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THE

CULTIVATOR,

A MONTHLY JOURNAL, DEVOTED TO

AGRICULTURE, HORTICULTURE, FLORICULTURE,

AND TO

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DOMESTIC AND RURAL ECONOMY.

ILLUSTRATED WITH ENGRAVINGS OF

FARM HOUSES AND FARM BUILDINGS,

IMPROVED BREEDS OF

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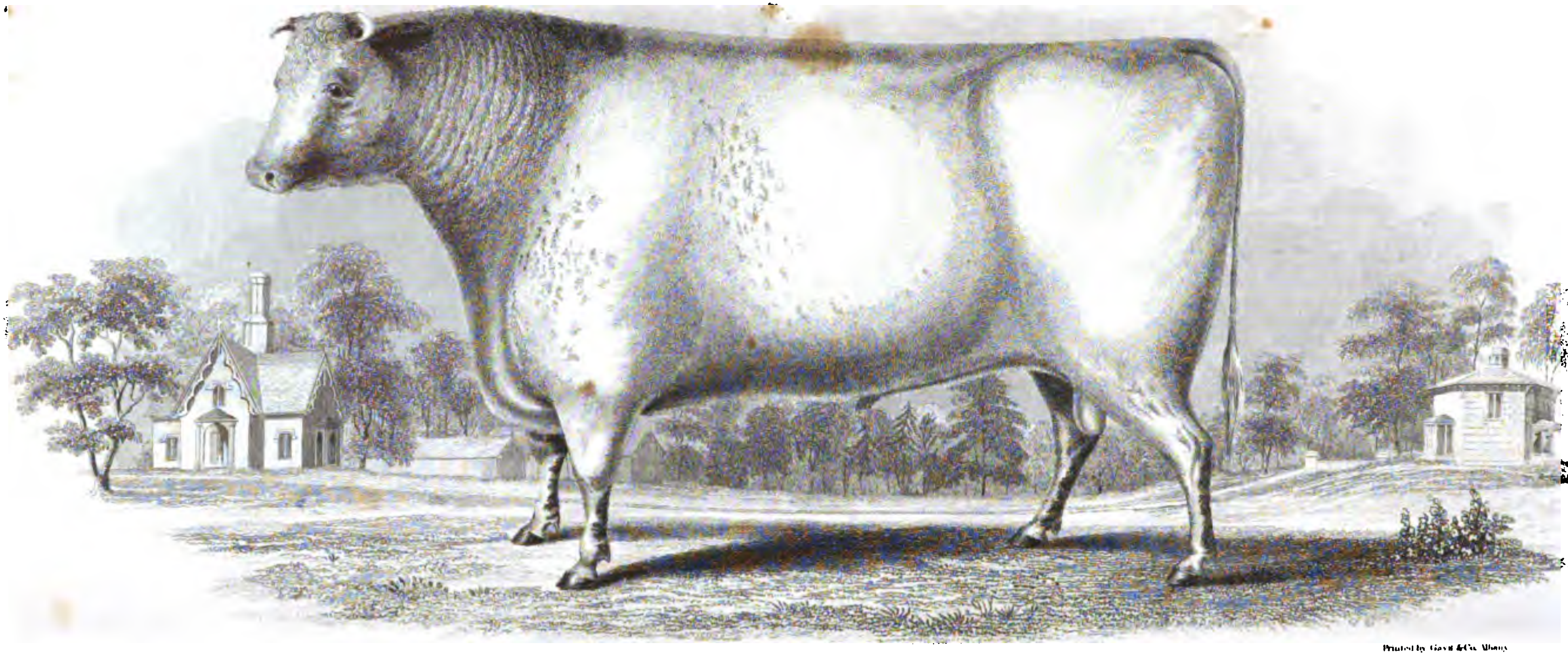

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THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

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THE FARMER'S MUSEUM,
(*Each no. containing 16 pages,*)
Is made up of selections from this paper, and published monthly at 50 cents a year—Fourteen copies for $5,00—Thirty copies for $10.

THE CULTIVATOR.

TO THE PATRONS OF THE CULTIVATOR AND MUSEUM.

Custom permits us (and the permission in this case is in perfect consonance with our inclination,) the privilege of addressing, at the opening of a new year and a new volume, the friends and patrons of our journal. We wish to seat ourselves by their social fireside, and embrace the occasion to exchange with them our cordial gratulations, and indulge in a free intercourse of feelings, interests and prospects. We wish to speak to such, as we consider them, as co-laborers and friends; and in addressing whom, we feel assured that our gratulations and kind wishes will be fully reciprocated.

With the past, we are acquainted; the future is yet before us, and unknown; but you will permit us to say, that in looking back over our editorial career since we engaged in the cause of agriculture, we feel a great pleasure in the consciousness of having, in the main, succeeded in our efforts, and in finding the most unquestionable evidence that our labors have been kindly received, and our efforts welcomed by those whom we have endeavored to benefit. We have endeavored, to the best of our ability, to place before our thousands of readers, topics which would interest, which would rouse to emulation and effort, and guide those efforts to a successful issue. Believing as we do, that every man is responsible to the public for the manner in which he manages the property of which a kind Providence has made him the steward, we have been anxious that our farmers should understand their privileges and their true position, and act accordingly. Every man exercises an important influence in society, and he should feel that, as he wields this influence for good or ill, so his existence will be a blessing or a curse to the community. We have been anxious to convince all, that knowledge—knowledge of mankind, of himself, and in particular of his professed business, was essential to success in any pursuit, and that ignorance and successful agriculture were incompatible. We have endeavored to enforce the necessity of industry, and to show that honest labor can never be disreputable: On the contrary, the only honorable man is he who earns his own bread by honest industry in some useful pursuit. Industry is a blessing, not a curse. God ordained that with the sweat of our brow we should earn and eat our bread, but he has wisely ordered that from this necessary industry shall flow our choicest blessings. To be satisfied of this, we have only to compare the situation, intellectual, physical, and moral, of those who reside where nature spontaneously produces all that is required to support life, with that of those who in less genial climes are forced to labor for their bread. The former must always succumb to the latter; one does but vegtate, the other lives.

As farmers, we have abundant cause for congratulating each other; not that the crops of the past year have been excessive, but because they have been abundant and good; not that prices have run up to the inflated height they reached a few years since, but because they have greatly improved since that disastrous reaction, are firm, and generally remunerating. The resources of our noble country are every year more and more developing themselves. Spreading over such a vast extent of country, embracing so many varieties of soil and climate, partial failures of crops may indeed occur, but such a failure as shall seriously affect the aggregate amount, or endanger the bread of the nation, is scarcely possible. Providence seems to have placed our destinies in our own hands; on our faithful discharge of devolved duties, all is depending. It is in the power of the farmers of this land to convert it into one vast garden, to make it the granary of the world. Let us see that while prosperity advances, the mind does not suffer; that while riches increase, the man, the immortal, is not neglected.

With the favor with which our agricultural publications have been received, we have every reason to feel gratified; and while we continue in good faith and untiring zeal to present the farmers of our country such a journal as their wants and the interests of agriculture de mand, we have not the slightest apprehension of ever being compelled to complain of a withdrawal of their confidence or their patronage. We have been friends and co-laborers too long; we are too well acquainted with the wants and wishes of each other, of what is desired and expected, to have the most distant fear on that score. We feel, that for the success of our labors, much, very much, is due to the many intelligent farmers and kind friends who have been with us from the beginning, and made our journal the record of their experience, and the repository of agricultural facts. Names, new and old, now pouring in by thousands, and the masses of communications from an increasing list of correspondents, prove, that amidst the crowd of competitors for public favor, and of co-laborers in the broad field open for the diffusion of agricultural knowledge, the Cultivator still retains its high place in the affections of the tiller of the soil. All are welcome, and we rejoice in the circulation of our journal, and feel grateful to all who promote it; because in that circulation. we think we see proof that agricultural inquiry is extending, and a brighter day beaming on the prospects of patient, but honest, untiring industry, in our land. We close these remarks by expressing the hope that the friends and patrons of the Cultivator, will find our mutual intercourse for the coming year, as pleasant as that of the past, and wishing all readers a successful, prosperous, and happy New-Year.

MONTHLY NOTICES.

☞ The public are here presented with our annual Offering, the first number of a new volume. The change of form, the improved typographical execution, and the superior style of the illustrations, we doubt not will meet with general approbation. An examination of the contents of this number, and a comparison with preceding ones, will show that the intrinsic value of our work is in no way diminished, and we pledge our renewed and unremitting exertions, to continue it worthy of the encouragement it has heretofore liberally received.

To our friends whose influence has extended the circulation of the Cultivator, and to those, also, who by their pens have contributed to its usefulness, we tender our sincere thanks, respectfully soliciting a continuance of their favors; and to all our patrons, we cordially tender the compliments of the season.

☞ We have great pleasure in announcing to the patrons of the *Cultivator and Museum*, that we have associated with us in the general management of these papers, Mr. **Sanford Howard**, who for some years had charge of the "Agricultural Department" of the Zanesville (Ohio) Gazette. A practical farmer from his youth —a close and accurate observer, intimately acquainted with the husbandry of the different sections of our country—a good judge of farm stock, and familiar with all the best breeds among us, his connection with our paper can scarcely fail to add to its usefulness and to increase its claim to public favor.

☞ Our readers, we doubt not, will rejoice to see the commencement of a series of articles on the Culture of Fruit, in this number, which are to be continued through the year. They are from the pen of **John J. Thomas**, of the Macedon Nursery, than whom there are few persons in our country better qualified for the task he has undertaken. The series will embrace every variety of fruit, and will alone be worth the price of our paper.

ACKNOWLEGMENTS.

Communications have been received since our last, from Geo. Geddes, V., Samuel Akerly, H. S., G. B. S., H. S. Randall, Alpha, N. B. Cloud, Salt Point, H. T. C., J. J. Thomas, Elisha Thayer, Richmond, A. J. Downing, Young Farmer of Greene County, D. Tomlinson, H. L. G., A Farmer, W., D. T., C. T. Botts, A Daily Laborer, Thomas Affleck, J. S. Vaughan.

We are indebted to P. L. **Simmonds**, foreign newspaper agent, London, for a copy of Johnson & Shaw's *Farmer's Almanac* for 1844—(we shall be greatly obliged if Mr. S can forward us a copy of this Almanac for 1841) —also for copies of the Pictorial Times, Essex Standard, Sussex Agricultural Express, and other papers—for copies of "The Legion of Liberty," to J. R. **Ames**, Esq. —for copies of Mr. **Johnson's** Address before the Oneida Ag. Society; Prof. **Richardson's** to the Ag. Society of Ohio and Brooke counties, Va.; Mr. **Williamson's** to the Ag. Society of Fayette co., Tenn., to some unknown friends—to Col. J. W. **Lincoln**, for the Transactions of the Worcester Co. Ag. Society for 1843—to T. Affleck, Esq. for the Concordia Intelligencer—to E. **Cowles**, Esq. for Conn. Courant—to J. J. **Thomas**, and some one else, for copies of the Wayne Standard.

ILLUSTRATIONS OF THIS NUMBER.

☞ We think the Illustrations of this number greatly exceed any previous no. of our work. For the design for the head, we are indebted to our friend, J. J. **Thomas**, to whose beautiful drawing, our engraver, Mr. N. **Orr**, whose card will be found in this paper, has done justice. We have also to thank Mr. N. Orr, for the faithful manner in which he has transferred to the block, the beautiful drawings of the Cottage furnished us by T. M. **Niven**, Esq. architect, of Newburgh; and we take this occasion to commend him as a young artist who gives promise of attaining a high rank in his profession. The Cotton Plant was engraved by J. H. **Hall**, and the Bull and Sheep by J. W. **Orr**, both well known and superior engravers.

GREAT YIELD OF BUTTER.

Mr. **George A. Mason**, of Jordan, Onondaga county, received the first premium of the New-York State Agricultural Society, at the exhibition at Rochester in September last, for the best cow for dairy purposes. From the 7th June to the 6th July—30 days—there was made from the milk of this cow, 67½ lbs. of butter. During the first 14 days of that time, 35 lbs. butter were made, averaging 2½ lbs. per day; and it is believed as great a ratio would have been given for the whole 30 days, had not the weather turned very unfavorable. The cow's keeping, during this time, was 4 qts. wheat bran and 2 qts. ground oil-cake daily, in addition to pasture feed. She was called a "native," but the gentleman who sold her to Mr. Mason informs us that she was got by a bull owned and imported by Captain Talcott, of Skaneateles. Will our friend Fuller of Skaneateles, give us the history of this bull ?

REARING COLTS.

A correspondent, "V." of Ashtabula county, O., says: "I have been recently informed, by a person who has resided some time at the west, that in raising horses for the Santa Fe trade, and whenever great power of enduring hardship is required, a course very different from that pursued by Yankees, is adopted, viz: they feed to a colt the first winter some thirty bushels of oats; the second, twenty bushels; the third, ten; the fourth winter less still, or none at all. Which is the best course; that of our fathers, or the one just described ?"

DISEASE OF THE POTATOE.

We make the following extract from a private letter of **David Thomas** of Cayuga county:—"I am inclining to the opinion that the new malady in the potatoe, is a *fungus*, converting the wholesome nutriment of that tuber into its own deleterious nature. Potatoes which are not rotten, but only clouded with brownish spots, give off a very offensive odor when boiled, which I believe no common potatoe, when rotting, ever does. The opinion is not entirely unsupported by analogy. The smut in wheat may be cited as one case; and perhaps the fungus that destroys the roots of the saffron crocus in England, as another."

POTATOES FROM SEED.

Our correspondent, J. M. Harlan, Esq., gives the following directions for raising potatoes from the seed, or ball. We can show some fine samples of potatoes raised in this way, that we have just received from Massachusetts:—"The pulp of the balls should be squeezed out as much as possible. They should then be dried and laid by till the following spring. The ground should be partially spaded, and well pulverized. I placed mine along the pales of the front part of the garden. The bugs are the greatest enemies of the young plants, and should be well watched. The potatoes will not come to their full size until the third or fourth year of planting. I had at least seven distinct kinds, of various shapes and colors, among the potatoes produced from the seed."

SUB-SOIL PLOWS.

Our correspondent "V.," of Ashtabula county, O., in making some inquiries about sub-soil plows, says:

"Will Ruggles, Nourse & Mason's sub-soil plow work in a soil where two or more yoke would be required to draw it? * * * Sub-soil plows must eventually be introduced extensively on the Western Reserve. The soil is generally far from being light and easy to work. Below the tilled surface, an impervious sub-soil retains the water, much to the injury of most cultivated plants. Grass is at present almost the only certain and abundant product of this region, generally."

We have no doubt that the use of the sub-soil plow would be found advantageous in the kind of soil above mentioned. In another part of this paper will be found an article which contains the information called for, in regard to R., N. & M.'s sub-soil plows. The other matters mentioned in V.'s letter will receive attention hereafter.

SOUTH-WESTERN FARMER.

If we have done injustice to this paper, as complained of, by "N. G. N.," it has been through inadvertence. If we have referred to articles from it, as "from an exchange paper," it has been because we have found them in some other paper, without credit; and we take this occasion to say, that the *South-Western Farmer*, ranks with our best agricultural papers, having for its editors, our friend Dr. Philips of Log Hall, and J. Jenkins and N. G. North. It is published weekly in quarto form, at Raymond, Mississippi, by North & Vance, at $3,00 a year, or two copies for $5,00.

CULTURE OF TOBACCO.

On this subject we have received a valuable Essay, from J. S. Skinner, Esq., Washington City, which shall have a place in the course of the winter.

SALTING HAY FOR STOCK.

Mr. I. Cartwright, states in the Boston Cultivator, that he has found salted hay to be very injurious to his horses—they became "broken winded." He sold two tons to a neighbor who kept a horse and cow, and by the time the hay had been expended, his neighbor's horse was as badly affected as his own. We have no doubt that to oblige animals to eat more salt than they would naturally choose, is productive of injury, and as a *general* practice we would not advise the curing of hay with salt. Sometimes it may happen that a load is unavoidably put up with too much dampness in it, and in such a case salt may be properly used to prevent its being damaged; but animals should not be confined to hay so cured.

HATCHING CHICKENS BY ARTIFICIAL HEAT.

We learn by a letter from H. T. Chapman, Esq., of New-York, that a gentleman has commenced the business of hatching chickens by artificial heat, and is now getting 5,000 a month, and calculates, when in full operation, to increase to 20,000 per month.

DORKINGS.

Mr. Chapman, whose Dorkings have heretofore been noticed in the Cultivalor, informs us that he has just received from England, four hens and a cock of this variety; very fine birds, pure white, selected for him at Dorking by a very good judge.

"CALICO CORN."

Mr. A. W. Townsend, of New Brighton, Pa., gives an account in the Farmers' Cabinet, of a new variety of corn to which he gives the above name. He states that the flour from it, makes bread that a person who knew nothing about it, would at once pronounce wheat bread. He sent one and three-quarter bushels of this corn (weighing 72 or 73 lbs.,) to mill, and had 30 lbs. superfine and 20 lbs. of common flour, with 21 lbs. of bran. It came from Oregon. Will Mr. Townsend send us a sample of this corn?

LOUISIANA SUGAR.

A gentleman of New-Orleans has invented some new processes in the manufacture of sugar, which promise to add greatly to that valuable article. His process adds 25 per cent. to the sugar obtained, and saves the whole expense of fuel for grinding and evaporating. The apparatus now in operation turns out 12,000 lbs. daily. The Bee estimates the amount of saving in fuel, and the increased value of the product, at ten millions of dollars annually to the state.

EXHIBITION OF FRUITS.

The Report of the Committee on Fruits at the exhibition of the Worcester co. (Mass.) Ag. Society in Oct. last, says that there were "over *one thousand* samples of fruit entered for exhibition by sixty-three different individuals, all residing in the county, with the exception of six or seven, and by far the greatest proportion of them in Worcester and the towns adjoining; and of this vast number of entries, there were very few, if any, lots offered that would not be creditable to any exhibition of the kind."

PRODUCTS OF PREMIUM COWS.

E. T. Forbes took the first premium at Westboro,' Mass. for a cow of common breed, which fed on pasture feed only, gave an average of 16¼ quarts per day in June last, and on trying her milk repeatedly, it was found to yield 2 lbs. of butter per day.

Thomas Cowles of Farmington, Conn., took a premium last fall, for a cow 6 years old, from which 12¾ lbs. butter was made in 7 days. Wm. L. Cowles took a premium at the same show for a *two years old* heifer, from which was made in 7 days, 9 lbs. and 10 oz. of butter. Both these trial were made in the month of *October*, and the keeping of the cows "ordinary grass feed" only.

HORTICULTURAL ADDRESS.

We desire to express our thanks to J. S. Skinner, Esq., for a copy of his very interesting, classical, and instructive address, delivered to the Horticultural Society of Washington, D. C., and we assure him that nothing but want of room prevents us from transcribing a considerable portion of it to our columns.

SUCCESSFUL COMPETITION.

At the Cattle Show of the Cortland County Ag. Soc., held on the 3d of Oct. last, H. S. Randall, Esq., Corresponding Sec'y of the New-York State Ag. Society, carried *ten* prizes on stock of various kinds.

LEGISLATIVE AID TO AGRICULURE.

We notice that the Legislature of Vermont, at its late session, passed an "Act to encourage and promote Agriculture," the provisions of which are similar to that of this state and Massachusetts. We hope soon, therefore, to see Ag. Societies organized in each county of that state.

AGRICULTURAL EXHIBITION IN MISSISSIPPI.

The Concordia Intelligencer gives the particulars of the exhibition recently held at Washington, Mississippi. Mr. Thomas Affleck, formerly editor of the Western Farmer and Gardener, delivered an address on "The Nature and Structure of Plants, with reference to Practical Horticulture," which it is said was "listened to with great attention and interest." The exhibition, in all its departments, seems to have been well filled. In the domestic and household manufactures, we should think, from the account, that the exhibition was highly creditable. The premiums in this class, we notice, were decided by *ladies*—an excellent plan in our opinion.

☞ Lewis Brush received a premium of the Suffolk County Ag. Soc., (this state) for having raised 405 bushels of corn on three acres of land.

FINE HOGS.

The Zanesville Gazette says that George W. Gibbons, of that place, lately killed four hogs, the oldest 19 mos., the youngest not quite 13 mos. old, whose aggregate weight was 2,042 lbs.—or 515½ lbs. each. They were a cross of the Leicester breed.

Agricultural, Horticultural, and Floral Society, in Northampton, Mass.—This Society, which has been lately formed, will, we doubt not, be productive of great improvement in the arts to which the united and individual efforts of its members are directed, and we confidently anticipate from it some highly interesting and useful results.

PREMIUM FOR THE BEST FIVE ACRES OF COTTON.

Our friend Affleck, of Miss., makes, through the Concordia Intelligencer, the following proposition:

"Let all who are willing to put to the test of experiment, *a rotation of crops, deep plowing, a sufficiency of manure, choice seed, and additional distance to the plant,* give in their names, and pay over five dollars to the *Treasurer of this Society,* (Adams Co. Agricultural Society,) the whole sum thus paid, to be, by him, and the President, laid out in the purchase of a piece of *silver plate,* which they shall award to the planter, so subscribing, who shall *during the next season,* give the necessary proof that he has *picked and ginned the greatest quantity* of *good* clean cotton, from FIVE ACRES OF LAND, planted and tended in such manner as he may have seen fit—tendering along with such proof, a clear statement of the entire process *in writing,* which each competitor binds himself to do when he enters for the sweepstakes."

We rejoice to see this proposition. It cannot fail to have a beneficial effect, by rousing a spirit of inquiry on the subject, which we doubt not, will eventuate in a very decided improvement in the culture of this important staple.

In our next, we shall give an account of Mr. Affleck's crop of the present year, together with a letter from him, received too late for this month.

RAPID FATTENING OF A PIG.

It is sometimes asked, what is the greatest gain per day that can be given to a pig in feeding? but it is evident no satisfactory answer can be given, as much must be depending on breeds, food, treatment, &c., and it is probable the best of all these, are rarely, if ever, united. The following statement made to us by Mr. GEDDES, of Camillus, Onondaga Co., furnishes proof that a pig may, by good treatment, and good food, be made to take on fat far more rapidly than is generally supposed.

Mr. GEDDES purchased on the 29th of July a pig weighing 177 lbs. live weight. He was pastured until the 1st of September, 33 days, and allowing a gain of 1 lb. per day (a liberal allowance) his weight at that time, when fattening commenced, was 210 lbs. On the 11th of December he was killed, and his weight, dressed, was 442 lbs. If we allow one-fourth as the loss of weight, he would have weighed, living, 552½ lbs. From this, deduct his weight on the first of September, and it leaves 342½ lbs., as his gain in 101 days. This gives a gain per day of 3 lb. 6 oz. and a fraction. His food was barley-meal, and his consumption about a peck per day.

If any of our friends have succeeded in a greater per diem gain than this, we should be pleased to learn the particulars.

BUCKWHEAT AS GREEN MANURE.

MESSRS. EDITORS:—I have a piece of land which, by the bad cultivation of the previous owner, is poor. I have no manure to spare for it next spring; my object is to get it seeded down with clover. I thought of summer fallowing it, and sowing a crop or two of buckwheat, and plowing it under. Please direct me in the manner it ought to be done; the quantity of buckwheat to the acre; also if two crops of buckwheat can be got in so as to sow wheat by the 1st of September, as I prefer early sowing, as the clover does better to be sown early.

Onondaga, Dec. 12, 1843. SALT POINT.

The object of "Salt Point" appears to be to enrich his land by plowing in a green crop of Buckwheat. For this purpose the seed may be sown as early in the spring as the frosty season is over. It should be plowed in when in full bloom, and this may be readily done by first passing a roller over it, making just such lands as it is intended to plow, and running the plow the same way the roller went.

If the first sowing of buckwheat should be got in early, it might be turned under, and a second crop might be raised and also plowed under in time for wheat. The second crop might be plowed under at any time, if it should appear that there was not sufficient time for it to reach maturity; there would, of course, be something of it, though its value as manure might not be as much as if there were more of it.

PROFITS OF POULTRY.

From the report of a committee on Poultry, of the Wayne County (N. Y.) Agricultural Society, we gather the following items:

Charles P. Smith, of Ontario, keeps 120 hens and two cocks. Attached to his hen-roost is a yard containing one-fourth of an acre, enclosed with a picket-fence six feet high. From the first of March to the tenth of October, he had 6,000 eggs, and 115 chickens.

John J. Thomas, of Macedon, states that carefully conducted experiments have led to the conclusion, that a "bushel and a half of oats will be an adequate yearly supply for each adult" hen, and that by allowing the fowls "an hour's run for exercise before retiring for the night, high health and productiveness will be secured."

David Cushing keeps 25 hens, and feeds them with oats, corn-meal, broom-corn seed, and refuse meat, and supplied with ashes, pounded shells, &c. They were confined to a warm but airy room during winter. His account current is as follows:

Poultry Establishment, Dr.

To investment of stock and fixtures,		$60 00
Interest,		3 50
Feed, a large estimate, 25 bush. oats, 20 ct.		5 00
Attendance,		5 00
Total,		$13 50
Cr.		
By 75 doz. eggs, 12 c. sold early,	$ 9 38	
" 200 chickens, 10 cts.,	20 00	
	$29 38	29 38
Leaving a nett balance of		$15 88

On an investment of $60 00, or, an interest of more than 25 per cent on the capital employed.

CLOVER HULLING MACHINES.

IN answer to an inquiry in our Nov. No., concerning machines for cleaning clover seed, we have received two letters, from which we extract the following information:

Thomas D. Burrall, of Geneva, in this state, states that most of the seed raised in that neighborhood is cleaned by machines made by him, and that his machines are largely in use in most of the states. He builds three sizes, costing sixty, seventy, and eighty dollars each, and requiring from two to six hands to drive them. His machines thoroughly clean the seeds at a single operation.

H. Baldwin, of Washington, Conn., manufactures a machine which is very highly recommended by those who have used it, and which took the first premium of the American Institute of New-York, in 1840, and has taken several other premiums. It is said to do the work without any loss of seed, and is so constructed that it can be tended without inconvenience from dust or dirt.

CAPONIZING.

A correspondent of the Philadelphia Ledger gives the following very simple mode of castrating fowls:

"The bird was kept from food for two days, in order that the distended entrails should not conceal the organs from the view of the operator.

"Strapping its wings to a table, through an auger hole, an inch incision was made in the side, between the hip and the last rib, and two inches from the spine; the feathers having been first plucked out at that spot.

"By a simple spring-grapple, the sides of the wound are kept apart. The organ to be removed is readily recognized—it is a small reddish-yellow cylinder, tied to the spine; and by means of a horse-hair, looped and passed through a little tube, it is removed in an instant. The bird was turned on the other side, another incision made, and the corresponding organ excised—the whole process occupying about two minutes. The loose feathers were pressed on the wounds as a styptic, and the poor bird did not appear to suffer at all."

NEW-YORK STATE AGRICULTURAL SOCIETY.

Annual meeting to be held at the old State Hall, Albany, Jan. 17, 1844, at 10 o'clock, A. M.

The regular meetings of the Executive Committee, are held at the same place, on the second Wednesday of each month.

MEETING OF EX. COMMITTEE FOR DEC.

The following communication was received and referred to the annual meeting of the Society:

To the Executive Committee of the New-York State Agricultural Society:

Gentlemen,—I enclose the proceedings of a meeting of citizens of Dutchess county, held at Poughkeepsie, on the 3rd inst., which give their views in relation to the improvement of agriculture, by means of county and state societies, and express their desire that the next annual fair of the State Society should be held in the village of Poughkeepsie. That place seems to be the most central and eligible for all the citizens of the 1st and 2nd senate districts, and for a large portion of those of the 3rd district; with great facilities of communication with other portions of the state. No state fair has yet been held south of Albany, and the citizens of the southern section may reasonably expect that some regard will be paid to their locality and convenience; and believing that the object of the State Society is to distribute its benefits as widely as possible, I indulge the hope that the present application will receive a favorable consideration. A number of the committee attended at this place on the 15th inst., under the impression that the Executive Committee would have met on that day. At the meeting in the village of Poughkeepsie, about $700 was raised by subscriptions for the purpose of providing suitable enclosures and accommodations, and the committee consider themselves pledged that such shall be provided free of expense to the Society, and that the Committee of the State Society shall have the control and direction thereof, and the whole benefit of the fund which may be raised from admissions. ABM. BOCKEE,

Albany, Nov. 27, 1843. Chair'n of the Com.

Donations of Books for the Library of the Society, were presented as follows:

150 vols. from the *Albany Institute*, consisting mostly of the Reports made to the British Board of Agriculture, of the Surveys of the several districts of England, Scotland, Wales, &c.

Transactions of the Albany Institute, vols. 1 and 2—from the *Institute*.

The Farmer's Cabinet, from its commencement, 7 vols.—from *Josiah Tatem*, publisher.

Memoirs of the Board of Agriculture of the State of New-York, Vol. III.—from *Alex. Walsh, Esq.*

The thanks of the Society were voted to the several donors, for this handsome addition to their Library.

The thanks of the Society were also voted to Gen. HARMON, of Wheatland, Monroe county, for specimens of twelve varieties of wheat cultivated by him.

The Society will be glad to receive the 1st and 2nd vols. of the Memoirs of the Board of Agriculture of this state, to complete their set, from any gentleman who may have a copy to spare. Any other works on the general subjects of Agriculture or the Natural Sciences, Agricultural Reports, Addresses, &c. will also be very acceptable.

☞ The next meeting of the Ex. Committee is to be held Jan. 10, at 10 o'clock, A. M.

NEW PRODUCT OF THE SOUTH.

We find in one of our Louisiana papers, that Mr. McIntyre of Ouachita, is cultivating the *bene plant* for the oil obtained from its seeds. Twenty bushels is considered a fair product for an acre, which will give fifty gallons of pure oil, worth $1.25 per gallon, or a product of $62.50 per acre. The oil is superior to the common olive oil, and its taste is very pleasant. It will, should its culture for this purpose spread as anticipated, render the importation of olive oil unnecessary in the southwest.

TENNESSEE HOGS.

WE have been furnished by our friend J's L. Vaughan, with the weight of fourteen hogs killed by him. They certainly did well, for "the common scrub breed;" but we can hardly doubt that had Mr. Vaughan kept some of the improved breeds instead of them, they would have acquired they same weight at 18 months, that these did at "three years old."

Caledonia, Henry Co. Tenn., Dec. 7, 1843.

MESSRS. GAYLORD & TUCKER:—I send you the weight of 14 hogs killed the other day. We have not as fine hogs as in other places, but I thought perhaps you would like to hear what sort of hogs we do have:

No. 1	weighed,....	424	No. 8	weighed,....	266
2	"	384	9	"	264
3	"	346	10	"	248
4	"	330	11	"	228
5	"	316	12	"	222
6	"	302	13	"	212
7	"	274	14	"	208

Total weight of 14 hogs, 4,024; average, 287.

These hogs were of the common scrub breed, 3 years old; allowed to run out in the woods, and fed on corn once a day until they were put up to fatten, except in harvest time, when they were turned in upon a small field of oats without any corn. They were penned in the latter part of August, and fed on corn until they were killed, being three months fattening.

IMPROVED VARIETIES OF INDIAN CORN.

MESSRS. GAYLORD & TUCKER:—Herewith I forward you a box containing a sample of my crop of corn of the present year. There is one ear on the top of the box, containing sixteen rows, sent to me by a neighboring farmer, being a sample of his crop, all of which was shrunk and indented like this. The seed from which this sample was raised, was Virginia corn, showing clearly that the season here is not long enough, or warm enough, to perfect the grain. It will show, by comparison, the advantage of raising the White Flint, like my crop, all of which is good and fair, though all the ears are not as large as the samples I send you.

Respectfully yours, SAMUEL AKERLY.

Southfield, Richmond Co., N. Y., Dec. 4, 1843.

We have received the samples of corn mentioned above, and should be happy to distribute it among such of our friends as wish to give it a trial. The White Flint, spoken of, is a handsome variety, and we should think would suit the latitude where it was raised—say two degrees south of this, very well.

THE SUGAR CANE.

A correspondent of the *Planter's Banner*, Louisiana, gives the following as Mr. Packwood's system of cultivating the Sugar Cane, which is said to have proved very successful:

"Mr. P. plants his cane eight feet apart, and gives it a very heavy hill. In cutting his cane, in the fall, he winrows his tops in the middle of his rows. As soon as he finishes rolling, or whilst rolling, if possible, he throws four furrows with a large plow over his winrowed tops, and leaves them through the next summer to rot, having plenty of space left to hill and cultivate his crop, without interrupting them. The four furrows, with the rattoon tops and leaves, give him a good ridge on which to plant the next year, and space enough to cultivate it without interfering with the old stubble until the last plowing, when he breaks it out with a large plow and strong team, thus opening the drill for the deposite of the plant cane-tops as before: Thus changing his rows every other year, and planting each time over a good bed of manure. In this way Mr. P. has brought up an old cocoaed place, to be one of the most productive plantations in the state. His crops range from 500 to 600 hogsheads a year, and he scarcely ever rolls more than 200 arpents of cane."

Principle will succeed where management would fail.

BERKSHIRE HOGS, &c.

We give the following from a letter from Col. John Bonner, of White Plains, Georgia, dated Nov. 17:

"In the last number of your Cultivator, I read the remarks of J. W. G., relative to the weight of his Berkshires, &c. I can only say that the Berkshires raised by me have greatly exceeded the weights stated by him, and that with ordinary food. I have no doubt but with good food, and a plenty of it, I can, at one year old, make a lot of ten or more of my hogs, average over 400 lbs. nett. I also notice your reply to his remarks on that subject, in which you say "that other food than corn will make them attain greater weights, &c." Now I should be much pleased to know what kind of food it is that is cheaper and will make hogs grow larger than corn will. I am a raiser of Berkshires to a considerable extent, and should be happy to find any food better and cheaper than corn, or corn meal, to raise them on."

If our correspondent will turn to the Cultivator for 1843, page 30, he will find in the Lecture of Professor Playfair, some hints which will enable him to see why some kinds of food are more productive of muscle and growth, than of fat, and *vice versa*. Our method is to allow our pigs to run in clover pasture the early part of the season, feeding them with potatoes, or small quantities of barley meal, to keep them constantly thriving, not fattening. When apples begin to fall, they run in the orchards. Peas which are sown for this purpose, are now fit for feeding to them, and experience proves there are few things that better promote both growth and condition, than to commence with the pea while the vines are still green. By the time to commence the process of fattening, a good growth is obtained, and the fattening is conducted with peas, or barley meal, or corn, as circumstances may indicate. Dr. Dana's analysis of Indian corn, shows why it is better for fattening, than the formation of muscle or growth. Of the principles that promote growth, it contains but about twelve parts in a hundred, the remainder belong to those useful in fattening.

PREMIUM FARMS.

Among the most interesting papers emanating from our Ag. Societies, are the Reports on Farms. From a very valuable report of this kind, made by our correspondent, J. J. Thomas, to the Wayne Co. Society of this state, we copy the following description of the Farm which received the first premium:

The farm of Wm. P. Capron, in the town of Macedon, contains 160 acres, of which 120 are cultivated, and 40 occupied with wood. It is handsomely laid out, divided by a lane, with fields of about 10 acres on each side. This is the only farm where the committee found a regular system of rotation of crops. The following is the rotation pursued in each field:—1st. Wheat after clover; 2d. Corn with all the manure; 3d. Barley; 4th. Wheat; 5th. Clover one year; 6th. Wheat, &c. Different fields are of course occupied the same year with different stages of this course; and so uniformly is it pursued, that the proprietor can tell for twenty years to come, what is to be in each field. A proof of the cleanliness and fine tilth which this rotation produces, is furnished by the fact that 7 acres of corn were hoed well, the present year, by three men in three days. His crop of corn averages from 40 to 60 bushels to the acre; barley averages 35, and has never been less than 25; wheat, which he considers is more benefitted by the manure applied two years previously to the corn, than if directly applied, has averaged over 20 bushels,—in one case he had 50 bushels per acre on 5 acres; ruta bagas, from 600 to 700 bushels per acre, and has raised more than one thousand bushels on one acre; these he feeds successfully (uncooked,) to hogs and other animals during winter. There are 17 acres of permanent meadow, generally low-land, which is occasionally top dressed and harrowed, but rarely plowed, and which averages fully two tons to the acre. He never raises oats, but buys them when needed. He has 9 cattle, 5 horses, 120 sheep, and 20 hogs, from which he makes yearly 300 loads of manure, all of which is applied every spring to the corn crop. He fattens hogs on ground and cooked corn and barley, the cooking greatly swelling the bulk with water, and according to his experiments, increasing the value of the food about three fold. A part of the farm which cannot be well brought into the regular rotation, is periodically summer fallowed and sown with wheat. There are never less than 30 acres of wheat each year,—10 acres of which are after clover, 10 after barley, and 10 or more after summer fallow. There are but 10 acres of pasture, besides stubble and fallow. This is the one year of clover preceding wheat. When the clover sod is clean, he mellows the surface with a cultivator, and sows it. There is a mile and a half of stone wall; nearly all the rest of the fences are rails, with upright stakes and connecting caps under the riders. The buildings are a good house, large barn, sheds, stone granary, &c.

THE SILK BUSINESS.

The 6th No. of Greely & M'Elrath's "Useful Works for the People," is devoted to the "Silk Culture," and has heretofore been noticed. In this work we find a letter from Alex. Walsh, Esq., of Lansingburgh, on the progress of the Silk business in this country, from which we make the following extract:

"The statements which have recently been laid before the public on this subject, are most gratifying to those who, like myself, years ago asserted the practicability of the Silk culture; and the argument which they afford is conclusive in favor of the value and importance of this branch of industry. The experiments made in different parts of the United States, form a new era in the business of Silk culture, and must remove every lurking doubt as to its practicability and utility, even when managed on an extensive scale. It will give a new impetus to such as are already engaged in the employment, and arrest the attention of others in whom the subject has hitherto awakened comparatively but little interest.

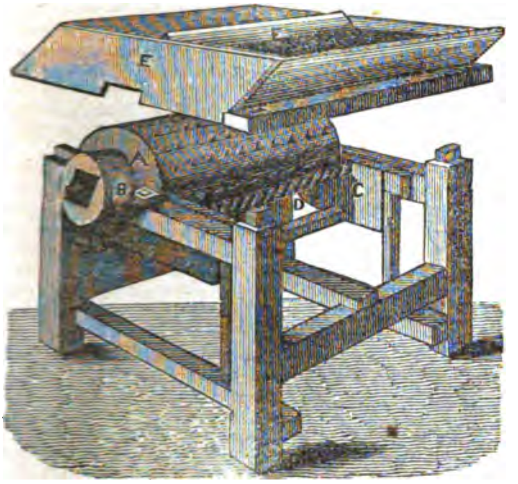
"I am gratified to observe that in New-England this enterprise is steadily advancing. The amount of Silk made, seems to be doubling with each successive year. 'Maine can grow Silk; New-Hampshire and Vermont can grow Silk. Notes of encouragement come from the cold North and the warm South. The fertile West has spoken in terms full and decided. Onward we are summoned; onward determined to move.'

"The late experiments and results connected with the 'Silk Culture,' assume especial importance when regarded in a national point of view, and as pointing to a general and lasting benefit that must flow from the successful establishment of the Silk culture and manufacture in the United States—this being 'a department of industry that has enriched and aggrandized every nation by which it has been adopted.'

"Now that the principal obstacles in the way of the successful prosecution of this business have been surmounted, will not our agriculturists generally direct their attention to this branch of new and profitable industry? The production of Silk fabrics might furnish employment to classes of our population who are now of necessity unemployed, or meagrely compensated for their labor. This would secure the advantage of steadiness of employment—increase the average reward of labor—promote individual comfort and national wealth. I persuade myself—looking at present indications, and at the same time dwelling in my own mind on the importance of the subject—that the United States will shortly become a Silk growing nation; that Silk will be the prime staple article, and its culture the most profitable branch of agriculture; and the time thus arrive when there will be saved to the nation the amount of money now expended in purchase of foreign silks, and exceeding *seventeen millions of dollars* per annum."

REMEDY FOR HARD MILKING.

Mr. Kniskern, of Knox, says that he has tried the plan of opening the teats of cows that milk hard, with a harness awl, or a small penknife, as recommended in a former No. of the Cultivator by Mr. Durand, and has by this means made a very good milking cow from one which could scarcely be milked before.



GOLDSBOROUGH'S CORN SHELLER & HUSKER.—(Fig. 2.)

The above figure represents Goldsborough's patent cylindrical Corn Sheller and Husker, for horse power, which is worthy the attention of extensive corn growers. They are capable of shelling 130 bushels per hour, and are warranted to shell 1200 bushels per day, without extra exertion; they break no corn, and leave none on the cob. With this machine, about half the above quantity may be husked and shelled in a day. They are manufactured by R. Sinclair, Jr. & Co., Baltimore, and for sale at $45,00 and $35,00, according to size.

SOWING CLOVER SEED IN ORCHARDS—COAL ASHES.

Messrs. Editors—It has been remarked by some, that clover seed should never be sown in orchards; that so long as the clover remained, the trees would yield no fruit. Now I would thank you to insert in the next no. of the Cultivator, your opinion, or that of some of your correspondents, upon the subject, whether red and white are both injurious, and if both, which the most so? Likewise whether the ashes of anthracite coal contain any nutritive substances, or are in any way beneficial to land?
A Subscriber.

We are aware that the cultivation of clover in orchards has been condemned by many, but we think without reason. If clover is allowed to ripen its seed, it produces on soils the same exhausting effects that other plants, the grain ones for instance, do, when their seeds are ripened on the land, and probably no more so. The ripening of grain seeds, is however, usually preceded and followed by the plow, which has a tendency to counteract the exhausting effect, a practice to which clover land is not as commonly subjected. That clover will not prevent orchards from bearing, we have the most conclusive evidence. Our orchards have been always subjected to a clover rotation, and without injury to the fruit. The present year our orchard is in clover, and was mowed; and it is believed it would be difficult to find finer apples of the several varieties grown in it, or trees more productive than a large part of them have been the past season. On soils much reduced, it is possible clover might subtract something from the nutriment, otherwise drawn by this tree, but no more than by other plants, if so much.

Anthracite ashes are valuable as a top dressing for grass, or applied to plowed lands intended for crops, or when placed around trees as a preventive of vermin. They should always be carefully preserved, and applied by the farmer where most wanted. With compost manure, or swamp muck, they render essential service. The term "nutritive," is not generally applied to manures of this class; they are more properly "stimulating," like other mineral manures.

The mahogany tree is full grown in 200 years.

DIGGING POTATOES—CORN SMUT—PLASTER.

Messrs. Gaylord & Tucker—There is quite a difference of opinion among farmers, as to the best time of digging potatoes. Some prefer digging them soon after they are ripe; others prefer to let them stand in the ground, as long as they can and be secured safely. My own opinion is, that if allowed to remain in the ground a length of time after they are ripe, they will, when dug and carried into the cellar, prove better, and their flavor superior to those dug as soon as ripe. Exposure to the sun and air, soon spoils potatoes, and the sooner they are placed in the cellar after being dug, the better they will be for eating. We should be glad to learn your opinion on this subject.[1]

I have noticed that there is more or less smut on corn every year; and I have been led to think what could be the occasion of smut; and does it increase more in wet weather than dry? There is more or less of it in all seasons. Will the taint of smutted seed corn, if planted, cause the grown crop to be smutty?[2]

How will sowing plaster in the fall, on irrigated meadows, operate? We have had as good returns from plaster sown on low natural meadows, as upon upland; but never have sown it in the fall of the year. There would be an advantage in fall sowing over spring sowing, were the effect equal, as farmers have less to do in the former season than in the latter. But the difference in effect on the crop at fall, over spring sowing, we have not learned.[3]
Levi Durand.

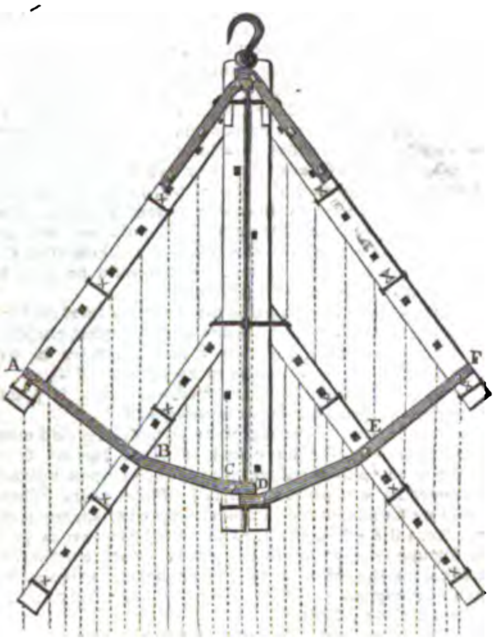
Derby, Conn., 1843.

1. Potatoes may be dug with safety at any time after they are ripe, of which the decay of the vine is the best indication; but they will continue to improve, if suffered to remain in the ground, unless, as is sometimes the case with very early ripe potatoes, and as we have seen this year, they commence sprouting, an indication that their hibernation, or the period of rest in plants, has passed. Not only the sun and air, but even light, is very injurious to potatoes, which will be better for being kept in cool dark cellars. If a cellar is light, covering the potatoes with turf, is an excellent plan. Potatoes should be dry when put in the cellar, and then the dirt that is upon them is beneficial rather than otherwise. Potatoes this year are rotting extensively, because they did not mature, but rather died from drouth. This is particularly the case we learn with that fine potatoe, the *pinkeye*.

2. The fungus on corn, like the smut on wheat, oats, &c. is a species of Uredo, and corn infected with the smutty particles, is much more likely to produce smut again. That smutty wheat, if sown, will in most cases produce smutty wheat for a crop, is certain; and as brining and liming wheat will kill the germinating power of wheat smut, it is probable the same process would exterminate it in corn. The trial would be well worth making. Wet seasons, if hot, are most favorable to all species of fungus or uredo.

3. We live in a district where plaster abounds on every side of us, and is used extensively by nearly every farmer, but we know of no instance where it has been used on irrigated meadows, and the opinion is general that plaster is of little if any use on low moist lands of any kind. Plaster, with us, is sown at all times of the year, as best suits the convenience of the farmer; though the time preferred is April or May, when the wheat and clover have fairly begun to put forth their leaves. We have known it used with good effect on summer fallows; sown on wheat in the fall; on wheat and clover, or dry meadows and pasture, in the spring, but rarely on low wet pastures or meadows. If any of our readers have experimented with plaster, in the way suggested by Mr. D., they will confer a favor by informing us of the result.

Great Berkshires.—In looking over the list of premiums awarded at the late meeting of the Rhode Island Ag. Society, we noticed the following:—"Messrs. A. & W. Sprague sent to the show two very fat pigs, about two and a half years old, supposed to be nearly pure Berkshires. These animals weigh about twelve hundred lbs. each, alive."



MR. GEDDES' HARROW.—(Fig. 1.)

(Scale, half an inch to the foot.)

We are indebted to George Geddes, Esq. of Onondaga county, for the drawing from which the above engraving was made, as well as for the annexed description of the Harrow, invented by him some years since, and which has been extensively used in that part of the state, and found superior to any other known there. With the aid of the description and drawing, our readers in any part of the country will be able to get them made for their own use, as there is no patent for it.

Description.—Timber, three inches square.

The side pieces should enter the center pieces, so that the acute angle will contain thirty-five degrees. Or the bevel may be found by laying a carpenter's square on a board, and measuring on one side of the corner three inches, and on the other two inches and one-twelfth of an inch; a line drawn through these points will make a triangle, having the smaller angle, that is the angle at the point where the three inches reached,—the angle required.

The tenons should enter the center pieces only one inch, the mortice and tenon being cut square with the center pieces, as shown in the engraving. If this joint is well made, the bolt passing through both sticks will keep the timber in place perfectly. The side pieces have each three bolts, X. X. X. passing through the middle, to prevent their splitting. The back hinge is made of Swede's iron, bolted at A. B. C. D. E. F., on the timber with half inch bolts. These bolts should be well made, and have large heads on the lower end, as if any thing breaks, it probably will be these bolts.

The forward hinge is made with Swede's iron, and bolted on the top of the timber, with three bolts in each side of the hinge.

The hook plays freely in an eye on the end of a rod, made of round iron, five-eighths of an inch in diameter, which runs through both hinges; having a washer, nut and spring key, behind the back hinge. The eyes in the hinges should be the thickness of the iron above the timber, consequently the rod running through the eyes will be that much above the timber.

The hinges should be four and one half feet apart from center to center.

The center pieces are one inch apart.

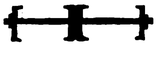


Fig. 2.

Fig. 2, represents the bolts that pass through the joints of the center and side pieces. The heads on these bolts are half an inch thick, and being exactly opposite each other, *they come together* when the harrow is flat on top. These heads and the plates under the nuts are three inches long, and are turned a little at the ends, so as to grasp the timber, and keep it from splitting.

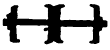


Fig. 3.

Fig. 3, represents the two bolts that pass through the center pieces, behind the back hinge, with the heads, plates and nuts.

The side pieces should be twelve or thirteen inches apart in the clear, measuring square across.

The four teeth in the center pieces require to be made straight on one side, instead of having the point in the center, as their places are near the sides of the timber.

The teeth should be seven-eighths of an inch square.

This drawing of my harrow, shows all the improvements in its construction that have been made since you published the engraving in 1836.

I have attempted to show every thing in this drawing, and to give so minute a description that any common mechanic shall be able to construct a harrow without making mistakes.

A harrow having thirty teeth passing within two inches of each other, from center to center, is just what is wanted on ground under good cultivation. On land just cleared, the teeth should be further apart, perhaps four inches.

The advantages that my harrow possesses over the hinged square harrow, are very great. It draws easier. One reason for this is, that the line of draft passes through the middle of the harrow, having just as much weight, and just as many teeth, (and they equi-distant therefrom,) on each side; consequently, the harrow on an even surface, moves straight forward, without producing any vibrating of the whiffletrees, as the square harrow does.

Another advantage is, it is easily cleared of foul stuff. The driver, without stopping his team, lifts up one side, and the stone or stick falls out.

The teeth track better, and instead of leaving a few large marks on mellow ground, it leaves thirty small marks.

It is stronger, and when broken is easier repaired than any other harrow.

It is cheaper than a well made thirty tooth square harrow, and the expensive part, (hinges, rod and bolts,) will last a very long time. The cost of one of my harrows, made of the very best of timber, the teeth all steel pointed, and the whole painted twice is twelve dollars.*

I request any person that may attempt to construct a harrow from my plate and description, to follow the directions exactly. If it should be supposed that improvements can be made, I beg that first an experiment be made after my directions—then improve, and if the improvement is not found to be backwards, give it to the public.

I have been using this harrow for eleven years. Since you published the engraving in 1836, which showed the principles involved, I have made great improvements in the manner of putting it together; but all the attempts to alter it fundamentally, have so far as I have learned been failures, and sometimes the experimenter has laid his to somebody besides himself.

My only wish now, in relation to this harrow, is, that it may be made correctly; that this may be done, I have prepared the drawing. I have no fears but that it will prove to be better than any other in use, if fairly tested.

Tyler, N. Y., Nov. 30, 1843. Geo. Geddes.

Hemp Tree.—The Louisville Journal says, "A hemp stalk measuring nine inches in circumference, and sixteen feet two inches in height, and having sixty-five branches, was grown on good clay land in Mecklenburg co., Keutucky.

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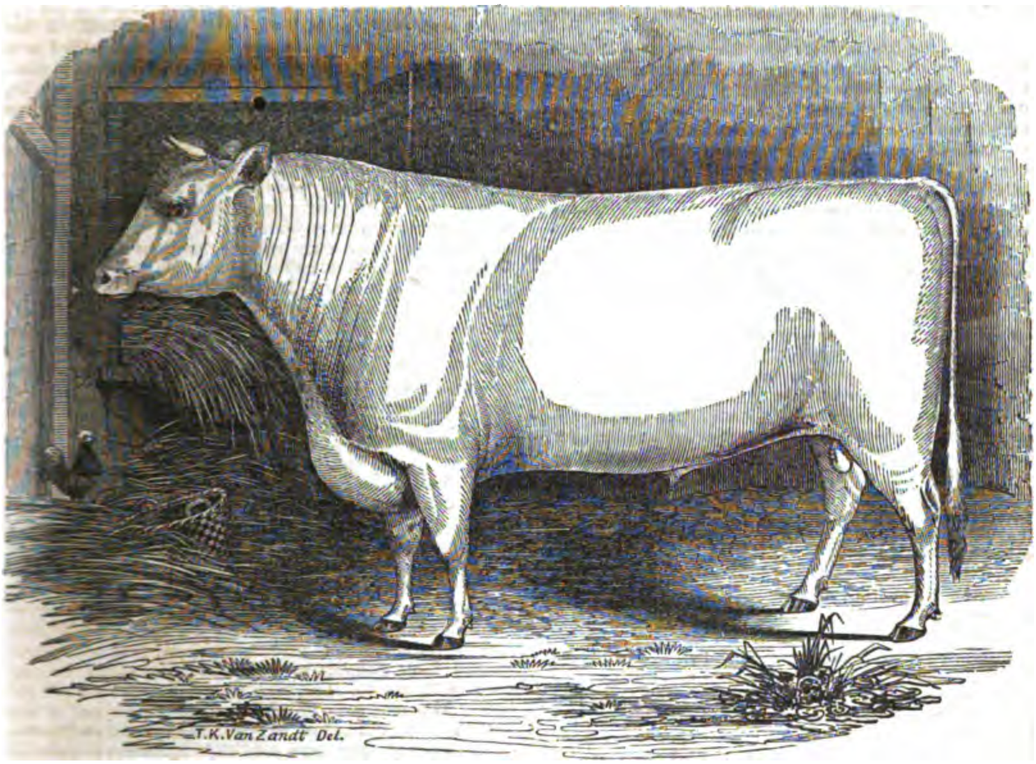
*As it may be inferred by some unacquainted with Mr. Geddes, that he makes the harrows here described, or is interested in their construction, we deem it proper to state that such is not the case,—that in giving this harrow to the public, the only solicitude he feels, is that of the inventor; but that should any person desire a harrow of this construction, by addressing a note to Oren Barton, Tyler P. O., N. Y., postage paid, enclosing $12, a harrow made in the best manner, will be put on the canal, directed and forwarded to any place required. [Eds. Cult.]


T.K.Van Zandt Del.

IMPROVED SHORT HORNED BULL "METEOR,"

Bred and owned by George Vail, *Esq. Troy.*

Meteor, now two years and three months old, received the first prize at the cattle show of the American Institute, in Oct. 1843, as the best bull of any age, and also the first prize as the best bull in the first class at the Rensselaer County Agricultural Society's Fair, Sept. 1843. He was got by *Duke of Wellington*, out of *Duchess*, both bred by Thomas Bates, Esq., of Kirkleavington, Yorkshire, England, and whose pedigrees have been heretofore given in the Cultivator.

Meteor is a fine animal, of good size, small bone, and excellent handling; with all the essential indications of good constitution, tendency to fatten, and quality of flesh. His dam, (Duchess,) is a fine cow—her head and eye show good breeding—and her points show a very good combination of fattening and milking qualities. She now has her third bull calf—not yet having had a heifer. The calves are all well shaped, and are good handlers.

Mr. Vail has handed us a letter, recently received by him from Mr. Bates, from which, at his request, we make the following extract:

"I showed the above gentlemen the Oxford premium Cow of 1839—the dam of your bull by Short Tail, (2621,) and her half sister, (same dam, and by Short Tail)—also the own brother to this half sister, Cleveland Lad 2d. (3408) and own brother to the bull that got the highest premium of the Royal English Agricultural Society at the Liverpool exhibition in 1841, named Cleveland Lad, (3407,) and which own brother I sold last year to Lord Feversham. In 1841, he also gained the first or highest premium given at the meeting of the Yorkshire Ag. Soc.

"These two cows and two bulls, all of the same cow, with a steer sold when two years old, and weighing then 72 st. 8 lb. of 14 lb. per stone, were in succession from the same cow, after putting her to bulls of the Duchess family. She had bred five inferior calves previously to other bulls—the best of their day—but not having any Duchess blood in them. My tenants, whom I had furnished this cow at her prime cost, £11, after having had her first five calves, offered her for sale in Darlington market, a month after calving, and could not have above £9, 15s. for her, though a very good milker, giving 12 quarts of milk, ale measure, when on hay only in winter; no turneps or other hard food, and straw at nights. As they wished to sell her, I took her again of them at prime cost, £11; telling them previously, that if put to bulls of the Duchess family, this cow, called Matchem cow, would not breed a calf worth less than 100 guineas; and the Oxford premium cow was her first calf afterwards—and her half sister by Short Tail bull, (2621) is a better cow than even the Oxford cow. She has brought me two roan bull calves to Duke of Northumberland, and is now turned four years old; these calves are both very promising. And as a proof of the great improvement this tribe make, 2d Cleveland Lad went into Northumberland before he was two months old, in May, 1838; on the 6th of June last, he left Northumberland, having been kept on one of the highest hills there on which grain is grown; he was weighed on coming here and his weight 160 stones; on the 30th of July, he was again weighed, and had gained 24 stones in the 54 days; or 12 lb. over 6 lb. per day—or 3 stones of 14 lb. per stone, per week—weighing then 184 stones; a greater growth than I ever knew gained in the same space of time, and he was regularly served to cows during the time. The Oxford premium cow, calved Oct 5th, 1838, and was milked regularly every meal, twice a day, till Oct. 1841, bringing a calf annually; and in September, 1841, would have weighed above 100 stones of 14 lbs. per stone, and on grass only during the summer of 1841, she and two others going on two acres of grass, till so bare that they leaped the fence to get better food."

OHIO SILK GOODS.

Mr. J. R. Howard advertises in the Zanesville Gazette, vestings, ladies' dress silks, hosiery, drawers, shirts and caps, from the manufactory of John W. Gill, of Mt. Pleasant, Jefferson county, Ohio. Mr. Gill seems to be rapidly improving the quality and increasing the quantity of his fabrics, and we are happy to see the prosperity of this branch of industry.

CUTTING STRAW, HAY, CORNSTALKS, &c., FOR FODDER.

THERE are few farmers unwilling to admit that straw, cornstalks, and even hay, are far better for food when cut, or converted into chaff, than when fed out uncut; indeed, this is one of those things that are self-evident to all who understand any thing of the action of the stomach on food, or what is necessary to nutrition. Great, however, as is the acknowledged benefit of feeding animals in this way, the few that attempt it only serve to show how deeply rooted the habits of the farming community are, and how averse they are to all change.

There are many advantages in cutting hay, straw, and cornstalks, when used for fodder, or the food of animals. In the first place, there is little or no waste of food. Every farmer is aware that of hay, clover hay in particular, when fed without cutting, a very large portion, and of cornstalks nearly one-half, and that the most nutritive part, is rejected by the animal and wasted. Secondly, it is presented to the stomach in a condition the most proper for the action of the digestive organs, an essential point in ascertaining the necessary amount of food required to keep an animal in condition to travel or to labor. Thirdly, an animal consumes much less time in making its meal, or filling its stomach with cut food, than when uncut; a most important matter to the poor animal that requires rest after labor, and not to be compelled to spend half the night in eating to satisfy hunger, when it ought to be quietly sleeping; and lastly, there is a great saving in the quanity of food consumed, to keep an animal in equally good condition, or fit to perform a given quantity of labor.

It appears from a statement in "British Husbandry," vol. I., page 141, that the allowance of food to cavalry horses, is 12 lbs. of hay and 10 lbs. of oats, or 22 lbs. in all; but experience has proved that work horses or cart horses will require 28 to 30 lbs. to keep them in good condition; and the large dray horses of the metropolis consume from 36 to 40 lbs. of hay and oats daily. The great contractors, the Messrs. Wiggins, allow their heavy horses 16 lbs. of clover hay, 4 lbs. of straw, and 18 lbs. of oats daily. This is a much less quantity than is usually consumed, or rather wasted daily by our ordinary farm horses, and proves that we are very far from being as economical as we might be in the matter of feeding. In the 19th volume of the Sporting Magazine is a letter from Dr. Sully, a physician of extensive practice, giving the results of his experience in feeding horses, and they are the more entitled to notice, as made in all respects with the greatest care and precision. The animals upon which his experiments were made, were his own saddle or draught horses, usually driven at a rapid pace, and yet kept in perfect working order. The kinds of food used by Dr. Sully, were divided into four classes, in the following proportions, and experience proved that they were nearly equal in keeping the animals in good condition; a slight preference being, however, given to the first and second classes, of which potatoes form a part:

	1st. lbs.	2d. lbs.	3d. lbs.	4th. lbs.
Bruised or ground beans, peas, or white corn,	5	5	10	5
Hay, cut into chaff,	7	8	10	8
Straw, do.	7	10	10	8
Steamed potatoes,	5	5		
Malt dust, or ground oil cake,	..	2	..	2
Brewer's grains,	6			
Bran,	..	..	..	7
	30	30	30	30

It must be remembered that the "white corn" mentioned is not Indian corn, but the common white grains, such as barley, wheat, &c., and that the same quantity of ground Indian corn might be substituted for the grain in each of these cases. All this food was made into what is called manger meat, that is, it was cut and mixed in tubs, and fed in the manger, no racks being used for hay or straw. Two ounces of salt were allowed to the daily feed of each horse; but this we think a rather liberal allowance. Any farmer who will look at this table, and then at the amount of food he is in the habit of giving his horses, in hay and grain, will see there must be a great loss somewhere, and might readily calculate whether there would not be a saving effected where a number of horses are kept to justify the purchase of the fixtures necessary for such a preparation of food. A few years since, a failure in our hay crop compelled us to keep our working horses on cut straw and corn meal, with two or three carrots thrown to each horse daily, and never have we had our teams in finer condition, or better fitted for the labor of the farm than in that year. Our rule is to salt our horses once a week, and to mix with the salt for each animal a handful of ashes; as a preventive of disease, such as bots, colic, &c., we think this method unrivalled. In no country in the world are the great principles of economy in the management of the farm so thoroughly studied, and successfully practiced, as in Flanders, and no where are the farm horses so universally fat and in fine condition for labor, as there; yet the food is all cut, ground, or steamed, before using, and racks in stables for horses are unknown. In England, where extensive experiments have been made to test the comparative merits of feeding prepared and unprepared food, the saving effected by cut or prepared food has been estimated at from one-fourth to one-sixth of the expense; probably one-fifth may be about the true medium. It may be added here, that the arguments in favor of cutting food for horses, are, so far as the same kinds of food are concerned, equally conclusive in favor of so feeding other stock.

The things most necessary for farmers who would like to feed their stock economically and yet effectively, (for the common economy of farmers in this respect, is the greatest of losses,) would seem to be a warm range of stabling, and the proper machine for cutting hay or straw, and breaking or grinding the grain. Whatever may be the method of feeding animals, it is indispensable for their comfort or thrift that they should be provided with comfortable, well ventilated, but not *hot* stables. The man who thinks to keep an animal of any kind in good condition, exposed to the cold and storms of our winters, must have paid little attention to some of the first principles of animal economy, and must have provided himself with an extra supply of fodder, as it will surely be needed. A little attention to keeping up the animal heat by comfortable stables, would save much food that is now required for that purpose, and which is far more costly than providing the stables.

The implements necessary for feeding animals in this way, are not costly. A straw cutter worked by hand, or what is better, by horse power, will convert, in a few hours, hay or straw enough into chaff to last for days or weeks. The grain can be bruised or ground at our corn cracker mills, or some of those mills invented for the farmer's use and adapted to such purposes, may be readily procured. It surely is not a hard way of feeding horses, to mix the food, cut straw or hay, and meal or roots, in a comfortable stable; and experience will convince any one, as it has us, that it is an expeditious one. One of the most decided advantages of a chaff cutter, particularly if worked by horse power, is the facility with which the thick, and usually wasted stalks of Indian corn, may be converted into the most palatable and nutritious food. That great improvements may be made in our methods of feeding animals, few will doubt; that the importance of the subject demands more attention than it has yet received, will not be disputed; and any man who will furnish facts, having a bearing on the matter, will confer a benefit on his fellow farmers.

FINE STOCK GOING WEST.

THE farmers of the West appear to understand their true policy, and the advantages of their position. There is no part of the world offers such advantages for raising stock, as the whole valley of the Mississippi. We find in the Michigan City Gazette, that "Mr. T. J. Field has lately returned from Onondaga county, N. Y., bringing with him eleven hundred sheep, principally fine Saxons, and a very superior lot. Mr. Field availed himself of the opportunity of attending the great Agricultural Fair at Rochester, and was much gratified with the exhibition. He bought at Auburn a beautiful Durham heifer, two years old, and weighing 1,400 lbs." Northern Indiana has many public spirited farmers, and any district that has such men as Robinson, Steinbergen, Clark, Field, and others, will be sure to go ahead.

STATE OF AGRICULTURE IN EASTERN MASSACHUSETTS.

THE following brief notes were taken during a late flying trip.

A steady general improvement is apparent. The soil of this section is generally of a hungry, gravelly nature, yet varying considerably in its quality and powers of production. The farmers are so dividing their lands, as to adapt every foot to its most appropriate crop. The first settlers of the country and their immediate descendants, committed a great error in clearing too much of the land. The forest was cut off, and cultivation introduced, where the plow ought never to have entered. The consequence was, a scarcity of wood and timber, and leaving a great deal of unproductive soil. But the present enlightened generation are beginning to correct the mistakes of their fathers. Their wood-lands are protected with almost as much care as their corn-fields; the seeds of the pine have been planted in some of their old worn out fields; the barren knolls which were once such disagreeable objects in the landscape, are becoming covered with beautiful evergreen groves. An agreeable aspect might be given to almost every district of country, if due care was only taken to adapt the various productions to the locations to which they are best suited. Such a piece of ground, say, is not worth cultivation; it will not, perhaps, produce five bushels of rye to the acre. Then let it go to wood; and if it will not bear hard wood, try pine; if it is too poor for white pine, take pitch pine, which even the most barren sands of Cape Cod produce in abundance. Wood will soon be more plenty here, than it was twenty years ago, and with the improvements in culinary utensils, and in warming apartments, the expenses for fuel are and will be less.

At Bridgewater we passed through the beautiful village where the Plymouth Co. Ag. Society holds its annual exhibitions, and which we have taken much pleasure in attending,

"In days of auld lang syne."

This section of country abounds in peat bogs, or swamps. The natural growth of these swamps is ash, maple, yellow birch, &c. They are also the home of several varieties of indigenous grapes, some of which are found to be more productive and nearly equal in quality to any of the exotic sorts, when raised in the open air. The soil of these swamps is composed of vegetable substances, and is in some places of very great depth. It is found to be highly valuable in making compost manures, and as a dressing for the up-lands. When first taken from its bed, this soil, or "muck," sometimes contains an acid, which must be extirpated before it is useful as a manure. The use of alkalis, ashes, &c., are found valuable in developing and increasing its fertilizing properties. Exposure to the action of frosts and rains for a time, it is found dissipates the acid and renders the food for plants which the soil contains, available. Great care is taken to save all the animal manures; there are cellars under most of the barns and stables where the manure is mixed with bog soil, &c., its properties not being permitted to waste away by rapid fermentation.

Much attention has been paid to reclaiming the swampy and boggy lands of this section, by draining, eradicating the wild growth, and substituting the cultivated grasses in its place. The most productive grass lands in this neighborhood, are of this character. When once brought well into grass, they require very little care or trouble to keep up their productiveness for several years. When they require renovation, it is found to be best to plow them with a sharp plow, subverting the sod as smoothly and evenly as possible, and sowing grass seeds immediately on the furrows. The month of August is found to be the best season for this purpose. The lands are then generally sufficiently dry to work on, and the young grass has ample time to strike a deep root for itself before winter sets in.

The farmers here, usually deem it most profitable to cultivate but little land, and manure that highly. They raise Indian corn enough generally, for their own use, and as large crops of this grain are got here as in any part of the country. We found in this neighborhood, a variety of corn which is believed to be better adapted to this latitude than other kinds. Although a small sort, it is found to yield abundantly, from sixty to eighty bushels to the acre being frequently produced.* The stalk is small, which makes the fodder particularly valuable for stock.

The town of Bridgewater is distinguished for its various manufactures of iron, cotton gins, &c., and also for its excellent Normal and other schools.

At Easton are the shovel works of Oliver Ames, the most extensive works of the kind in the United States. Mr. Ames has here invested a capital of one hundred thousand dollars, and has brought the manufacture of shovels and spades about to perfection. None of the English articles of this kind that we have met with, are equal to his. He sends his articles to all parts of the Union, and even to the West Indies and South America.

Agricultural Implement Establishments—Growth of Boston, &c. Few cities of the Union have been so uniformly and constantly prosperous, as Boston. A large amount of surplus capital has enabled her to go through all the revolutions in business unscathed; and the construction of the numerous rail-roads which connect her with the interior, bring to this market the products of a vast extent of country, and increase the growth and business of that place. It is said that there was more capital expended in building in Boston, last year, than there ever was in any previous year, the number of buildings erected being eleven hundred and eighteen.

There are several noted establishments for the sale of agricultural implements in this city. Jos. Breck & Co., proprietors of the New England Farmer, have a large seed store, and a large assortment of agricultural and horticultural implements.

Ruggles, Nourse & Mason occupy a large hall over Faneuil Hall Market. The establishment of this concern is on a very large scale. Their sales of implements last season, amounted to forty thousand dollars. Their articles, which are manufactured at Worcester, appear to be of the very best character and finish. Among the articles which we particularly noticed as being valuable improvements, were their sub-soil plows, the form and structure of which they have so modified and improved that they can afford to sell them at from $8 to $15, according to the size. The smallest and cheapest size is adapted to the draught of a yoke of oxen, or pair of horses, but in ordinary soils would answer for four oxen or horses. Their first sub-soil plow they imported from Scotland. It was a ponderous thing, and cost, including charges of transportation, $80. We are of the opinion that the use of the sub-soil plow will be found very beneficial. By it the ground may be thoroughly loosened to the depth of a foot or more if desired, below what is reached by the common plow. It is designed to work in the furrow of the common plow, and loosens without bringing the cold soil to the surface. On lands where plants may suffer from want of moisture, this stirring the soil to a greater depth will enable them to strike deeper root, while at the same time it promotes the exhalation of moisture from below, and brings it within the reach of the roots of the plants. On the other hand, where the sub-soil is too retentive of water, this same operation allows the surplus to descend into the earth, so that the plants are not injured by too large a quantity coming in contact with their roots.

Messrs. R., N. & M.; have been for sometime noted for the excellence of their plows for common plowing. Their Eagle Plow has been very successful at the agricultural exhibitions and plowing matches, in Massachusetts and elsewhere. They have also a new plow which they call the Improved Eagle, which is calculated to do more work than the Eagle. This received the first premium at a very particular trial made in Essex county, Mass., in October last.

We also noticed at this establishment, a churn, called "Kendall's Churn," which seems to be a decided improvement over any other kind we have seen, not excepting Gault's, to which we have heretofore given the preference. Its cost is from two to three dollars, according to size.

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* A sample of this variety of corn may be seen at the Cultivator office, which we should be happy to distribute among those who will give it a fair trial.

The large establishment of Messrs. Prouty & Co., we had not time to visit.

At Worcester we visited the implement manufactory of Messrs R., N. & M. Any farmer or mechanic who may have the opportunity, would find an hour or two spent here much to his advantage. The wood-work of their plows is all got out and fitted for the plow by machinery, even to the making of every mortice and tenon, and boring every hole. Being thus made, all the plows of the same pattern run exactly alike, and if any part of the plow should break, any person can put in a new corresponding piece, (by keeping the part on hand,) with the greatest precision. The machine which so admirably performs the work of preparing the wood part of the plows, was invented by Mr. Matthews, a very ingenious mechanic in the employ of Messrs. R., N. & M.

The metal which Messrs. R., N. & M. use for making their plowshares, is old rail-road wheels, which they think is the very best material for this purpose. They *chill* the edge of the share, so that it becomes harder than case-hardened steel, and will wear to a sharp edge. They have shares of different width and shape for their plows, to fit the different soils, and for plowing bog meadows they use a share to which a strip of steel is nicely fitted, that forms the edge, and may be ground sharp. This would make their plow exactly the thing wanted for plowing the prairies of the west.

In passing through the manufacturing districts of Massachusetts, one cannot fail to be struck with the indications of comfort and happiness which the mechanics and operatives exhibit. Their dwellings are neat, tasteful, and convenient; and their yards are ornamented with evergreens, shrubs, and flowers, which are always tokens of a cultivated mind.

In fact, the mechanics of Massachusetts occupy a very prominent position for respectability and influence—a position to which their character and intelligence evidently entitles them; and it is gratifying to see this class of citizens filling, with so much honor to themselves, their proper station in society.

DISEASE IN POTATOES.

Dr. G. B. Smith, a name of weight in the agricultural world, in a letter to an editor in Baltimore, suggests in relation to the present extensive rot in the potato, (which he says has destroyed large quantities of Mercers and Pink-eyes this season, in that section of country,) that it is caused by "hot damp weather, as the potato is approaching maturity," and that the disease is a "*fungus* belonging to the same class of vegetable growth as rust and smut in wheat, smut in corn, mould and mildew." He says, "I would recommend that all diseased potatoes be carefully taken out and thrown away, that lime, either quick or air slaked, be sprinkled among the healthy potatoes, just enough to whiten their surface slightly. * * * The appearance of the disease clearly indicates its character, and the remedy seems almost as clearly a matter of course."

We think these suggestions are important, and hope they will be acted upon at once, where such a remedy is required. That it was owing to unusually hot and moist weather succeeding that which had been remarkably dry as well as warm, seems probable; and we hope the subject will not be lost sight of, until the true character of this formidable disease is established, and, if possible, some check to its spreading discovered.

THINGS OF IMPORTANCE.

To have your cellar well secured against frost; your windows and doors in good repair; your woodhouse with at least a year's stock of fuel cut and piled in it; your yards warm and comfortable; your stables clean and well ventilated; your farm implements carefully cleaned, repaired, and housed; your district school attended to, and every thing provided to facilitate education; useful and instructive reading for long winter evenings; a kind and benevolent heart to the poor; plenty of food for your animals; the receipt of an agricultural journal; and though last, not least, exemption from debt, and a conscience at peace with God and man.

HINTS TO YOUNG MEN.

"Who aims at excellence will be above mediocrity; who aims at mediocrity will fall short of it."—[Anon.

Be industrious. We do not mean here the industry of the hands alone; but that perseverance in whatever we undertake, that is the sure precursor of ultimate success. Never allow the mind or the body to stagnate; activity is necessary to the health of both. Always have some worthy end in view, in whatever you undertake; remembering that to fail with good intentions, is more honorable than success in an evil cause.

Cultivate your mind. It is of more importance to the young, that their reading should be select, rather than extensive. One volume well understood, on any important topic, is better than half a dozen merely skimmed. There are many subjects of general utility, with which every man should have a partial knowledge at least; but it is one of the great faults of modern education to spend too much time on studies that rather burden and clog the mind, than strengthen and inform it for life's practical duties. Reading, or studying without some definite aim, is likely to lead to few useful results. How many men there are who have spent a large part of their lives over books, of whom it may be said, "they remember a mass of things, but nothing distinctly." It is possible to cram the mind with masses of indigestible materials, destructive alike to a healthy and a vigorous action of the intellectual powers. Such is not the cultivation of the mind required by a young American farmer.

Be economical. No matter if your parents are worth millions, it is not the less proper that you should understand the value of money, and the honest, honorable means of acquiring it. What multitudes of young men, particularly in our cities, make fatal shipwreck of reputation, health, and eventually of property, by a neglect of this simple maxim. They are aware that their fathers obtained their wealth by habits of industry, but they are ashamed of the very name. They forget that wealth in this country passes rapidly from one to another, and that he who is rich to-day may be poor to-morrow; or that he who relies on wealth amassed by his father, may end his days in a poor-house. It is for the young here to say whether by industry and economy he will secure competence and respectability, or by extravagance and idleness become a worthless beggar and sponging outcast.

Be just. In the course of life a man frequently finds his interests or his opinions crossed and thwarted by those from whom he had a right to expect better things, and the young are apt to feel such matters very sensibly. But be not rash in your condemnation. Look at their conduct carefully, and be just to the motives that prompt it. You may find, that were you placed in their position, the course you now condemn would be the one proper for you, and the one you would be under obligation to pursue. A little cool consideration would avoid much censoriousness.

Shun avarice. One of the most disagreeable characters on earth, is that of the grasping, avaricious, penurious man. Generosity is perfectly compatible with economy; and the means which enable some of our most noble hearted, generous men, to do so much to benefit and bless mankind, are obtained, not by closefisted penuriousness, but by economy. The distance is not greater between the zenith and the nadir, than between the covetous and the economical man: the first banishes every just and honorable feeling from the heart, the other fosters and ministers to them all.

Determine to be useful. No matter what may be your condition in life, you have an influence, and that influence should always be exerted in a proper way. The young have no right to fold up their arms, bury their talent, and become the drones of the social hive. Aim high, but with prudence; act with determination and perseverance; let no obstacle drive you from the path of honor and duty, and you may be sure of eventual success. Riches are not within the reach of all: competence is; and the latter condition is preferable in every respect to the first. Remember the Deity helps those who help themselves, and that utility is the great end of human exertion.

DRY OR GREEN WOOD FOR FUEL.

Messrs. Editors:—I lately observed in a New England paper, an elaborate argument by a man apparently in sober earnest, in favor of using green wood for fuel in preference to dry; and I find there are many who entertain similar ideas. Although I have no doubts on the matter myself, I should be pleased if you would give your opinion on the subject through the Cultivator.

Inquirer.

An old book, the "Prompter," recommended that *back-logs* should be green, and the reason assigned was, that as only the *front* of the log should burn, a green one was better than a dry one, as the latter would be apt to get on fire on all sides at the same time. As back-logs have, however, gone out of fashion, this, the only admissible case in which green wood was the best, may be considered as testimony in favor of dry wood for fuel in all other cases.

Wood seasoned or dried at a temperature of 100° weighs about one-third less than green wood; for while some kinds will lose only about 25 per cent., there are others that will lose 50 per cent. As a cord of green wood will weigh on an average more than 4,000 pounds, every cord will contain some thirteen hundred pounds of water, or about one hundred and seventy gallons. This water must be raised to the boiling heat, and expelled by evaporation before the wood containing it can possibly burn. All the heat required for this purpose passes off in the latent state, and is lost to all useful purposes. The man, therefore, who burns green wood, loses precisely as much caloric, or in other words, of his wood, in every cord, as would be required to boil away 170 gallons of water. What part that would be, he can estimate for himself.

But, says the advocate of green wood, all the fluids of the living tree are not water. The sap holds in solution sugar, gum, starch, resin, &c., all of which are inflammable substances, or will burn. This is true; but none of these substances are lost when green wood is dried; all remain for the benefit of the fuel; on the contrary, none of these will burn until free from the water holding them in solution, and much of them is driven off by the heat required for that evaporation. View the matter then as we may, there is a loss in burning green wood.

The best wood for fuel is that which is cut green, split into suitable sizes, and thoroughly and quickly dried, with as little exposure to rain or moisture as possible. There are some who cut and split their wood while in a sound and green state; but this is left exposed to the weather perhaps year after year, until the substances we have named as originally existing in it, and which contribute so much to its value, have become wasted, and even the texture of the wood itself partially changed. Such wood is of little value; indeed, it may be doubted whether in this condition it will afford as much heat as when green. Wood, too, is frequently damaged by being cut when full of sap, and instead of being split and prepared for drying, it is left in logs, in which state the juices ferment, sour, and this chemical change seriously injures the wood for fuel. Experiments carefully made, have demonstrated that dry wood will keep the thermometer at a higher range, and for a longer time, than green wood will do, pound for pound of each being used in the trials. Dry wood should not be made too fine, when economy in burning is consulted. If too fine, the heat will be too violent, in proportion to its duration, whereas by allowing sticks of suitable size, the heat will be more equal and permanent. Our experience and our experiments have convinced us that burning green wood is vexatious in practice and miserable in economy.

WINTERING FARM STOCK.

Messrs. Editors—As we are now in the foddering season, I offer a few remarks on the subject of wintering stock. Having noticed in various sections, a want of attention on the part of the farmer, it may not be amiss to admonish him at this season of the year.

Many seem to say by their management, that young stock will not grow and thrive in winter, and some are compelled to skin more or less before spring, for want of attention. Let no more stock be kept on a farm than can be at all times in thriving condition, with shelters to protect them from the chilling blasts of winter, especially for the young; give them the best of hay, morning, noon and night; and if they do not thrive, a little grain may not be amiss. Calves may be fed oats in winter without injury, say a pint per day, till accustomed to grain; then increase the mess till you give a quart at morning and night. Calves thus wintered, with good pasture the following summer, when dressed in the fall, will weigh from five to six hundred weight. Many of our best colts are injured by the first wintering, and are not worth as much in the spring as when weaned in the fall. Thus you see a loss of fodder and growth, and many times midsummer is past before they begin to thrive. The growth of the stock is the profit of the farm, therefore daily care should be taken to see that they are constantly improving. Let every foddering show that your stock is gaining, and in the spring you will feel rewarded for your winter's toil.

Dutchess co., Nov. 23, 1843. J. G. W.

SOWING INDIAN CORN BROADCAST

Messrs. Gaylord & Tucker—Having seeen sundry interesting communications in your valuable journal, relative to the immense yield of corn sown broadcast, I am induced to give you "my experience," though it is the result of an experiment on a small scale. In the spring of '42, I prepared two squares in my garden, each 20 feet by 30, and sowed them with corn—about half a gallon to each square—though this is too much. When about waist high, I commenced pulling it up by the roots, and feeding it green, to a fine Durham heifer and some pigs; the latter devouring it as greedily as the former.

I pulled up and resowed these squares four times during the season, and kept the animals in the finest order, without any thing else worth naming. This year I did the same thing; and I am satisfied nothing will produce *half* as much as corn thus planted or sown. Every time I stripped a square, it was forthwith highly manured, and at once spaded up and resown; and this season I had corn thigh high, when frost came. I generally fed the corn as it was pulled up, but sometimes, for a relish or change, it was cut up and seasoned with meal and salt.

Memphis, Tenn., Nov. 23, 1843. Alpha.

CARE OF BEES.

Messrs. Gaylord & Tucker:—These interesting insects occupy a part of our garden. I prefer having them hung on a shelf supported by a frame, which prevents insects, the ants in particular, from climbing to them. I spiked pieces to the rafters of an out-house, on the north part of the garden. These pieces have the same pitch of the rafters; to these I pinned perpendicular pieces of boards, with cross pieces at the bottom; on these I placed a shelf, and affixed a roof of boards extending from the out-house roof.

Persons wishing their bees to swarm more frequently than they do under cover, may effect this object simply by exposing them to the rays of the sun. I speak from experience. Last summer I had two hives, neither of which swarmed during the summer. In the fall, I parted with one of them, and in the spring lowered the remaining hive, so that the rays of the sun had a strong power on the hive, whenever it shone, and it produced three swarms nearly at the same time, viz: on the 23d, 24th, and 26th days of June.

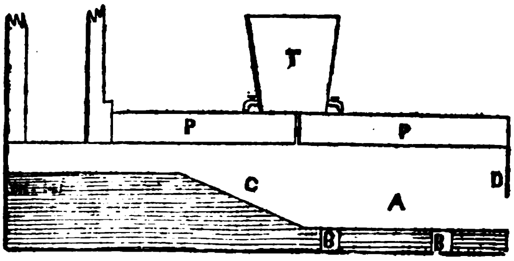
The grape vine is a pretty thing for bees to alight on when they swarm, and it should be planted near them for that purpose. I have never hived swarms with so little trouble, as when they alighted on the grape vine.

John M. Harlan.

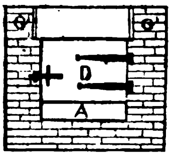
Chester Co., Pa., July, 1843.

There are two silk factories in operation in Richmond, Indiana, which manufacture the best silk for dresses, gentlemen's vests, handkerchiefs, &c.

Domestic Economy.



Sap Boiling Apparatus—Side view.—(*Fig.* 12.)



Front view. (*Fig.* 13.)

EXPLANATION.

A. Fire-Place or arch.

B. B. Air flues, going through under the wood to clear the coals and admit air.

C. Space for burning out extra coals.

D. Door to prevent the cold air striking the pans.

G. Wall to prevent the cold air striking the sides of the pans.

P. P. Pans nine inches deep; much better than shallow ones.

T. Tub for feeding.

Sheet iron covers may be used to advantage for shutting out cold air.

To manufacture on a large scale, use another pan, or increase the width.

MESSRS. GAYLORD & TUCKER:—I write you at this time, to communicate to you a plan (figs. 12 and 13,) for boiling sap for sugar, which we have used and find to be a very great convenience and improvement on the common mode of boiling. The advantages are: 1st. It saves a large amount of fuel; 2nd, hemlock, or other soft wood, if cut in season to dry, is as good as any; 3d, the manner of admitting air causes a more complete and rapid combustion with any kind of fuel; 4th, the neatness of it in guarding the boiler from smoke, soot, coals and ashes; and last, that a person can tend it without being burned and smoked almost to death. I have a shed built over this furnace, which forms a safe and cheap place of storage for the tubs, during the year.

I am sure that if this plan was generally adopted, or some other as good, it would greatly increase the amount of home manufactured sugar, and save much to the people of the northern states, by making the manufacture of it a pleasure instead of an irksome task.

Royalton, Vt., March 30, 1843. AN OBSERVER.

MANUFACTURE OF MAPLE SUGAR.

THE maple sugar exhibited by Mr. JOEL WOODWORTH of Jefferson county, and which received the first premium of the State Ag. Society, at Rochester, was far superior to any thing we had before seen, being nearly equal in whiteness, purity, and grain, to the best refined loaf sugar. The following is the statement furnished by Mr. W., of the manner of making and clarifying this superior sugar:

"In the first place, I make my buckets, tubs and kettles all perfectly clean; I boil the sap in a potash kettle, set in an arch in such a manner that the edge of the kettle is defended all around from the fire; I boil through the day, taking care not to have any thing in the kettle that will give color to the sap, and to keep it well skimmed. At night I leave fire enough under the kettle to boil the sap nearly or quite to syrup by the next morning; I then take it out of the kettle and strain it through a flannel cloth into a tub, if it is sweet enough; if not, I put it into a caldron kettle, (which I have hung on a pole in such a manner that I can swing it on and off the fire at pleasure,) and boil it till it is sweet enough, and then strain it into the tub and let it stand till the next morning; I then take it and the syrup in the kettle and put all together into the caldron and sugar it off.

"I use, to clarify, say 100 pounds of sugar, the whites of five or six eggs well beaten, about one quart of new milk, and a spoonful of saleratus, all well mixed with the syrup before it is scalding hot. I then make a moderate fire directly under the caldron, until the scum is all raised, then skim it off clean, taking care not to let it boil so as to rise in the kettle before I have done skimming it; I then sugar it off, leaving it so damp that it will drain a little. I let it remain in the kettle until it is well granulated. I then put it into boxes made smallest at the bottom, that will hold from 50 to 70 pounds, having a thin piece of board fitted in two or three inches above the bottom, which is bored full of small holes to let the molasses drain through, which I keep drawn off by a tap through the bottom. I put on the top of the sugar in the box a clean damp cloth, and over that a board well fitted in so as to exclude the air from the sugar. After it has done, or nearly done draining, I dissolve it and sugar it off again, going through with the same process in clarifying and draining as before."

MAKING BUTTER IN WINTER.

OUR correspondent, "G. C. M." of Greenfield, Mass., after alluding to the difficulty often experienced in making butter in cold weather, gives the method pursued by his family, as follows:—"When the milk is strained, it is put upon the stove and heated to near or quite scalding heat, and then set away for the cream to rise. After sufficient cream is gathered for a churning, it is placed where it will be kept warm a sufficient time for it to sour, (usually about 24 hours,) when it is subjected to the process of churning, which rarely occupies more than 20 or 30 minutes. Previous to our pursuing this method, it often required from two to three and sometimes four hours to accomplish the same result."

In this way, we doubt not, as fine yellow butter may be made in winter as in summer. Mr. MERRIFIELD, a farmer of this county, by whom we are supplied with butter of the finest quality, lets the milk stand twelve hours, when it is removed to the stove, and scalded over a slow fire to near boiling heat. The pans are then removed to the cellar to cool. By this method he finds no difficulty in making good butter in winter.

TO MAKE BISCUIT OR ROLLS.

MESSRS. EDITORS—I would be glad to acquaint yourselves and the readers of the Cultivator, with the following receipt (not generally known, I believe,) for the making of good and wholesome biscuit or rolls. It has been in use for a length of time with some of my friends, and is their usual method of making bread in the above mentioned forms. Should any fail on the first or second trial of the experiment, they may be assured of a defect in some of the materials employed, or a want of strict compliance with the terms of the receipt, which are as follows:

Put two tea spoonsful of cream tartar finely pulverized, into one quart of dry flour, then dissolve three fourths of a tea spoonful of sup. carb. of soda into warm new milk, sufficient when mingled with the flour, to make the paste of the ordinary consistence for soft biscuit; then mix and bake in the form of rolls or biscuits, for about twenty minutes. These directions, if strictly followed, will render the bread extremely light and of a superior whiteness and flavor. H. L. Y.

East Avon, N. Y. Dec. 19.

"NEST EGGS."

"G. C. M." informs us that he manufactures "nest eggs" as follows:—"Take eggs and make holes in the large ends about one-fourth of an inch in diameter, and in the small end make them the size of a pin; by blowing, force out their contents. Then take calcined gypsum and Spanish white, about equal parts; mix them with water to the consistency of stiff paste, and fill the shells quite full with it, and place them in a warm place to dry. When dry, the substance will be quite hard. If the hens chance to break the shells of such eggs as these, there still remains good formed ones, and those of better consistency than chalk."

TO COOK A BULLOCK'S HEART.

Wash it well and dry it thoroughly; then prepare the seasoning, made with crumbs of bread, thyme and parsley, or any meat herbs, and an onion chopped fine, with a little suet and some pepper and salt, all mixed together and put into the heart, the opening of which is to be sewn up so as to prevent the stuffing from getting out. Bake it, and while it is cooking, rub it occasionally with lard, to prevent the skin from becoming too hard. —[Condensed from an article on cottage economy and cookery, in the Journal of the Royal Ag. Soc.]

BACON AND CABBAGE.

This is a very common dish in this country, particularly in the south and west. The articles are commonly put into the pots separately, but the Journal above referred to, says "it will be found a great improvement, if instead of that, a hole be cut in the head of the cabbage, and a quarter or half a pound of fat bacon is thrust into it as a plug. The head of the cabbage should then be tied over so as to confine the leaves, and the cabbage boiled in a napkin, to prevent all escape of fat, which will thus be imparted to the vegetable, and render it so much more mellow and savory, that any housewife who tries it will never dress it in any other way."

TRIPE AND SOUSE.

Tripe, after being scoured, should be soaked in salt and water seven or eight days—changing the water every other day—then boil it tender, which will take eight or ten hours. It is then fit for broiling, frying, or pickling. It is pickled in the same manner as souse.—*Mrs. Ellis's Housekeeping Made Easy.*

Souse.—Take pigs' ears and feet, clean them thoroughly, then soak them in salt and water for several days. Boil them tender and split them—they are then good fried. If you wish to souse them when cold, turn boiling vinegar on them, spiced with pepper-corns and mace. Cloves improve the taste, but turns them a dark color. Add a little salt. They will keep good pickled five or six weeks. Fry them in lard.—*Ib.*

Veterinary Department.

BLACK LEG IN CALVES.

Messrs. Editors—Having seen a number of articles in your excellent paper concerning a disease called the black leg, (which is so formidable an enemy to the rearing of calves,) and knowing that any light on the subject would be very acceptable, I feel in duty bound to give you what has come to my knowledge, and what little I have seen concerning this disease, the remedy, &c. This disease generally attacks the fattest and best; therefore it is hardly for the interest of the farmer to keep his young cattle in very high order. It has proved fatal in every case in my knowledge with one exception. We have met with some loss every year since my remembrance, in this neighborhood, from this disease, and some years to quite an extent. We have generally practiced bleeding in the fall as a preventive during winter, and for a few years I believed we had a sure remedy. I practiced it four or five years, and never lost any in the time, except those that by mistake or for some reason, were not bled; but in the winters of 1841-2, I undertook to winter thirteen calves, all of which had been thoroughly bled; and before spring, five of them died of the black leg; they were kept in a small yard, and not permitted to run out any, and were housed nights, and kept in good order; I thought it owing in part to their close confinement and being in good flesh, and last winter I let my calves have more chance for exercise, obliging them to go eighty rods for their drink; but notwithstanding, about the middle of the winter I discovered that one of the best had every symptom of the above disease, and I counted him as good as dead; but at the suggestion of a neighbor, I gave it a strong dose of lobelia, and got him on his legs and made him exercise much against his will, and within one hour he began to eat hay and got well immediately. G. S. P.

Randolph, Vt. Nov. 1, 1843.

BLIND TEETH IN HORSES.

Referring to an article on this subject, in the Dec. No. of the Cultivator, Mr. L. Physick of Maryland, in a letter to us, says:

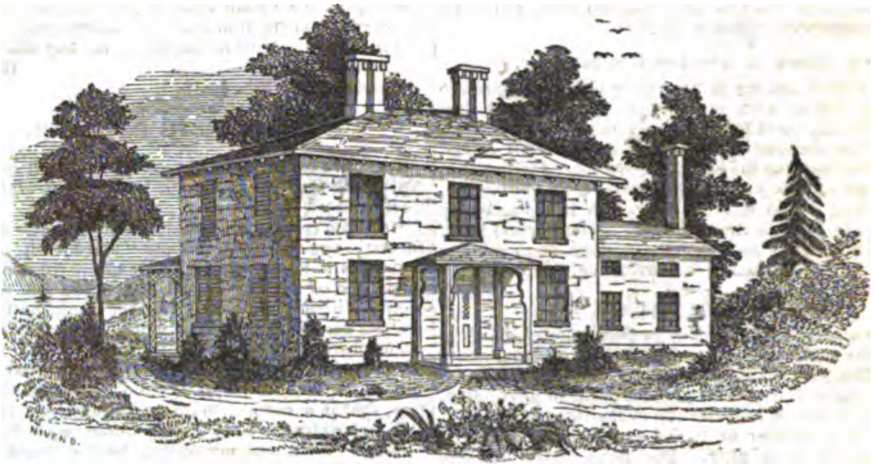
"I observe that you are desirous to obtain all the information you can collect about "blind teeth" in horses. This was a matter entirely new to me till last summer, when one of my horses had nearly lost the use of his sight; which I attributed to over work, he being of a restless disposition when at work. Some time after the predisposition to blindness was discovered, (the sight of one eye being almost, if not entirely gone,) he was sent to the blacksmith to be shod. The smith told the boy, that if a certain tooth, pointing it out to the boy, was not extracted, the horse would soon be entirely blind; and without my assent, took a hammer and a piece of bar iron, as described by the boy—rather barbarous pulling—and knocked it out. The boy said that there was no evidence of pain experienced by the horse, and that the tooth dropped out with the first stroke of the hammer. Whether this was the cause of blindness or not, I cannot say; but the horse very shortly afterward recovered his sight, which since then continues good."

REMEDY FOR BARREN SOWS.

We here give another extract from the letter of Col. Bonner, alluded to in another part of this paper:

"While writing, I have thought it not amiss to give you the favorable results of an experiment of mine upon a fine Berkshire sow, purchased last fall of Mr. C. N. Bement, near your city. She was over two years old when I bought her, and although she ran regularly with his boars she had never produced a litter of pigs, or had even been in pig, to his knowledge. With a full *knowledge* of these facts, I purchased her. On the first of November last, I found her in season for the boar, and turned her in the pen to one of mine; he served her repeatedly for two days. In about twenty days I found her again in season for the boar, and was persuaded by many friends that she was too fat to breed. I put her again to the boar, and turned her out in the woods *without any food*, to reduce her. She continued to reduce daily, and got *quite poor*, but was in season for the boar every eighteen to twenty-one days, and was as regularly served by different boars, until about the 10th of June. I then concluded to half spay her; or, in other words, to take out one of her ovaries, or prides, as we Georgians call them. I did so by making or cutting an incision in her right side, and took from her as large a pride as I ever saw. In the latter part of July thereafter, I discovered her again in heat for the boar, and turned her into a pen to my imported boar, Ontario, and I am pleased to tell, that she not only proved in pig, but that on the 13th inst., she produced me six fine pigs—five sows, and one boar pig. I would further remark, that she had on previous occasions been served by Ontario, and that her condition as to flesh, &c., was about the same it had been for several months, and the treatment precisely the same. It is the first and only instance of the kind I ever heard of, and thinking it possible that some of your many readers might have a sow similarly constituted, concluded to give you the above fact."

We know of several instances where great disappointment and loss has been caused by the failure of sows to breed. Although, so far as we know, his remedy is perfectly novel, it is based on strict physiological principles. Excessive ardor, or frequently repeated sexual connection, is usually a hindrance to impregnation, and the removal of an ovary, by lessening the first, had a direct tendency to produce the result desired. It is more than possible that the reduction of flesh might have been also useful, as the pressure of fat usually closes the Fallopian tubes and effectually prevents impregnation.

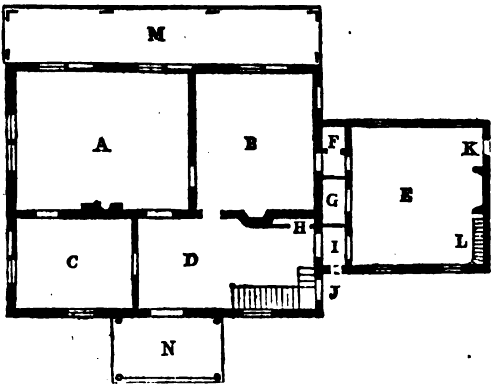


COTTAGE RESIDENCE,

Now erecting for Dr. John A. Lockwood, U. S. N., *near New-Castle, Del., looking from the Northwest.*

Messrs. Gaylord & Tucker—I herewith send you the plans of a Cottage Residence now erecting near New Castle, Delaware, for Dr. John A. Lockwood, U. S. N. The building is of brick; to be stuccoed and colored in imitation of stone. The whole area under the principal building is cellar room. The building is 28 by 32 feet, and the wing 16 by 19 feet. On the east side looking toward the Delaware, is a veranda the whole length of house, (32 feet,) and on the west, or entrance front, a porch 8 by 10 feet. The floors of veranda and porch are of stone.

River Front.

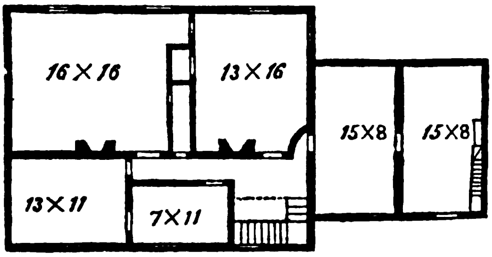


Entrance Front.—Plan of Principal Floor.—(Fig. 4.)

A. Drawing Room, 20 by 16.
B. Dining Room, 18 by 16.
C. Library, 13 by 11.
D. Vestibule, 18 by 11.
E. Kitchen, 15 by 16.
F. China Closet.
G. Kitchen Pantry.

H. Cloak and Umbrella Closet
I. Wing Entry.
J. Door to Cellar.
K. Kitchen Door.
L. Servant's Stairs.
M. Veranda.
N. Porch.

By referring to plan of principal floor, it will be seen that the casement windows, opening upon veranda from without, have the appearance of double windows, whereas nothing but single casement windows are seen. This was done for two reasons; first, that the river front might present an open and inviting appearance, (the real and false windows all having venetian blinds,) and secondly, that the real windows might be in their proper places in reference to the Drawing and Dining Rooms. The same device is resorted to in the Library, (C.) while a real double window is seen in the end of the Drawing room, (A.) This must answer as a cheap substitute for a bay window, which would have been desirable on some accounts. Many would also prefer folding doors between drawing and dining rooms, but in this instance they were not desired.



Chamber Floor.—(Fig. 5.)

The contracts are all made, and the building is now in progress of erection, the cost being a trifle over $2,000.

My intention has been to design a cottage that should be economical in its cost, and yet of a character that would harmonize with that beautiful rural district—its undulating bosom, its ancient and luxuriating thorn hedges, with an occasional "brave old oak," or verdant grove of fruit or forest trees, and the whole skirted on the east and south by the broad waters of the Delaware. I trust I shall not be chargeable with the crime of having done any thing to mar the fair face of that beautiful landscape. Yours with esteem,

Newburgh, Sept. 23, 1843. T. M. Niven.

TOBACCO CULTURE—INFORMATION WANTED.

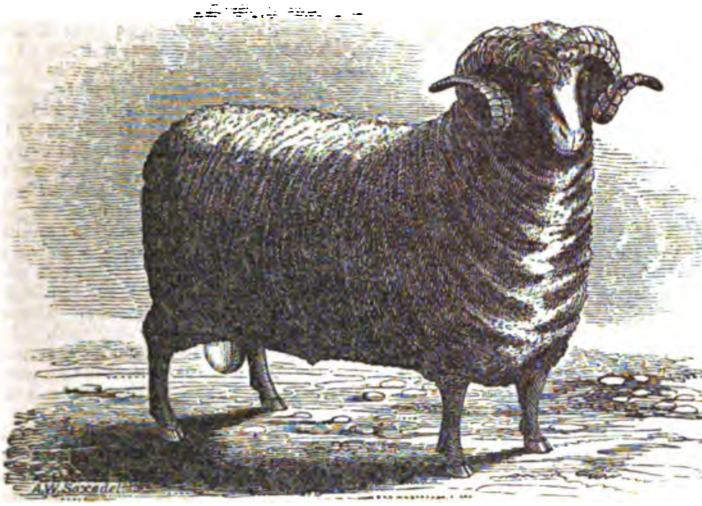
We shall be glad to receive a reply to the following inquiries, from some one familiar with the cultivation of Tobacco:

Editors of the Cultivator—Will you, or some of your southern correspondents, give through your valuable paper, some information relative to the culture of Tobacco, in the latitude of New-York. What kind of soil—time of planting—manner of curing—value in market, and where can seed be procured?

Yonkers, Dec. 1, 1843. H. S.

The U. S. Senate has a superb Brussels carpet made in Germantown, near Philadelphia, of superior texture and rich colors. Scarlet ground with yellow stars. The new President's room has another splendid carpet made in Thompsontown. An extensive manufactory of Brussels carpeting and rugs is carried on in the Sing Sing prison.

By a measurement lately made by one skilled in curiosities, it is found that the silk worm's thread is so fine that one drachm of it will extend a distance of one hundred and eighty-five miles and ninety-two feet, while the same weight of a common grass spider's thread will reach two hundred and twelve miles and seventy-four feet.



"FORTUNE," A PAULAR MERINO BUCK,

Bred and owned by SOLOMON W. JEWETT, *Esq. of Weybridge, Vermont.*

MESSRS. GAYLORD & TUCKER:

The Paular Merino Sheep, when originally imported from Spain into this country, were, compared with the other Spanish fine wooled sheep, large strong animals, with heavy fleeces, containing a considerable quantity of jarr or coarse hair. The form of this variety was good, but they were characterized by a huge dewlap extending from the jaw to the brisket, so plated and doubled, that if severed from the neck, it would extend to twice the length of that member. Numerous large folds or wrinkles in the skin, extended over the neck, and occasionally on other parts of the body. An ugly head, the face often singularly wrinkled; the former surmounted with massive horns, completed the portrait. The wool was exceedingly compact, gummy, black, and hard to the feel when grasped externally. Their weight of fleece among prime sheep of the variety, was from six to seven pounds of wool, (washed on the back,) to the buck, and from four to four and a half, and even five pounds, to the ewe. They were found to bear the cold winters and changeable climate of the U. States, better than any other Spanish variety; and though coarser wooled, and more unsightly than some others, they have ultimately obtained the preference over all.

By far the largest portion of Paulars introduced into the U. States, and perhaps the only large importation of which any authentic history remains, was that made by the Hon. WM. JARVIS, in 1809 and 1810. This gentleman was acting as the Consul of the U. States at Lisbon, at the time that the Spanish government, pressed by the victorious French, was driven to raise funds by confiscating and selling the property of the Spanish nobles who had espoused the cause of the invaders. The flock called Paulars, (from the Paular convent,) were the property of the infamously celebrated Godoy, the "Prince of Peace." They, with two or three other celebrated flocks, (the Montarco, the Negretti, and the Aqueirres,) were in the vicinity of Badajos, and were daily thinned for the subsistence of the Spanish troops. The Paulars were reduced to 7,500, when fortunately they were rescued by three individuals. These were the English Minister, who obtained and forwarded 4,000 to his Sovereign; Consul Jarvis, and Gen. Downie, an Englishman, who purchased the remainder. Mr. Jarvis shipped about 1,000 Paulars to the U. States, with drafts from the other three flocks abovementioned, and 200 Escurials. Some Paulars purchased of Gen. Downie, were subsequently imported from Spain into the U. States.

It may be well here to state that the sheep imported by Chancellor Livingston, were not Paulars, as has been supposed by many, but were from the Rambouillet flock of Merinoes in France. I do not know that this flock belongs to any distinct family, or sub-variety of the Merinoes, but suppose they were originally selected without discrimination, from the prime flocks of Spain.

As in France, Sweden, and every other country to which it has been exported, the Merino has decidedly improved in the U. States. Larger sheep—heavier fleeces—more symmetrical carcases have been obtained, than could be found in any of the early importations. Our colder climate—to say nothing of the skill of American breeders—has increased the fineness of the Paulars; our pastures, infinitely more nutricious than the scorched plains or uncultivated mountains of Spain, have enlarged the carcass, and given weight to the fleece; our breeders have robbed them of a little of their original hideousness! Improvement in the latter particular, might have been carried still farther, had it been *desired!* But a Paular without his "*ruffle*," would be like a *white* Berkshire—nobody would give credence to his pedigree!

It is often asserted that there are no pure Paulars now in the U. States. Individually, I consider this a matter of the least possible importance. There are sheep which no one will deny are pure Merinoes, that are mainly descended from the Paular stock, and *which are in every point of view superior to the original Paulars.* If they are not Paulars, they are *an improvement* on Paulars. Consul Jarvis, in his private flock, mixed his different varieties as the French did at Rambouillet. In his judgment, it resulted in the improvement of *all.* But Mr. Jarvis kept but a small portion of the Paulars he imported. They were sold in every part of the Union.

For the satisfaction of those who esteem the Paular pedigree, as the lawyers say, a *sine qua non,* I perhaps should state that *there are pure Paulars in the U. States,* in the hands of various individuals? How is this known? How are the pedigrees of our *cattle* known? Have we any thing to show for it, but the assertions of honorable and veracious men? How is the pedigree of a Durham bull or cow placed in the English Herd Book? Is it not done on the assertion of the breeder? Now there are honorable and veracious men who trace back their Paular sheep directly to Mr. Jarvis' and other importations—who had bred them, or knew of their being bred, directly from such imported sheep—and who assert that they never have been crossed with any other variety. Are their assertions entitled to less credit than the cattle breeder's assertions?

The portrait at the head of this article, is that of the Paular buck "*Fortune*," owned by S. W. Jewett of of Weybridge, Vt. He was bred by that gentleman, sold by him a lamb, and subsequently re-purchased at $200. Mr. Jewett considered him superior to his celebrated "Don Pedro," so often alluded to in our agricultural periodicals. The fleeces of these animals, well washed on the back, has been as follows:

	Don Pedro.	*Fortune.*
1st year,......	6 lbs. 7 oz.	7 lbs. 9 oz.
2d year,......	9 lbs. 4 oz.	12 lbs.
3d year,......	12 lbs.	13 lbs. 4 oz.
4th year,......	14 lbs.	
5th year,......	13 lbs.	

"Fortune's" live weight is about 140 lbs.

Mr. Jewett states that the full blood *yearlings* of Fortune's get, taking bucks, wethers and ewes together, will average between five and six pounds of washed wool.

The accuracy of the above portrait, I have had no opportunity of testing by personal inspection. Mr. Jewett thinks it an uncommonly faithful one. If so, Fortune is truly a remarkable sheep—better in the fore rib and bosom, and with less dew-lap, than any thorough bred Merino I have ever seen. I suppose in fact, this buck *is* every way a remarkable one. I am satisfied that Mr. Jewett has no design to exaggerate in relation to his fleeces, or in other particulars in relation to his sheep. In proof of this, I offer the following facts:—This spring, I ordered a small lot of sheep of him. He was unable to forward but two—a buck and an ewe. They were about 13 months old at the time of their arrival. I had them *well* washed. To make "assurance doubly sure," I sent a pair of small steelyards to the "sealer of weights and measures," and invited in some neighboring breeders. Both fleeces were accurately weighed by the newly tried steelyards, in the presence of all, and the buck's fleece weighed 8 lbs., the ewe's 5 lbs. 12 oz. On the first day of Dec. inst., I had the buck weighed. Including two light straps, weighing say 1 pound, he weighed 147 lbs. The ewe, I think proportionably heavy. So far, then, my buck beats both his sire and Don Pedro. I never have seen finer formed *pure* bred Merinoes than either of them, nor *finer wooled ones*. The ewe I think decidedly the best I have ever seen. I have a small flock of Merino ewes, which, including yearlings and all, averaged above 5 lbs. of wool per head. A portion of them took the first prize in two counties this fall, but none of them equal the the sheep purchased of Mr. Jewett. Both of the latter, however, and in fact all of them, are terribly *wrinkled*—have huge pendulous dew-laps, and an "apron" (a large flap of loose skin depending from the brisket,) which falls nearly to the ground as they graze.

So, Mr. Editor, I have fulfilled your request to tell you what I know of Paulars in general; "Fortune's" character, pretensions, and progeny, in particular.

Yours truly, HENRY S. RANDALL.

Cortland Village, Dec. 1843.

EXPERIMENT WITH GREEN MANURES.

MESSRS. EDITORS:—The query in your November number, (p. 172,) relative to "green manures," opens a subject which is important to that large section of country where corn usually sells from ten to fifteen cts., wheat from thirty to sixty cents per bushel, and other crops in proportion, and where of course it behooves farmers to manure their lands not only *well* but *cheaply*. Having recently tried some successful experiments with green manures, on exhausted land, I propose to give the results to your readers.

The farm is "bottom" land, 140 acres, slightly rolling; soil originally 4 to 6 inches rich sandy loam, then 2 to 4 feet yellow clay, mixed with sand and loam, the whole resting on a bed of limestone gravel 30 or 40 feet deep. When I commenced my experiments in 1840, about half the farm was moderately fertile, having been cleared from the forest about eight years; the other half, old fields which had been cleared forty years, had been *skinned* by successive crops of corn, and appeared more congenial to mullein than any thing else. My object was to restore these old fields at the least expense practicable. In September, 1840, one of these (30 acres) was sown in wheat, red bearded, 5 pecks to the acre, and in March, 1841, 3 bushels of clover seed sown on the 30 acres of wheat. The crop of 1841 was just 8 bushels of wheat to the acre, and was a fair measure of the average capabilities of the land in its then condition. The spring of 1842 was an early one, and on the 9th of May, the 30 acres of clover being in full blossom, and divided into two lots of 14 and 16 acres, 118 hogs were turned to pasture on each lot alternately, and kept fat without any other food than the clover tops, until the 1st of September. From the 15th to the 24th of September, 1842, fourteen acres of the clover sward was broken up, and with 20 acres of the adjoining *new land*, sown in wheat (red bearded, 5 pecks to the acre.) The crop of 4843, was 18 1-4 bushels of wheat to the acre on the 14 acres of old field, and 14 1-2 bushels per acre on the 20 acres of new land. The average wheat crop of 1843, in this neighborhood, did not equal that of 1841. There is now, without any expense of seeding, a fine crop of young clover on the 14 acres of old field, the remaining 16 acres being under a different course of experiment.

The advantages of this mode of restoring exhausted soils, of the kind above described, where labor is dear and the produce of land cheap, are several:

1st. The expense of preparing and hauling artificial manures is avoided.

2d. The pasturage of the hogs (3 to the acre, 4 mo's,) on clover, pays for the use of the land and expense of sowing and seed. And as hogs eat little else than the clover tops, they do not check its growth, and the dung they leave is as valuable for manure as the clover they eat.

3d. The clover, if not pastured too close, will always scatter seed enough to cover the ground the next year with a new crop.

I ought to have stated that 3 acres of the 14, had 52 ox cart loads of well rotted horse manure, and 3 other acres had 100 bushels of fresh slaked lime scattered over the clover sward before it was plowed in. The land was well plowed once, and harrowed twice. The stable manure produced a slight effect for the better on the wheat crop; the lime none perceptible. I will watch the effect of each on the coming clover crop. I attribute, therefore, nearly all the increase of the wheat crop to the effects of the green clover and fresh hog manure. If I am right in this, the account for 1843 will stand thus:

COST OF MANURES.	GAIN.
50 cart loads horse litter on 3 acres, at 8 c. per load, $4·00	8 bushels wheat at 60 c. $4·80
100 bu. lime on 3 a. at 7 c. 7·00	
14 acres, clover sod and hog manure, paid for by pasture,	140 bu's of wheat, increased crop, at 60 c.,...... $84·00

I do not give this single experiment as a safe basis for any system whatever; but as many of your readers, like myself, occupy lands where any mode of manuring costing more than four or five dollars per acre would occasion a loss, even if the average crop were doubled, an efficient and less expensive mode of manuring than is practiced where the produce of the soil brings a higher price, is much needed, and I earnestly desire to see the attention of the many intelligent correspondents of your valuable and widely circulated paper turned to this subject. Very respectfully,

JAS. T. WORTHINGTON.

Chillicothe, Ohio, Nov. 20, 1843.

CHAUTAUQUE SILK.—From a report of the proceedings of the Board of Supervisors on the 14th ult., furnished by the Mayville Sentinel, we see there was awarded by the board, the sum of $176,79 as a bounty on cocoons and reeled silk, the products of Chautauque co. N. Y., for 1843, to be paid from the treasury of the State, agreeably to a legislative enactment offering 15 cents per lb. on cocoons, and 50 cents per lb. on reeled silk. The amount of cocoons being 1002 lbs.; of reeled silk 59 lbs.

Give hens chalk or egg shells with their food.

NEGLIGENCE AND ERRORS IN AGRICULTURE.

Messrs. Gaylord & Tucker:—I propose as a very proper subject for a paper for the first number of your journal, to point out some of the negligence and errors that farmers allow themselves to indulge in or commit. I have often thought, and still think, that one of the most useful periodicals that could be published, would be one for the correction of errors, called, if you please, "Erratur." Scarcely less valuable, may I not say even more valuable, would be the "Detector of Negligence;" but if both were combined, who can conceive of the value of such a work to the farmer? But enough of introductory; let us proceed to the discussion of the subject.

I believe farmers lose as much by negligence as by bad cultivation. Let me illustrate: Whenever I hear a man complain that his grounds are overrun with thistles, with ox-eye daisy, wild carrot, chess, nut grass, &c., &c., I at once say to them, there was a time, and that not long ago, when you might have prevented this evil with five minutes labor. When you first saw that villainous plant on your land, there were but one or two, or half a dozen, and you could have destroyed them with a dock extractor or hoe in a few minutes, but you neglected the opportunity. The next year their seeds were scattered over every field, and you might even then, by a few hours' exertion, have exterminated the whole family; but now their name is legion, and your small force is inadequate to their extirpation, except at the expense of at least a season's crop. This is not all. Your more careful neighbors, on whose grounds a vicious weed was never seen to grow before, are out with their weed-hooks, &c., endeavoring to destroy a noxious weed that they find springing up in all parts of their fields *from the seeds blown from your fields*, and wondering whence they come. Would you do justice to yourself and to all your neighbors? In all your walks over your fields carry in your hand a weed-hook, with such fixtures on the end as will enable you to pull up a narrow leaf dock by the roots, and never allow one of these or any other noxious weed to stand one minute after your first discovery of it. Do not, as many negligent farmers do when they see a weed of this kind, pass on, saying to yourself, "I will send a hand to destroy this thing, on my return to the house." That is not the way to destroy it. You may, and most likely will forget it, on your return to the house; the hand may not be able to find it: he may not destroy it effectually, if he does find it; he may not look for it, (because the land is not his, the crop to come is not his, he is sure of his month's pay at all events, he has no interest in its destruction.) In all your walks over your farm, let the staff in your hand be a well constructed weed-hook; you can walk as well and protect yourself as well with such a staff or cane as with any other. Now this is the way to rid yourself of all noxious weeds, or rather to prevent their formidable appearance. Begin at the beginning, with these pests, or with any thing else. Put a new rail in that panel, in place of that rotten one yonder; do it now, don't wait till the broken rail invites some stray animal to leap into your cornfield, and in doing so breaks half a dozen other rails. Take a spade and drain off that pool of standing water in your wheat field yonder, and as you go along cut off that summer sprout or young shoot that is just starting from the limb of that apple tree, that favorite tree of yours, and mind, hereafter don't let such things grow on any of your trees. Take a small spade and dig up all, every one, of those butter cups, (*Ranunculus bulbosa*,) in your cow and sheep pastures, and as soon as you see a single plant of that poisonous plant hereafter, destroy it instantly. Don't you know it is one of the most deadly poisons to cattle and sheep that can be found. It does not kill, it is true, at once; but it is a slow poison, and ultimately kills any ordinary animal that eats it; besides, it poisons the milk of cows, and is supposed to be the cause of the "milk sickness" of the west.

Errors in farming or agriculture, are as numerous as instances of negligence, and even as deleterious. That was a capital error of yours, sir, in supposing that because you had a thin soil with a clay substratum, you must not plow deep. Why, my dear sir, if ten years ago you had begun to plow deep, you would at this time have had a deep soil, instead of this thin skin that is made still thinner every time you *scratch* it. Plow deeply, as deep as you can, every time you plow, and in a few years you will have no reason to complain of short crops from drouth, or of winter killing from hard winters, nor of short crops from any thing else. Don't try too much of it! Try all new things in a small way. If you had tried but one acre of that new spring wheat, and kept trying one acre till you found it to be, or not to be, what it was cracked up to be; or if you had tried but one bushel of those new potatoes, for two or three years in succession; or if you had tried a quarter of an acre of that new Spanish clover, till you had found out what it was worth—if you had done all these, you would not now be complaining of loss by experiments. Go upon, in all cases, the wise proverb of Solomon, or St. Paul, I forget which, "Try all things, and hold fast that which is good." But Solomon or St. Paul, whichever it may have been, meant that you should "try all things" in a small way, until you found them "good."

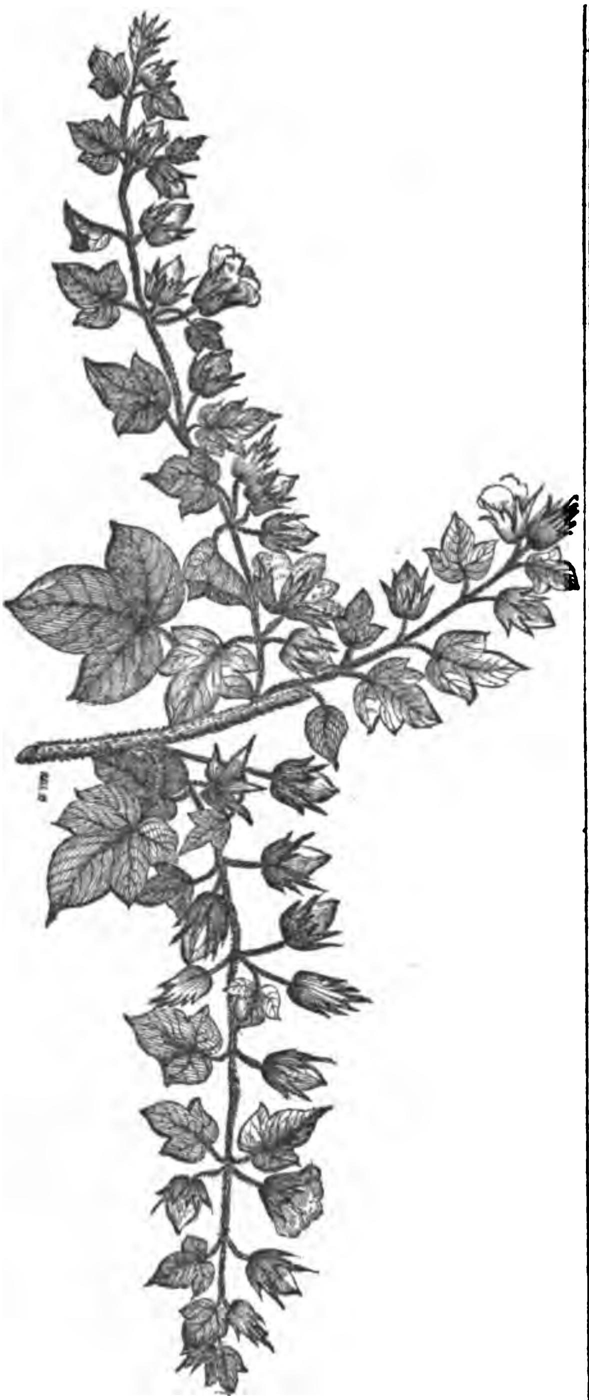
Errors in judgment are so numerous, so universal, that it is difficult to point out examples; there are so many of equal importance, that we can hardly choose which to take; but that farmer yonder who throws his stable manure out of the window of his stable, on the side of the hill, and allows it to remain there from month to month, to be washed by every rain and bleached by every day of sunshine, commits not a greater error than him who purchases manure at a distance, employs teams and hands to haul it to the farm, all at a heavy expense, and at the same time overlooks, or omits to avail himself of, the numerous sources of manure that are staring him in the face every hour of his life on his own premises. "My father hilled his corn, and made good crops," says one; forgetting, as it would seem, that his father's land was new and could "stand any thing." "I have the tallest corn, and will have the greatest crop of any in these parts," says a Saratoga county farmer who had obtained some seed of the tall southern corn, in a tour last year to the south; forgetting, or not having recollected, that corn that may make a good crop in the south, will not necessarily do so in the north, until the first of October nipped all his prospects in the milk. He had not duly considered that plants have their climates as all things have their seasons.

But I must bring my discourse to a close, and will do so by a summary illustrative corollary: Two white millers, or moths, entered the gardens of two citizens, in the spring: one, of course, in each. The owner of each garden was present, and each saw the little creatures. One of the citizens instantly caught and killed the insect; the other allowed it to pass on, paying no attention to it. In mid-summer, the garden of the first citizen was free from caterpillers; that of the other was completely denuded of foliage, with bugs and offensive insects on every shrub and plant. "Why," says the latter to the former, "how happens it that you have no caterpillars, while my garden is devoured by them?" "I killed the first miller," says the former, "you let it live, lay its 500 eggs, which in two weeks turned out 500 caterpillars, and then in their turn, in a few weeks, each 500 more, and so on till you have your millions of insects, and I have none."

G. B. S.

Messrs. Editors—Having seen an article in the Oct. No. of the Cultivator, respecting Nut Grass, I will give a slight description of the kind to which I presume your correspondent must refer. The grass to which I refer, makes its appearance in this climate I think, about the middle of June; the blades shoot forth in bunches of perhaps five or six, increasing in numbers however, as it advances in age, but never rising to form a stalk, always lopping off at the top of the ground; the leaf a beautiful glossy green, and at the root, (which runs to some depth,) may be found a nut resembling somewhat in size and shape the beech nut. I never knew it to grow in very thin land. To destroy it, is no easy matter, I think.

A Subscriber.



THE COTTON PLANT.

Drawn from nature, by Mrs. S. H. Bourne, *for 'The Cultivator.'*

The above engraving represents the thirty-fifth and thirty-sixth limbs of a stalk of Dr. Cloud's improved Cotton. The plant from which the drawing was made, was topped 10th of July, and was 6 feet and 4 inches high. Dr. C. informs us that great care was taken to make the drawing perfect, and that he has never seen a more correct likeness. We tender our thanks to Mrs. Bourne and Dr. C., for affording us this opportunity to present our readers with a correct drawing of even a part of the Cotton plant; and we hope they will hereafter furnish us with a correct view of the whole plant, reduced to a size suitable for our paper.

THE IMPROVED CULTURE OF COTTON.—No. III.

Messrs. Gaylord & Tucker—Entertaining the profoundest respect and the kindest feelings towards the opinions and practices of those planters who are greatly my seniors in age and in agricultural experience, I propose now, in this third paper, to engage in discussing "the principles and philosophy of this improvement in the culture of Cotton." I will first remark, directly, gentlemen, what I have intimated throughout this correspondence—that in conducting these experiments, and in advocating the claims of this improvement, (the leading and meritorious features of which belong to your invaluable Cultivator,) I have had no ambition to gratify, which is not common to the lover of science and agricultural improvement; nor have I any interests to subserve thereby, which may not be the privilege of every planter in the country, however humble his pretensions or ability. Yet, admonished as I have been, by the precipitate and unmeasured tirade of vituperation and spleen, which my first paper excited among the *corps editorial* of the country, and others of the "skinning gentry," I have not ventured upon this most delicate position, though long promised, without again revising carefully and practically, the principles and ability of this system.

In my first paper it will be recollected, I stated the grand object which this system of improved culture proposes to accomplish for the planting interest of the country, and I also gave there a fair and impartial, and a most satisfactory expose of that system, (if such it may be styled,) by which the cotton plant is at present grown. In my second number, I gave in detail, in an equally plain and simple manner, the *modus operandi* by which my experiments were conducted; this was no second hand report, or say-so of another person, but in part the work of my own hands, and the entire management under my immediate supervision. In this paper, I propose giving *the why and the wherefore*, for all this—at least, in my humble opinion; and to point out the *inconsistent*, the *reckless* and *grassy* policy of the present practices of the country, as compared with the *systematic*, *economical* and *philosophic* policy of this improvement.

It is my purpose, gentlemen, first to give you a correct sketch of the botanic characteristics of the cotton plant, as we meet with it under the circumstance of its most favorable culture. I do not offer this in the spirit of ostentation, to appear learned from the technicals used, (the necessary peculiarity of every science.) My object is simply to call attention to a subject—too much neglected by planters—about which the books are carelessly in error; and a proper knowledge of which, in my opinion, tends greatly to indicate the best or right mode of culture.

The botanic name then, of the plant we cultivate, is *Gossypium herbaceum;* we find it in the fifteenth class of the Linnean system, (*Monadelphia,*) and in the thirteenth order, (*Polyandria.*) The first leaves that make their appearance after the cotyledons, three to six, are *ovate*, and indicate certainly the sucker or branch limbs, that will first put out from the stalk. After these, we have the cotton leaf proper, *three to five lobed*, and mercronate, with one gland upon the *mid-rib* beneath; these leaves invariably indicate the arm limb, growing out horizontally, and articulated, forming at each joint one or more balls; coming out with the arm limb, we have almost invariably a branch limb, with several balls—or a stem with one to three balls. The stalk is *ligno*-herbaceous and *pubescent*—and in our climate an annual, attaining the height of *six to ten feet*. The period of flowering is from 10th *June to frost;* the calix double, the outer one three-cleft; capsule, 3 to 5 *celled*, with 7 to 9 *seeds* in a cell, involved in the staple. Early in the morning the milk white[*] bloom may be seen, in the form of a conic scroll, emerging from the fringe work of its outer calix; and with the rising sun it unfolds the segments of its petal, and by one hour by sun we behold the full blown bell-formed flower. Thus, blooming white, it remains till 12 o'clock, when within 15 minutes thereafter, we may observe by the naked eye, a faint ray of pink skirting the thin margins of the segments, which pink color may be seen by one to two o'clock, to have diffused itself throughout the bloom. It thus continues changing from white to red, till sun up the next morning, when it will be found a beautiful brilliant pink; now with the rising sun it gradually wilts, and by 12 o'clock it drops off, leaving a distinctly formed ball, securely sheltered by its calix.

This description, which is strictly correct, differs in several of its particulars from Eaton's, and from the miserably erroneous engraving and description of the same, to be found at page 307 of "Sears' Wonders of the World;" and yet strange to say, this same engraving, with probably but a single correct feature, is copied into the "American Agriculturist," in illustration of an article by Dr. Philips. I might point out a half dozen errors in that engraving; it will answer my present purpose however, that I detain you with but two or three such notices. You will first observe the bloom and the description given, and you will agree with me at once, that Mr. Sears has been *bugged* by an okra flower; the cotton bloom in its healthy state, is never so much flared, nor has it any *red spots* in the bottom. Observe again to the left, that young ball with its *drooping calix*; that is altogether unnatural, and is never seen except where the worm is or has been. You will observe the same error in the opening ball; every little boy, who has picked but fifty pounds of cotton, will tell you if that were the fact, there would be no trashy cotton. I am sure Dr. Philips has detected these blunders, with others equally evident. This I suppose will be considered a small matter, about which nobody is at fault; because even intelligent planters have never thought it worth while to give a correct description of the cotton plant. This same carelessness is observed, when we cast our eyes upon the large map of Alabama; we there see a most imposing engraving of a large *fancy plant*, with its one hundred and one errors, if called a cotton plant. Observe again, the beautiful and chaste vignette of our own excellent and cherished *Southern Cultivator*; we see there an engraving designed for the cotton plant, yet I am sure if the *pendent* open balls were painted *red*, you would sooner take it for a pomegranate bush!

To the planter who is satisfied merely to plod along the inanimate imitator of some skinning neighbor, this sketch will appear a tedious and uninteresting detail. I am convinced, however, of its importance,—and there is a spirit of improvement abroad in the land, which requires just such detail of fact; because it is not possible, at least it is extremely improbable, that we succeed in improving and perfecting the culture of any article of vegetation until we make ourselves *well* acquainted with its natural characteristics. Hence I remark, that when we look upon the stately pyramidal appearance of an improved cotton stalk, grown under favorable circumstances, we observe at once—indeed, we are forcibly struck with the distance proper in its arrangement upon the soil, which is so clearly indicated. Again, we observe an uncommonly large amount of foliage for an annual, besides some 3 to 4 lbs. of seed cotton upon the stalk—literally crowded from its base, upon an area of some 15 to 20 square feet, to its apex, at the height of 6 feet. Now in view of these clearly established facts, the invariable effect of certain well defined causes, I shall not suppose any planter so dull as not to know what course to pursue, if he find that it require a given amount of grain to grow a pig to a given size in one year, that to produce another such pig the next season, the necessary amount of food or grain must be first supplied. Without the food, the pig will be found at the end of the year a *landpike*; and so the cotton, without the geine or manure, will be found, as is too common, the *little Federick!* Were I to assume an affirmative position in this analogy, every planter would reply instanter, and most indignantly too,—Sir, you are behind the times; our own sage Franklin, more than a half century ago, in his friendly advice to Poor Richard, has assured us "that by constantly taking out of the meal tub and never putting in, we shall soon find the bottom." Philosophically true this—good homespun and sound doctrine; yet plain and simple as be this doctrine, the cotton planter knows it only in song—his acquaintance with this golden truth is theoretic entirely. His exhausted fields and dwarfish puny cotton, tell tales more positively contradictory and gloomy, than I have room or inclination here to enumerate.

The governing principle then, in this improvement, is to give constant and diligent attention to keep the *meal tub well supplied*. In the first place, produce and haul out upon your land a sufficiency of good manure, fully to supply the requirements of the plant all the season. In another place, I have shown that it is a perfectly easy matter to produce this manure, to which I will further add here, that the decaying materials abound spontaneously, scattered up and down, filling each nook and corner on every plantation, during all the season, a wasting nuisance that might be easily collected and converted into a profitable revenue, if but one-third the time and attention otherwise sedulously consumed in the butchery of the soil, in a petit war against grass and weeds, the inevitable produce of such latitudinarian systems of culture, was devoted to that most valuable employment. In this important department of agriculture, science is actively engaged in rendering the planter the most essential service.

Having derived these important indications from the figure and natural characteristics of a perfectly matured cotton plant, the judgment of the planter is brought into active requisition in properly adjusting its relative position in width of row and its situation on the drill, in order that we secure the greatest possible advantage in its subsequent culture. My own experience inclines me to the opinion that when land is improved only to the extent of 150 to 200 bushels of manure per acre, less than fifteen square superficial feet to each stalk will be too close. Nor will improvement carried to five times that extent, require greater distance than twenty square feet to each stalk. Since, then, it is found necessary that each stalk occupy this distance, it would appear that the simplest course would be to lay off the rows equi distant each way. The question is frequently asked, "Why not lay off the land 4 by 4 feet, or 5 by 4 feet?" There is a very serious objection to this simple plan, which every planter must perceive on a moment's reflection. In either case, the cotton will be found so entirely interlocked by the 20th June to the 1st of July, as to forbid further work; yet we find, under the most favorable circumstances of seasons and culture, that it will take the stalk until the 10th July to attain the height of six feet, short of which we should not top it, nor earlier in the season; and it is very desirable, and highly necessary even, that the cotton be swept once after topping it, which we find impracticable unless the rows be laid off wide one way, with a view to that desirable operation. Upon land then, that is but moderately improved, I prefer the rows north and south 5 feet, by 3 feet east and west; and upon land in a higher state of improvement, 6 feet by 40 inches will be found the best distance. Though we shall find the stalk a little crowded the narrow way by this course, yet we secure the more important advantage, in being able to scrape and pulverize the surface later in the season. I suppose there to be other advantages likewise, in this plan of laying the rows at right angles, north and south, and east and west, and bedding the land north and south, to which, however, I must refer at another time.

The next object to which I shall direct your attention, is the mode of culture which I conceive to be necessary in the after management of the cotton plant; the correctness, and even superiority of which, I hope to establish as clearly here, as in practice it has so triumphantly succeeded. The constant and invariable success which attends this improvement in my hands, is the result of a *strict and scrupulous adherence to system in its management.* Every science and every profession among men, which is either useful or valuable, acquires both respect and importance on account of system. System is essential to certain success in every undertaking; and especially is it necessary in this first of all professions. The principal object we have had in view, in all this manuring, thorough plowing, laying off and bedding the land previous to planting the seed, has not been to plant alone; men plant abstractly, as handsomely and with the same facility, with less labor; it has been done to encourage and facilitate the early and extensive growth of the fibrous and soil roots, by which means the plant readily, and equally early, augments the extent of surface (in number and length of its limbs,) for fruiting, and the consequent number of its organs of atmospheric nutrition. The immense advantages which the plant derives from an early accomplishment of an object so desirable, is at once obvious when we recollect "that the soil and atmosphere offer the same kind of nourishment to the roots and leaves of the plant." There can be no reasonable doubt, though we possess not the means of positive measurement, but that the plant multiplies its organs of atmospheric nutrition in precisely the same ratio that an improved and judicious system of culture facilitates the growth and prosperity of its roots. There is also another interesting consideration connected with this subject, which I esteem worthy of notice in this place; which is, that though the soil and atmosphere offer the same kind of nourishment to the roots and leaves of the plant, yet the character of its assimilation and consequent appropriation widely differ. My own opinion is, that the roots assimilate food for the production of the stems and leaves mainly, and that the leaves assimilate the same for the production and maturity of the blooms and fruit. I do not claim originality for this opinion; I think I have seen it hinted at in some work on vegetable physiology, though I cannot now say where.[*] I have been governed by this impression, at least in conducting my experiments, which have not as yet been of a sufficiently varied character to enable me to determine and assert the fact positively. My attention was first called to this interesting subject while investigating the cause and effect of rust upon the cotton plant, which every planter has seen, some of the features of which would seem to strengthen this position. How desirable is it, then, if all this be fact, that we adopt such system in our after management as will not only preserve this natural chain of action unimpaired, but encourage its progressive prosperity? It is not enough, however, that we thus dismiss this part of the subject; its importance requires of us a much more simple and extended view.

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[*] *The* Sea Island Cotton bloom is yellow.

We will commence then, at that age of the plant at which it is first worked, by examining the roots of two stalks: we pull up one in the ordinary way of thinning cotton, that is, we take hold of the stem and draw it up, and we have a single long root (in most instances) tapering to a point; we have simply the tap-root. We will take up the other with a spade or hoe, the stalk standing in the center of some six to eight inches square of soil; we then gently sift or shake the soil from the roots, and we have a fair specimen of the cotton root: we have what is properly meant by tap-root, a plant with a main root long and tap-like or tapering, dipping deep into the soil; beside this tap root, however, we find an almost innumerable quantity of fibrous or surface roots diverging in every direction, as long in many instances as the tap root itself, and coming out generally from one-half to one inch below the surface. This is a fact worthy of notice, with which every planter may, if not already aware of it, acquaint himself early the next season. This may appear to some persons a very simple and a very trivial investigation, yet I find in it a most satisfactory solution of the immense injury which the cotton plant sustains from the multifarious policy of the country. I remark then, as the plant comes forward, so the tap-root (where it exists, though an unnecessary appendage in our climate,) sinks deep into the soil, while the fibrous or surface roots multiply and shoot in every direction; hence, I say, "as early as possibly convenient" after the plant is up, "plow out the middles *well*, the wide way, having first run around the plant with a scooter plow." The main object in this operation, is once more, before the surface roots have come out so far as to sustain injury, to thoroughly loosen the soil and again commingle it with the manure. The plant being now thinned down to two or three stalks in a place, and a small quantity of soil molded about the hill, is left in this most favorable and growing situation. In the course of some fifteen to twenty days, when we return to work it again, it will be found to have come forward rapidly, standing from 12 to 15 inches in height and finely limbed. If we now take the trouble to examine a hill or stalk, we shall find an amount of earth included within the circuit of these fibrous and soil roots, as they penetrate all parts of the loamy mold in pursuit of the luscious geine, (like a flock of sheep fresh upon a rich pasture,) that will weigh more than a hand can tote. With these facts before us, let us turn our attention for a moment to the practices of the country at this stage of operations. One planter will now commence work, and the plant standing from 10 to 12 inches high, "with a bull-tongue or scooter plow," and he will dagger into the soil, as close to the plant as he can possibly get, some 3 to 4 inches deep—he says, "to loose up the earth, that the tap-root may go down." Another planter will again, the second and third time, run the bar of a turn plow to the cotton—he says, "to kill the grass;" thus it stands bedded in the middles, and "*steaming*" a few days, when these hot beds are plowed out; though I have even seen it barred the third time before plowing out the middles! All this may answer the *purpose fully*, and even look very well to the planter that operates to kill grass; but we have a latent cause operating destructively in this practice, and though the *certain effect* is not always willingly recognized in the turning yellow aud falling leaves of the plant, it is not however the less obvious. The planters operating thus, will tell you, in the first instance, "this cotton has received a fine working; there's not a sprig of grass or weeds to be seen; but it does not grow off as it should; this *little dry spell* has checked its growth." But partial showers may have fallen upon the other man's cotton; he says, "See my cotton; how clean and nice its worked, though it is too wet, and does not grow; *rainy weather* does not suit cotton." This is the logic (I will not say universal,) of the devotees of this *grass killing* policy, in accounting for its disastrous consequences, and will, I am sure, be very readily recognized as such by every impartial man. Now, the truth is, I will illustrate the whole difficulty here, by a very simple, though rather uncouth simile; it is however not the less pertinent to my present purpose, because men are not to be benefitted, nor will they improve in the practice of any science or profession, unless they exercise the faculties of thinking and reasoning, though such exercise be bought at the expense of decent ridicule. We will suppose the planter operating in this way, having received a pair of fine Berkshire pigs, says to his trusty man, Sambo, "take this bushel of corn to the barn-yard and feed those pigs well; I want them to grow *large* and *fat*." Well, Sambo, always anxious to carry out the views of his master, and having carefully watched his operations in the treatment of his cotton, to make *it grow large*, takes up the basket, and then providing himself with a hammer or hatchet, he proceeds to the yard; he first takes hold upon the gentle, unsuspecting grunters, one by one, and with his instrument he knocks or breaks out their teeth, and then throwing down the corn, he returns to the house with spirits buoyant in the consciousness of having so consistently discharged his duty! "Well, Sambo, you have given those pigs plenty of corn, ha?" "Yes, sir, they are well fed." In a few days he takes a friend to look at the fine Berkshires. Yes, Sambo has given them corn plentifully; there it lies by them! But this is too plain a case; the pigs have the *teeth-ache, and they are broken off, too!* neither the wet nor the dry weather has caused the mischief here! And yet the pigs, like the cotton, have only *their teeth broken off!!* Poor Sambo! we leave him to explain to the world the rationale of this *root and teeth breaking policy.*

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[*] Since writing the above, I see, in a report of the sitting of the Academy of Sciences for August the 14th, a paper was received from M. Dutrochet, on the production and ripening of fruits. This gentleman states "that the removal of the leaves of fruit trees, in order to expose the fruit to the direct influence of the air and light, is exceedingly destructive" I suppose he means destructive to the fruit. If so, his experiments would seem to corroborate this opinion.

N. B. CLOUD, M. D.

Macon Co., Ala., Nov. 1, 1843.

(To be continued.)

LETTER OF MR. ELLSWORTH—BOMMER'S PATENT.

WE invite the attention of the readers of the Cultivator to the annexed letter of the Hon. Mr. ELLSWORTH, chief of the Patent office at Washington, on the subject of patents, and the claims of Mr. Bommer in particular. There is no subject in the whole range of agriculture, of more interest to the farmer, than that of manures; and any improvement in its manufacture, by which its quantity and quality may be increased, will be received by them with favor. That manures made in the way recommended by Mr. Bommer, or according to the patent claimed by him, are of superior quality, no one acquainted with that method can doubt. But if, as Mr. Ellsworth seems inclined to suppose, it is only the French method, with some unimportant additions, so far as the making of the manure, or its quality is concerned, that method should be generally known, that all may avail themselves of its advantages, and we thank Mr. Ellsworth for enabling us to give the specifications a place in the Cultivator. We have given the large pamphlet, just published by Mr. BOMMER, and containing an ample account of his method and its advantages, a copy of which he has kindly placed in our hands, an attentive perusal, and can safely say there are few if any publications on the subject there discussed, whatever may be their pretensions, which combine such a mass of practical instruction on the preparation and use of manures. Of the legality of the patent under which he is acting, we do not express an opinion; but we know that the method used by him, and described in the pamphlet, a copy of which is furnished every purchaser of a right, will make manure in any quantity, and of the best quality for almost every kind of cultivated crop. Of the French method as described in the specifications, we are not competent to judge, having never witnessed its effects; we should, however, prefer purchasing Mr. B.'s book, in which the whole process is detailed.

LETTER FROM MR. ELLSWORTH.

Washington City, Patent Office, Nov. 8, 1843.

MESSRS. GAYLORD & TUCKER—I noticed in your last number of the Cultivator, just at hand, a particular notice of Bommer's process,—also his advertisement announcing "Bommer's manure method, secured by letters patent," and referring to "documents recorded in the patent office," to prove his rights. This advertisement has greatly increased the burden of answering requests for copies of "Bommer's Patent." Whilst I have studiously avoided expressing an opinion on cases pending or decided, yet as special reference is now made to the bureau to sustain the advertisement, and fearing that the public may be misled by my silence, I hasten to state the facts as they appear of record. Mr. Bommer, on the 12th of May, 1843, presented an application for a patent for making manure. This application was duly examined, and rejected for want of novelty. No appeal was taken. The application was withdrawn, and $20, the usual sum allowed on withdrawals, paid to Mr. Bommer on the 6th of July last. No other application has been made by Mr. Bommer for a patent for similar purposes.* It may not be improper to state that Messrs. Baer & Gouliart, in June, 1843, obtained a patent for an alleged improvement on the method of making manure, patented in France by Juaffret, which said method, however, has not been patented in the United States, and is therefore free to the public. How far the public are restricted in the use of foreign inventions, may be ascertained by referring to the claim of the American patent, which, you will perceive, is restricted to the preparation of the *heap* and the mode of *applying* the lye to the same; the *ingredients*—in other words, the *lye itself*, not being claimed. That no injustice may be done to the parties concerned, I send you a copy of the American patent, and only add that Mr. Bommer has become an assignee for several states, under this last mentioned patent.

Yours, &c. H. L. ELLSWORTH.

COPY OF BAER AND GOUILART'S PATENT.

To all whom it may concern: Be it known, that we Charles Baer and John Gouliart, of the city of Baltimore, in the state of Maryland, have invented certain new and useful improvements in the manner of making manure, which has been for many years practiced in France, and has been there secured by Letters Patent under the name of "La Methode Jauffret," and we do hereby declare that the following is a full and exact description thereof.

In the method of Mr. Jauffret, a pit or reservoir is prepared of sufficient size to contain the quantity of prepared lye which may be required by the nature of the establishment. This reservoir or vat is intended to be a receptacle of water saturated with decomposed animal and vegetable matters, and is further to receive the ingredients hereinafter named; such water is to be found on nearly every farm, and it may be augmented by the drainings of stables, by dish water, suds, and other substances of a like nature.

Mr. Jauffret, however, finally prepares his lye, by which the fermentation of the articles to be converted into manure is to be promoted, in the following manner, under various modifications.

For the conversion of from one to two thousand pounds of vegetable matter into manure, he takes about

200	lbs. of night soil,
200	" calcined plaster in powder,
50	" wood soot,
20	" wood ashes unleached,
60	" quick lime,
1	" common salt,
1	" rough saltpetre,
150	" lye or ferment drainings from a Jauffret manure heap.

These ingredients are in many cases to be replaced by others; this lye to be prepared 10 or 15 days before use. The quantity of materials abovenamed, for the conversion of from 1 to 2,000 lbs. of straw or other dry vegetable stalks, will answer for about double that quantity of green vegetable matter.

In using this lye, the plan of Mr. Jauffret is to steep in it the vegetable fibres, which are to be acted upon by throwing them into the vat or reservoir containing it, and removing it thence at great labor so as to form a high heap in the vicinity of the vat, into which the drainings are allowed to run.

We have thus given a brief outline of the method of Mr. Jauffret, the same appearing necessary to the understanding of our improvements, which consist in our omitting altogether the excessive labor of steeping the materials to be acted upon in the lye, and elevating them from thence to the heap; and also in the preparation of a lye, which is equally effective with that of Jauffret, at much less cost, and which can be used immediately on its being made, thereby saving the delay of 10 or 15 days which "La methode Jauffret" requires.

We prepare a reservoir to contain the lye as usual, and in the immediate vicinity of this, we make our stacks or heaps of vegetable matter, which is to be converted into manure.

We give to the ground, where the heap or pile is to be made, an inclination towards the vat; if the ground is a firm clay, it may be merely sloped, and have shallow trenches dug on its surface to conduct the drainings back into the vat; or it may have a flooring of timber, brick or stone, as may be preferred, which may be so trenched as to conduct the whole towards a central drain. When our platform or flooring is of clay, we cover the trenches and whole surface of it with brushwood or rails, so as to form a temporary grating that will support the weight of the heap, and thus insure a drainage, and the admission of air to the heap from below.

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* Mr. Bommer informs us that on finding his own claim rejected, he was induced to make an arrangement with Baer & Gouliart, by whom his claim was again presented, and the patent secured in their names.—EDS

The materials to be converted into manure, we pile up on this prepared platform immediately as it is delivered by the carts, and this we sometimes continue to do until the heap has attained the whole height to be given to it, when by the use of a pump, buckets, or other suitable means, we raise the lye from the vat and pour it on to the heap, continuing so to do until the whole mass is saturated; we in general, however, raise the heap to a height of two, three or four feet, more or less, and then pour on a portion of lye, repeating this as the height of the pile is increased; this procedure obviates the necessity of lifting the whole of the lye to the full height of the heap.

The materials which we employ in making the lye, may be limited to the following, namely: cow, horse or hog's dung, or night soil, the urine draining from stables, and quick lime. The ingredients used to be intimately mixed with a sufficient quantity of saturated water. Two of the kinds of animal dung we have found to answer as well as a larger number. A perfectly good lye will be made by taking one barrel each of two of the species of dung, two of the urinary drainings, one of quick lime, and about 50 barrels of saturated water which is then to be used as above explained.

What we claim as our improvement on Jauffret's method of forming manure by the rapid fermentation of vegetable fibres, is, first, the forming of the said vegetable matter into piles or heaps, without its being first immersed in the prepared lye, and the subsequently saturating the same by the pouring on the lye in the manner set forth.

CHARLES BAER,
JOHN GOULIART.

Witnesses,
Th. M. Abbett,
J. R. Abbett.

(Patented June 24, 1843.)

HEREFORDS—THEIR DAIRY PROPERTIES, &c.

MESSRS. GAYLORD & TUCKER—According to promise, I send you the result of my dairy; but it will not be any criterion to judge from, although the *actual weight* is taken from the book of Mrs. Sheldrick, who has kept a *correct* account of every pound made.

I had no dairy to keep my milk, in the month of February, when six of my cows were milking, and not one pound was made from them during that month. Three of them calved in January.

There were nine three year olds, two four, and one seven, milked during the month of March. I sold Cherry, a three year old heifer, on the 2d of April. From that time until the 1st of Oct., I milked eleven, at which time I sold my milk to the milkman. The following is a true statement:

From March 1st to Oct. 1st, Butter,	1,456½
35 Cream Cheeses, 3 lbs. each, equal	105 lbs. butter.
113 quarts of Cream, sold, equal to	113 lbs. butter.
	1,674½

My opinion is that the same cows next year, will make nearly double the quantity; for my first cow Lucy, 4 years old, calved Nov. 28, and made 8 lbs. 2 oz. last week; the only cow I have now in milk.

I quote from the Mark Lane Express, the following remarks from a speech made by the celebrated breeder, W. Fisher Hobbs, Esq., at the annual meeting of the East Essex Agricultural Society, Oct. 11, 1843:

"He could not, however, conclude without making a few observations as a successful candidate. It had frequently been his good fortune to appear before them in that character, but he never felt so much pleasure from the circumstances as on the present occasion; for it must be admitted on all hands, that except in a few instances, the competition was very good indeed, and in some cases very severe struggles.

"He was the more happy, as a great victory had been gained for a breed of cattle, for which he was a strong advocate. He did not think, as *judges* were generally *prejudiced* in favor of Short Horns, that Herefords could have been so successful as they had that day been.

"When he first became a farmer, he was *determined* to have a good breed of cattle. He first tried Short Horns, because he thought they were the *best;* and at a sale in Suffolk, he purchased several, better than which could not be obtained. He also purchased some Herefords, and kept them together for twelve months, and the result was most decidedly in favor of the Herefords. He was therefore compelled, *contrary to his own wishes,* to give up the Short Horns and take to Herefords; and he had from that time continued to do so, being satisfied that with his soil and climate, they paid the best. (*Hear, hear.*) He trusted the farmers whom he was addressing, would do as he had done, and judge for themselves what description of stock was best suited to their farms; and and when they were satisfied that they had a breed which would prove *most profitable* to them, he would advise them to *keep to them;* and if they came here to exhibit them and were occasionally unsuccessful, he would advise them to go home, with a determination of meeting with more success on a future occasion. (Cheers.")

Be it *remembered* that Mr. Hobbs gained the first premium as the owner of the best cow *in milk, of any breed, with a Hereford. What will the pen depressers of milking Herefords say to this?* Will they not have to put on their "studying caps" to find some endorsers for "*Youatt?*"

Again, I refer you to a sale of Herefords in the Mark Lane Express Oct. 30, page 12, the property of Mr. John Hewer. "An in-calf cow, Lady, by Chance, was knocked down for 100 guineas, ($500;) two year old Victoria, at 87 guineas, ($435;) yearling heifer, 40 guineas, ($200;) an aged bull, Dangerous, (the sire of some of my heifers,) 100 guineas; Lofty, a bull calf, 51 guineas, and several others at similar prices."

What does this say for the Herefords? Will it not "*prove*" *that some writers know nothing about them?* and will it not *teach some of them* to search for facts before they "*abuse the Herefords?*" I refer you again to a sale at Algarkirke, of an excellent herd of short horn cattle belonging to Mr. Rogerson, same paper for Oct. 23, p. 12: "Nonsuch, two years and six months old, was knocked down at £27 10 s., ($136.68,) a very fine animal; others fetched from £20 to £25. Altogether, the sale has been highly satisfactory, and reflects equal credit on the breeder and auctioneer. *Young Spectator* was on the ground and was much admired."

Such comparisons as these are the *true standards* for other breeders, and it is gratifying to find such authority to substantiate the *facts* I have previously stated. I have an own sister to Lady, several half-sisters to Lofty, and two half-sisters to Victoria; and they came from the *bleak hills of Gloucestershire,* from the herds of William, John, and Joseph Hewer.

I do not think an "*extraordinary*" milker is a profitable animal for the farmer. If I can keep my cows up to from 6 to 8 lbs. each, for nine months, I will be perfectly satisfied; nor do I think that three herds in twenty, will do more, unless selected *entirely* for that purpose. We all know that a great quantity of milk requires to be forced with extra feed, and when such a cow is dried for the grazier or feeder, I want him to keep an *accurate* account of food consumed, and the *price* sold to the butcher.

One more statement, and I have done. I do not think there are many breeders in this country who are willing to give a remunerating price for a good animal. The butchers have far more spirit than *breeders,* and my object in future shall be to serve them. If breeders want this stock, let them go to England and fetch them; they will then know their *true* value. At present, I intend to make steers of all. Nor do I intend to show another animal for a premium in this country, so long as a combined prejudice exists.

I conclude by saying that the Hon. ERASTUS CORNING has rendered me every assistance with his purse, and deserves as much credit for this noble spirit as the *best of* the noblemen in England. They know agriculture is the only support of the country. Directing members of this country, know equally well the benefit they render it by such praiseworthy transactions, and such are the *true* supporters of a prosperous and enterprising country. It is such men only, that can place America in the exalted station she ought to occupy. WM. H. SOTHAM.

Hereford Hall, near Albany, Nov. 30, 1843.

IMPROVEMENTS ON MR. KETCHUM'S FARM,

AT WESTPORT, CONNECTICUT.

Letter to SOLON ROBINSON *of Lake C. H., Indiana, from his friend* RICHMOND *of Staten Island, and State of New-York, containing an account of his visit to see the Improvements on the farm of Mr.* MORRIS KETCHUM, *at Westport in Connecticut, in the month of September,* 1843.

YOUR last letter received through the Cultivator, (October number, 1843, p. 160,) was read with pleasure and regret; with pleasure, that you was alive and well, and had made me the medium of communicating further agricultural information, valuable to the farming interest; with regret, that you had been removed as Post Master when the situation enabled you to do so much for the country, without injury to the government or to individuals. Were I a Tyler man, I should remonstrate against an act so injurious to agriculture, and petition for a restoration.

In reply to your last, I shall now notice an agricultural visit recently made to a rocky part of Connecticut.

It is agreeable for farmers distant from each other, occasionally to interchange visits, compare notes, examine improvements, and observe the difference of cultivation caused by climate, soil and situation. Mr. Ketchum's visit to Oakland farm was reciprocated by me in Sept. 1843, when several days were spent very agreeably in partaking of the hospitalities of his family and leisurely walking over hill and dale, among rocks and water courses, along well cultivated fields of intervale, and among other things, admiring his beautiful stone walls, reclaimed peat bog, and his excellent stock of animals.

Westport is a large village, situate about 45 miles east of the city of New-York, or 55 north-east of Oakland farm on Staten Island, from whence I write. It is near the mouth of Saugatuck river, which empties into Long Island Sound, and once gave name to the village as well as the stream on which the village is situated, but the inhabitants, not pleased with this euphonious Indian name, caused it to be supplanted by Westport.

About a mile and a half north of Westport, lies the excellent farm of Mr. Ketchum, on which, within a few years, he has made extensive improvements, which struck me very forcibly, having previously been over the same ground in 1838. It is situated partly in the valley of the Saugatuck, and partly on the hills which skirt its eastern side, from which, and his house, is a delightful and picturesque view to the west, overlooking his whole farm and extending to the hills far beyond the valley.

The farm contains over two hundred acres, and is now productive in grass and grain, although some years ago when the owner was younger, he cultivated it without success, having at the end of the year, after unsparing toil and labor, made about money enough, as he used facetiously to say, "to buy a pair of boots." Then the farm was exhausted by cropping without manure, under the cultivation of previous occupants, and so it remained a number of years. Now, however, it is greatly altered, some of it is under high cultivation, and all more or less improved.

Mr. Ketchum's farm is divided into three parts by public roads. 1. That portion lying south of the old road leading from Saugatuck through Green's Farms to Greenfield, contains about 75 acres, and is very rocky. 2. A portion containing 35 acres on the north and westerly side is separated from the main body of the farm by the turnpike road from Westport to New Fairfield, and is part rolling and part level land, but all susceptible of cultivation. This is the poorest part of the farm, being of a stoney and gravelly soil, exhausted and not yet taken in hand by the owner, as it is the most remote from his residence and farm buildings. 3. The main body of the farm lies between the old road to Greenfield on its southerly side and the turnpike on its northerly side, while a cross road passes along its entire westerly front, making it a compact quadrangular body of land, containing more than a hundred acres, admirably situated for access to all its divisions from one field to the other, or from the three public roads which are always in good order.

This farm is in a primitive region. The rock of the hills is gneiss, but the plain land is a gravelly diluvion, as well as the surface of the hills where the base rock is covered. There are two small streams which water the farm, and are seldom known to be entirely dry. One has its origin in a small peat swamp in the second or remote section of the farm, and after crossing the turnpike, meanders through several acres of similar swamp, and waters several fields which are not swampy, and after leaving the farm, finds its way into the Saugatuck river. The other stream arises from springs at the base of the rock in the first section of the farm near the old road, and after running around the house and barn in the central part, wanders through the lawn in front of the dwelling: thence taking a course for several rods by the side of the road, again passes through a field in the central part of the farm, and joins the other stream a short distance before it leaves the possessions of Mr. Ketchum.

A large farm so situated, and near a large and thriving village from whence is a water communication to the New-York market, ought to be a highly valuable and productive one. But it should also have a wealthy owner, whose resources may be liberally applied to renovate and improve it. And such is its present proprietor, who is doing much to put it in a high state of cultivation, as well as in beautifying and ornamenting it. He commenced his improvements in 1838, and has been annually since adding thereto, though he has much yet to accomplish in bringing up some of his old fields; but this he will soon do, as he has found a mine upon his farm, which will enable him to put all his fields into good heart, as it has already a part of them. This mine is in the peat bogs.

Most of the improvements are on the central or main, and best part of the farm. In 1838, there was a small ancient farm-house and two small barns on the premises. That year he removed the old house and the barn, which stood near it, and erected on the same site a handsome, tasty wooden dwelling house, but not an extravagant one. At a proper distance was also erected a barn, 60 feet by 30, and a hay-house, 75 feet by 25, part of which was appropriated as a stable, carriage house, and corn-cribs. A little to the northward of his barn, was also built that year a snug two story frame house for his principal farmer and farm laborers. These improvements I saw progressing in 1838.

Since then he has converted a swamp in the rear of his house into a garden, by ditching, draining, and covering with soil. In front of the dwelling two fields have been thrown into a lawn of about ten acres, ornamented with fruit and forest trees of foreign and domestic growth, and with annual and perennial flowers and shrubbery. The stream which runs through the lawn is now confined by stone embankments, and prevented from overflowing as formerly, when a part of the lawn was an alder swamp, now converted into dry and arable land. A part of the lawn was a stony and gravelly bottom, with several out-croppings of the gneiss rock, around which have been planted groups of trees in vigorous growth, among which I observed some thrifty young yellow locust trees (Robinia pseudo-acacia) raised from the seed in 1838. The whole lawn, which at the time of my former visit was poor and unproductive, is now in good heart, and during the last season (1843) notwithstanding a severe drouth, produced two crops of grass. No expense, however, has been spared to convert a rough unsightly piece of ground into a beautiful and agreeable promenade, where, at my visit in September, it was delightful to see the children amusing themselves under the shade of the trees, climbing the rocky knolls, or romping and racing along the serpentine carriage road which runs through the lawn, and emerges into the public road at the farther end.

But the greatest object of attraction to the farmer in viewing this lawn, is the enclosure on three sides of it, consisting of huge stone walls. On the northerly side is a wall the most beautiful I ever laid my eyes upon, put up without mortar. It is as straight as a die, smooth, fair, and gently battering on both sides, four and a half feet at the bottom, six feet above ground, and two and a half feet on top. The wall at the westerly end is not so high as the other, and is banked up on the lawn side. That on the southerly side is a curiosity. It runs along the public road some forty rods, and is built with huge rocks, and its outer face is straight and battering, though not so smooth and fair as the wall on the opposite side of the lawn. It has a base of six feet, is of the same height, and in addition thereto is capped with large rocks, with their rough ends overhanging the wall, like a coping, giving it an unique appearance. It is banked up on the inside, and you may walk on the rough coping, but it is not an agreeable place to promenade. From the outside it is impossible for man or beast to climb over.

If you should ask the reason of constructing such heavy stone walls, the answer would be, the abundance of rocks and stones, and the determination to dispose of them to the best advantage. You may easily imagine the original roughness of the land, when such walls were constructed of materials collected from a few surrounding acres.

But of all structures of the kind, there was one other on the first and most rocky section of the farm, that beats every thing I ever saw. It was a wall about forty rods in length, having a base of six feet, a height of six, and was six feet wide on the top. Most of the materials were huge rocks, and yet both sides of the wall were handsomely faced, and well put together, and what is remarkable, they were all taken from a portion of about three acres of the adjoining lot, now in arable condition, which it never was before.

These stone walls have been costly improvements, and it is due to Mr. Ketchum to say that he has done wonders. In the accomplishment of these undertakings, he employed a Mr. Burr Wood, whose skill and tact in handling rocks is superior to any man in the rocky regions of Connecticut. He moves his rocks, and builds his walls without a frame or line to work by, trusting alone to the accuracy of his eye; and these of which I have written, I examined with care, walking by them and over them, and they were found as straight and as smooth, and to have a batter as regular as if a line and bevel had been constantly used in their progress of erection.

Another improvement, however, has been made on the farm, of a more productive or profitable character. He has reclaimed a quaking peat bog of about six acres, and in 1843 cut two crops of grass from it. This bog, in 1838, was partially drained, and at that time a pole could be pressed down perpendicularly from ten to fifteen feet, in some parts of it. That year also, he had an ox mired in it, and the animal was so injured in getting him out, that he was ever after disabled from work. The bog is now so firm that a loaded team can be driven over any part of it. Its surface was formerly covered with tussacks of coarse bog grass, and patches of briars and wild roses. In August, 1838, its surface was burnt over with advantage, and many of the briars afterwards pulled up by the roots. But Mr. Ketchum found that it required more draining; and taking a hint from an agricultural speech of the Hon. D. Webster, after returning from Europe, about draining lands there, he made the application. Accordingly, he commenced ditching on the margin of the bog, and continued it all around, arresting the supply of water from the adjacent higher ground, and conveying it by the outlet which carried off the water of the ditches previously made. A year had not passed away before he found the surface dryer and firmer, and the old ditches mostly dry. He then pared the whole surface, carting away the bogs and roots, and piling them on the adjacent upland, where they were afterwards burnt, producing some two thousand bushels of ashes. In making the new ditches, and deeepening the old ones, several hundred loads of black peat were collected in heaps near the pared bogs. After exposure to the winter, the peat crumbled into a fine black mould, and it was then incorporated with lime and the ashes of the bogs, making a rich and valuable compost, containing humus made soluble by potash and lime.

The peat bog so denuded of its surface, nevertheless became dry and firm, and was seeded with timothy, (*Phleum pratense*,) and in September, 1843, I saw men cutting the second crop of grass that season. It is now a valuable meadow, and will continue so for a long time. The compost made with the peat and ashes and lime, was given as a top dressing to an adjoining field of clover, and it was then also fit to be cut a second time.

The expense of reclaiming this peat bog of a few acres, has been considerable; but the outlay has been more than repaid by the quantity of rich manure made by the operation, without calculating the conversion of a bog into arable land. Of this fact the proprietor feels perfectly satisfied. He has, this autumn, (1843,) sowed a field with wheat, manured with his peat compost, and he assures me, since my visit, that it promises well, judging from its rapid growth and fine appearance after coming up. Here then, we have wheat growing upon a soil which for many years past would not produce that grain, but would grow poor crops of rye, or oats, or buckwheat. The value of this improvement to Mr. Ketchum is not limited to the few acres reclaimed, or to the manure made. It has taught him how he can reclaim ten acres more of the same kind of land, which he has, and therefrom make an inexhaustible supply of manure for future application. This alone, is of the utmost importance in a part of the country where little or no manure is to be bought, and where scarcely an individual makes enough to feed his crops well.

Mr. Ketchum has also made improvements on those parts of his farm where there are no rocks, by good and substantial fences. Woodland in that part of the country, is scarce, and fencing timber dear. He has a long line of fence with red cedar posts, which I sent to him from Staten Island; and he showed me a quantity of sawed oak posts, imported from Chenango county in this state, which he had laid up in cross piles to season, and he intended to char the lower ends.

One of the disadvantages of this farm is the want of timber. The proprietor, however, has a tract of woodland, six or eight miles distant, in a region called the "*Devil's Den*," where even the most industrious Yankee cannot glean a living. It accordingly remains in its natural state of forest, which, when levelled by the axe, is left to grow again. It is a great curiosity to visit the *Den*, where it appears as if his Satanic Majesty had amused himself in breaking into fragments the gneiss rocks and heaping them in irregular and confused masses. Geologists would say that such appearances are caused by an upheaval. If upheavals are produced by central fires, as they admit, then the people of Connecticut are not far out of the way in attributing the reckless breaking, scattering, and piling of the fragments of rocks at the Devil's Den, to the agency of the Old Boy.

Appropos as to land destitute of timber. Would it not be advantageous to cultivate the yellow locust on your prairies, for shade, for ornament, and ultimately for fencing timber? Locust trees can be raised from the seed in a few years, and by soaking the seed in water heated to boiling, they will come up almost as soon as beans. I have done so both here and in New-York, and seen the same method practiced on Long Island. Red cedar also, (*Cupressus thyoides*,) might be valuable to you. If so, I can send you any quantity of the seeds, which are small and are here called cedar plums. The trees abound in my neighborhood, springing up spontaneously from the seeds, which pass through the alimentary canal of birds which feed upon them.

Mr. Ketchum's stock of cattle was not as large as his farm would warrant; but it was select and excellent, having some full blooded Durhams, and crosses with the Devons. Among them he pointed out a young Durham cow, that gave a large pail of milk morning and evening, was a precocious animal of large growth, though only sixteen months old, and had a calf at fourteen months, having contracted too great an intimacy with a yearling bull, contrary to the wishes of its owner. In October, 1843, some portions of his fine stock were sent from the field, without any previous preparation, to the Agricultural Fair at Bridgeport, and obtained three several premiums, being allowed by good judges to have been among the best cattle in Connecticut, and the very best in Fairfield county, in which the farm is situated.

His stock of swine also, was not large; but the animals were of a superior breed, being full blood Berkshires, from the stock of C. N. Bement of Albany. He has a Neapolitan sow, which he has had crossed with the Bershire. This breed of hogs is said to be very fine and delicate. Coming from a warm climate and being without hair or bristles, it is questionable whether it can withstand our climate. I apprehend it will degenerate here, before it becomes acclimated, and then it will probably recover its external coating which nature has given to all animals in cold climates to keep them warm.

Westport, although a short distance east, and a little north of Staten Island, has a severer climate, and in consequence of early frosts the corn crop is sometimes injured, and hence the Dutton variety has been introduced on account of its early maturity. On Staten Island we raise the large white flint corn, which is seldom injured by autumnal frosts, although it requires three or four weeks longer to mature than the Dutton. This variety of corn does not thrive here, in our stiff clayey soil.

Enough for the present. With regard and esteem, from yours, RICHMOND.

Oakland Farm, Staten Island, Nov. 14, 1843.

EXPERIMENTS IN MANURING GRASS LANDS.

EDITORS OF THE CULTIVATOR—By recurring to page 164, of the 9th vol. of the Cultivator, you will find some experiments of mine on manuring grass lands. On the 5th of 6th mo. last, I staked two squares of exactly one square rod each, adjacent to the five mentioned as above, and numbered them 6 and 7; on No. 6, I sowed 1 lb. of dry sulphate of soda, and on No. 7, one quart of common salt. No. 1 to 5, inclusive, have had nothing applied to them since last year, and therefore present the *second* year's result of the manures then applied to them. The following is the result of their weights, taken immediately after cutting, on the 1th of 8th mo. last.

No. 1	53¾ lbs.
2	61
3	53¼
No. 4	54¼ lbs.
5	55¼
6	45½
No. 7	47½ lbs.

From this, it appears that notwithstanding the valuable effects of salt and sulphate of soda in England, when applied to grass lands, there was 8¼ *less* grass on the square manured with the sulphate of soda, and 6¼ lbs. *less* on the square manured with salt, than on No. 1, which had received no manure whatever; in other words, they injured the land by these amounts. No. 2, which was manured with ashes last year, you will perceive still shows a marked superiority over all the other manures. *Stockport, 11th mo.* 26, 1843. N. N. D.

LUCERN.

"LUCERN," says Nicholson, "makes the sweetest and most fattening food in the world for cattle;" and Drown says, "it is undoubtedly the most productive, and that which comes sooner into use [in the spring] than any other of the artificial grasses. From three to five tons of excellent hay can be cut to the acre; and with the best cultivation and plentiful manuring, nine tons per acre have been had in a season. It is supposed that our dry warm summers are more favorable to its growth than the cool and moist ones of Great Britain; and [Chancellor] Livingston has obtained greater products than those mentioned by British writers." The plants often last from eight to ten years.

Lucern requires two or more years before it attains its full growth; and therefore, as Loudon justly remarks, "it is ill adapted to enter into general rotations." For soiling, however, it is admirably adapted, as it may be cut at least four times in a season, "giving no taste to the milk and butter,"* and "one acre is sufficient for three or four cows."† I have seen it planted near Philadelphia, in rows or hills, and the intervals plowed twice a year. This culture greatly increased its vigor; but if it be sown broad-cast, and light harrows be used early in the spring, after the plants have become strong, treating them also with compost or poudrette, the crop could be more conveniently managed. In the former case, the sickle was employed; but the latter method would admit the introduction of the scythe.

"The soil for Lucerne," says Loudon, "must be dry, friable, and inclining to sand, with a subsoil not inferior [in quality.] Unless the soil be good and deep, it is in vain to attempt to cultivate lucern;" and yet I have a patch of several square rods, sowed broad-cast, in the spring of 1841, which is doing well. The seed was a present from M. B. Bateham, of Rochester; and as it had to be sown somewhere, I selected a loam, rather heavy, the best spot I could find that was mellow, though hardly dry enough for wheat. I have been, therefore, agreeably disappointed. It has resisted the frost well, which I scarcely expected, and far exceeds the adjoining clover in growth.

This experiment has satisfied me that farmers might find it very convenient and profitable to appropriate some half acre of land adjoining their stables or barn-yard. Throughout the whole summer, horses from the plow or from the road could be promptly provided for; and a bait for each milch cow, in the evenings and mornings, would be paid for in the pail. D. T

Greatfield, Cayuga Co., 12th mo. 16, 1843.

BOTTS' STRAW CUTTER.

MESSRS. GAYLORD & TUCKER:—My attention has been attracted to an article in the Dec. No. of the Cultivator, from your distinguished correspondent Mr. Bement, in which he has done me the honor to notice the straw cutter invented by me, and exhibited at the Agricultural Fair of New-York, in 1842. I am much obliged to Mr. Bement for the commendations he has bestowed upon the machine, considering the unfavorable circumstances under which it was exhibited; but in speaking of it, he uses an expression which I feel bound to notice, as it may lead to misapprehension on the part of some of your widely diffused readers. He says, "it appears to be a machine long sought for, viz. one that will cut hay, straw and *cornstalks.*" Now, this machine was taken from Albany, *put in good order,* and exhibited a few weeks afterwards at the Fair of the Philadelphia Agricultural Society, and at the great Fair of the American Institute in New-York. At both places it bore away the palm from all competitors, and at the latter it received a silver medal on account of its superiority as a hay, straw, and *stalk* cutter. I believe it is the strongest, simplest, and most efficient straw cutter, and better adapted to the capacity and management of common operatives, than any other machine I have ever seen; and in this opinion I am supported by testimonials from hundreds of the most judicious farmers in Virginia and the southern country. But I have received several orders for this cutter from gentlemen in the south, because of its supposed adaptation to the cutting of cornstalks, and I have uniformly declined to send it under such circumstances, because I knew it was fitted for no such purpose. The truth is, the cornstalks of the north and south are very different things. You grow your corn very thick, and your stalks are hardly larger than your thumb, whilst ours are frequently as large as your wrist.

This knife, although intended for straw and hay, on account of its great strength, operates very well on our *tops,* (the part of the plant above the ear,) and *your stalks.* But I have never seen but one knife adapted to cutting the lower part of the stalk of the southern country, and that is one which I have lately gotten up for the express purpose, at the request of a gentleman, upon an entirely new principle, viz: that of cutting the stalk obliquely, by means of a powerful knife descending upon the layer of stalks so as to make a very obtuse angle with it.

This knife will also cut straw and hay, as well as stalks, but requires to be fed by hand, whilst the one first spoken of is much more rapid in its execution, and is furnished with a very perfect feeding apparatus.

The cutter recommended by Mr. Bement is sold at *thirty* dollars, the stalk cutter proper at *ten* dollars.

Richmond, Va., Dec. 15, 1843. C. T. BOTTS.

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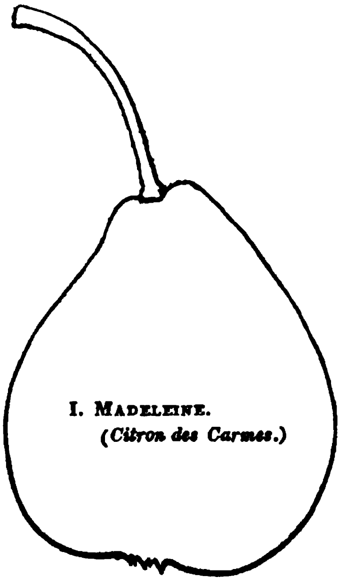
* Drown's Farmer's Guide.

† Loudon's Encyclopædia of Plants.

FIGURES AND DESCRIPTIONS

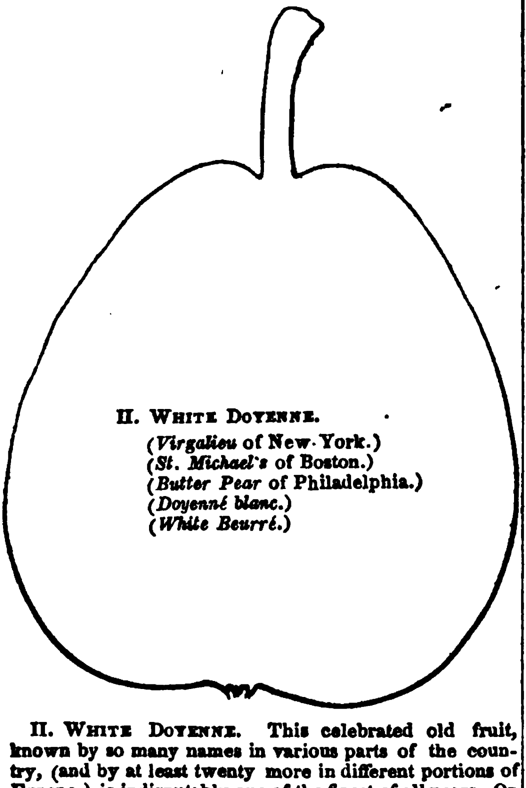
Of Five choice varieties of Pears, by A. J. Downing.



I. Madeleine.
(*Citron des Carmes.*)

The Madeleine Pear is the best *very early* pear in cultivation; as, though inferior to the Bloodgood and Dearborn's seedling, its earlier maturity renders it very desirable in every collection. Its name arises from its ripening in France about the 22d July, which is the Fêté de Sainte Magdalene. It commences ripening here about the middle of July.

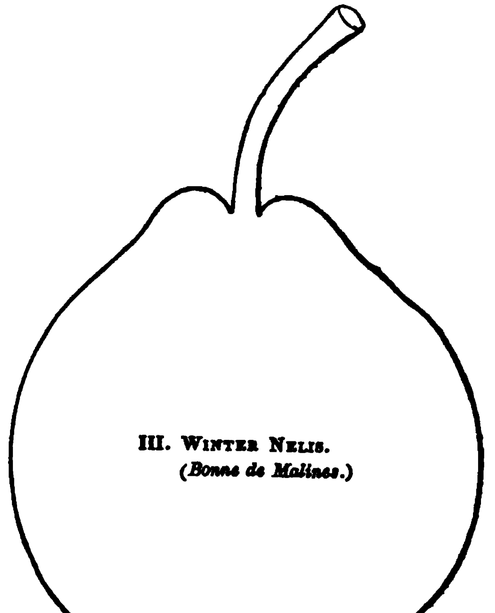
Fruit rather small, turbinate, narrowing gradually towards the stalk, where it thickens a little. *Stalk* from 1 to 1¾ inches long, slender, a little curved, and rather obliquely inserted. *Eye* very slightly sunk. *Skin* pale green, becoming a little yellowish, with sometimes a faint blush when fully ripe. *Flesh* white, melting, with an abundance of sweet and rather vinous juice. A good bearer, but the fruit must be picked a few days in advance, and ripened in the house, or it is rather liable to rot at the core.



II. White Doyenne.
(*Virgalieu* of New-York.)
(*St. Michael's* of Boston.)
(*Butter Pear* of Philadelphia.)
(*Doyenné blanc.*)
(*White Beurré.*)

II. White Doyenne. This celebrated old fruit, known by so many names in various parts of the country, (and by at least twenty more in different portions of Europe,) is indisputably one of the finest of all pears. On the sea coast, or within the direct influence of the salt breezes, it often fails to produce good fruit; but in the interior, it is universally cultivated, and produces regular and most abundant crops of the most beautiful pears. Its fruit is largest and finest on strong loamy soils approaching clay. It ripens about the middle of September, and remains in perfection for four or five weeks.

Fruit above medium size, roundish oblong, narrowing most towards the stalk. *Color* pale yellow, dotted with a little russet, and often showing a fine blush on one side. *Stalk* ranging in length from three-fourths to one and a half inches, but generally about one inch long, rather strong and straight, curved a little at the point of junction with the tree, and inserted in a slight depression. *Calyx* very small, with closed segments, and set in a smooth, very shallow basin. *Flesh* white, fine grained, exceedingly melting, buttery, and delicious. If picked from the tree when it commences ripening, and carried to the fruit room, this pear may often be retained in fine perfection till the first of November, and taking into consideration its productiveness, beauty and fine flavor, it is scarcely surpassed by any of the newer varieties.



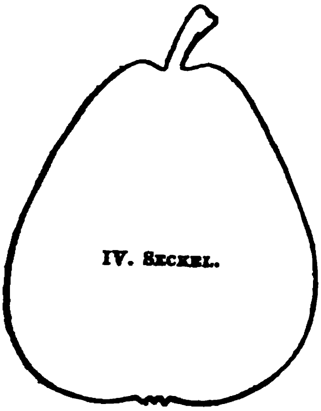
III. Winter Nelis.
(*Bonne de Malines.*)

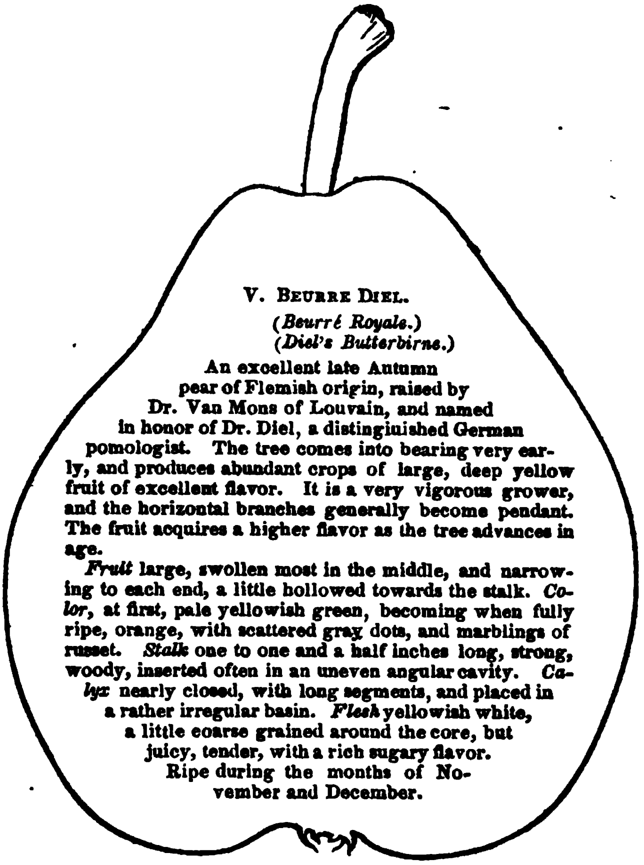
III. Winter Nelis. The Winter Nelis, of delicious flavor, melting, and very juicy in the months of December and January, proves to be one of the finest dessert pears. It was raised by M. Nelis of Mechlin, succeeds admirably in our climate, and is not inferior to any other of the new Flemish winter pears.

Fruit of medium size, roundish obovate, narrowing with a slight hollow towards the stalk. *Color* yellowish green, pretty well covered with streaks of gray russet and russet dots. *Stalk* an inch and a half long, inserted in a narrow cavity. *Calyx* open, with firm short segments, and set in a shallow basin. *Flesh* yellowish, fine grained, buttery, melting, sugary and high flavored.

IV. Seckel. This unique pear, the original tree of which, is, we believe, still growing on the farm of Mr. Seckel, near Philadelphia, is admitted to be the *highest flavored* pear known in either hemisphere, "possessing a high vinous aroma," says one of the highest European authorities, "which can scarcely be compared with any thing in fruits." It forms a very symmetrical bushy tree of rather compact but very healthy growth, producing its fruit in clusters, chiefly at the ends of the branches, and bearing very regularly and abundantly. No garden, however small, should be without this exquisitely flavored dessert fruit.

Fruit small, long obovate, a little compressed towards the stem. *Color* dull greenish brown, with a russet-red cheek. *Stalk* half to three-fourths of an inch long, rather obliquely inserted in a very slight depression. *Calyx* small, partly closed, placed nearly on a level with the surface. *Flesh* juicy, tender, melting, with a high and agreeable aroma, and a peculiarly spicy and rich flavor. It is in perfection from the first of September to the middle of October. To obtain fruit of large size, the trees of this variety should be well supplied with manure, and the branches moderately thinned by pruning.


IV. Seckel.


V. Beurre Diel.

(*Beurré Royale.*)
(*Diel's Butterbirne.*)

An excellent late Autumn pear of Flemish origin, raised by Dr. Van Mons of Louvain, and named in honor of Dr. Diel, a distinguished German pomologist. The tree comes into bearing very early, and produces abundant crops of large, deep yellow fruit of excellent flavor. It is a very vigorous grower, and the horizontal branches generally become pendant. The fruit acquires a higher flavor as the tree advances in age.

Fruit large, swollen most in the middle, and narrowing to each end, a little hollowed towards the stalk. *Color*, at first, pale yellowish green, becoming when fully ripe, orange, with scattered gray dots, and marblings of russet. *Stalk* one to one and a half inches long, strong, woody, inserted often in an uneven angular cavity. *Calyx* nearly closed, with long segments, and placed in a rather irregular basin. *Flesh* yellowish white, a little coarse grained around the core, but juicy, tender, with a rich sugary flavor. Ripe during the months of November and December.

CULTURE OF FRUIT.—No. I.

We propose to furnish our readers occasionally with directions for the cultivation of fruit, embracing every thing of consequence from the apple to the strawberry; with the culture adapted to each, and a selection of the most desirable varieties, for those who have but little land, as well as for the farmer's orchard. We intend to furnish one number of the proposed series once in each month. To those who have large fruit gardens and orchards, every thing relating to their management, every thing by which their culture may be improved, must of course be a matter of importance; and to those whose whole farm perhaps consists of but half an acre, or even less, and there are many such among our subscribers, it certainly cannot but be an object of interest to make the best of that little. To such, it is indeed far preferable to have fine, well bearing trees, of excellent and seasonable varieties, than to have their limited grounds occupied by trees whose only product is small unpalatable fruit.

No one, however limited his means, or however little the land he occupies, should be deterred from the cultivation of *first rate fruit*. A tree of the best variety costs but little more than the worst—and will grow in the corner of a small yard, as well as on the richest domain. A dozen trees of the finest selection, will cost but three or four dollars, and may be properly transplanted for half that sum. In five years, if well taken care of, they will afford a return for the labor bestowed; and few would then be willing to part with them for five times their cost. The proprietor of the village garden, will find many pleasant hours of recreation in their management; and an agreeable and useful occupation will be furnished to his children. Indeed, the culture, propagation by budding and grafting, and a knowledge of the diseases of fruit trees, should be considered as an indispensable accomplishment in a young man's education.

The first thing to attend to in planting fruit trees, is the *selection of the ground.* This, it is true, is often in a great measure beyond our control; but still, even in a quarter of an acre, if there is any difference in the soil, there is some choice; as each kind may be more nearly furnished with its appropriate soil, than where no such attention is given. Whenever, therefore, a choice can be made, the *apple* should have ground which is rich and moderately moist; the *pear, cherry, apricot* and *peach*, a deep loose soil, more sandy for the cherry and peach; and the *quince* a rich moist soil. But if the ground be of tolerable fertility, much more depends on a proper preparation by *digging and filling the holes* than any selection.[*]

There is probably no natural soil in the state well adapted to the proper extension of the roots of fruit trees, without previous loosening by digging. We have seen peach trees transplanted into soil naturally loose, linger year after year with little growth; while on the other hand, trees set in a heavy soil, properly prepared, have made a growth the first shoots an inch and a quarter in diameter. In the former instance, the trees were put in holes barely large enough to receive the roots; in the latter, they were dug six or seven feet in diameter, and fifteen inches deep, filled chiefly with the loose soil thrown out. In the former the roots had to work their way through the undisturbed subsoil; in the latter they penetrated freely through the artificial bed of mellow earth. Much of the success in growth depends on digging very large holes, (at least 7 feet in diameter,) yet there is nothing we have found more difficult to induce others to practice.

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[*] "For a Fruit Garden, a western aspect is generally best, because it is the least subject to sudden transitions of temperature. Severe vernal frosts often prove injurious, or otherwise, according to the weather that follows. If the sky be overcast in the morning, and the air continues cold, little or no damage occurs; but when the sun breaks out warm, the injury is greatest; and the most so, when the trees are most exposed to his rays. For this reason, a hill or a wood on the east side, may prove very beneficial.

"A northern aspect would go far towards insuring regular crops of the peach, nectarine, apricot, if protected from the sun and warm winds by a belt of evergreens. On sandy soils especially, the reflected heat is often sufficient in autumn or winter to *start* the buds; and snow and ice have been successfully heaped round trees to prevent this disaster; but a northern aspect would probably render such labor unnecessary.

"Dry firm ground should be chosen, preferring a sandy or gravelly loom, though clay will do with good culture. Wet, peaty, or spongy soils are apt to be frosty; for the radiation of the heat is much greater than from firmer lands."—*D. Thomas, in Trans. N. Y State Ag. Society.*

The distance asunder, is a point which should be attended to in transplanting. It is desirable that no ground should be lost by too great distance; and not less so, that the trees be not crowded. It is much better however, that they be too far than too near; for the same evils result from close planting as from want of pruning—the fruit will be small and of inferior quality. But by allowing plenty of space, it will be properly exposed to sun and air, and become fine and well grown. Another advantage in distance is, that it admits more freely of the cultivation of the ground for other crops. Different species of fruit require different distances, according to their respective size of growth. As a general rule, apple trees should never be nearer than 25 or 30 ft., but better if further—pears 15 or 20 ft.—peaches not less than 20 ft.—apricots 15 ft.—plums 12 or 15, and quinces 10 ft. Different *varieties* of the same species often vary considerably in size; thus the Bough apple and Tallman sweeting are small trees, and the Spitzenburg and Pennock are large—the early white Nutmeg and early Ann peach are small, while the Early York and Grosse Mignonne are more than twice their size. But this in general need not be taken into account, as mere varieties do not commonly differ greatly in size.

Guarding from the attack of the *Curculio*, is another important requisite. This insect rarely touches other than smooth *stone* fruit. The nectarine, apricot, and plum, are most liable to injury; but the cherry, and the earlier varieties of the peach frequently suffer from its attack. It is most effectually destroyed, if hogs are allowed to feed under the trees during the season the punctured fruit falls; for as this immature fruit contains the larvæ or worm for next year's insect, it is eaten and destroyed by the swine. Hence all smooth stone fruit should be placed in a separate part of the fruit garden, to be enclosed by a temporary fence, for confining the necessary number of hogs. Poultry, and especially geese, will accomplish in some degree the same end.

An important point in selecting varieties, is to furnish a *regular succession in ripening*. The whole value of some kinds of fruit, depends almost entirely on their *time* of ripening. Thus, if the cherry matured its fruit with the peach, it would be but little esteemed. The importance of early varieties of the best species is therefore obvious. A proper selection will yield a constant supply of some kind of fruit throughout the year. Strawberries may be had from the latter part of the fifth month (May,) till winter.* Raspberries for six weeks preceding wheat harvest. Cherries, from early in sixth month (June,) till the same. Apricots and plums commence ripening a little before harvest, the former continuing for a few weeks, the latter three months. Peaches may be obtained from wheat harvest till autumnal frosts. Pears and apples will furnish a supply from harvest till the season of strawberries and cherries the following summer. Selections, as complete as practicable, of varieties for succession, will be given hereafter, when we come to speak of the various kinds individually.

Transplanting properly, is a point of the very first importance. When the trees are taken up, care should be taken that the roots are mutilated as little as possible, especially the small fibrous roots which contain the feeding mouths or spongioles. If large trees are to be removed, they should have all the larger roots cut off at a convenient distance from the center, the previous year, so that a new set of fibrous roots may be thrown out near the tree. Great care should be taken that the root never become dry; to prevent this they should alway be immersed in mud as soon as dug up, and then duste with sand or dry powdered earth. Should they accidentally become too dry, cover the roots and most of th tree well in moist earth, till the moisture is restored; o should they be frozen, burying the roots before they ca thaw, will save them by gradually extracting the frost The holes in which they are to be set, should never b less than seven feet in diameter, and fifteen inches deep turf inverted, or muck, should be placed in the bottom and finely pulverized rich mold, but never manure should be well shaken in among the roots, so that the may be well packed on all sides, leaving no cavities. A pail of water thrown in before the hole is quite filled has been found highly beneficial in settling the eart well about the roots, and should never be omitted. Les fertile earth, may be filled in most remotely from the tree. After the tree is set, which should incline a littl to the southwest to protect the stem from the hot sun, i should be braced with one or more stakes inclining towards it, and secured by tying. Or only one stake may be driven close to the tree, before the hole is filled.

Transplanting in *autumn,* is generally preferable. When trees are to be transported to a distance, there is not sufficient time in spring; and when the distance is small, if they are removed early in autumn, while yet in a slowly growing state, the spongioles which may have been broken off, will be replaced before the growth ceases. The only case in which fruit trees should not be transplanted in autumn, is where the more tender kinds, such as apricots and peaches, are taken to a colder region of country, in which instance there would be a danger of their destruction by the frost of winter.

The *subsequent management,* consists chiefly in keeping the ground well cultivated, and free from weeds. This may be effected in large orchards, by plowing and planting low crops; in small gardens by spading once a month, for several feet on each side of the tree. This is of the greatest consequence; nine-tenths of the losses of transplanted trees in many parts of the country, arise from neglected after-culture, and the destructive influence of contiguous shading crops, weeds and grass. And even where the trees live, a miserable stunted existence, instead of a healthy, vigorous, and free growth, is the result of such careless treatment. Sown crops of grain are highly detrimental.

To prevent trees being *gnawed by mice,* tread the snow repeatedly round them. This is an effectual remedy, and should not be neglected, as the labor is small in comparison with the loss of fine trees. Clean culture will promote the same end, by destroying the hiding places of these animals.

Insects upon the trunk, may be destroyed by whitewashing, or by washing with soft soap or weak lye.

Before closing our remarks for the present, we wish again to urge the importance of proper transplanting and culture. Many suppose that a period of fifteen or twenty years must elapse before an orchard is in a good bearing state. This opinion results from the general practice of digging small holes, and neglected after-culture. Proper management would bring most fruit trees in good bearing condition, in five or six years at farthest. Indeed, so much depends on previously preparing a broad deep bed of loose soil, that for obtaining a *speedy* growth of ornamental trees on a plantation, Loudon, (whose authority is first among the first,) greatly prefers a proper preparation of ground and planting *young* trees, to Sir Henry Stewart's celebrated method of setting out at once, *large* trees for this purpose.

The best methods, and essential requisites, for successful budding and grafting, pruning, and the remedies for the diseases and injuries of insects, will be treated of hereafter. J. J. T

Macedon, Wayne co., N. Y.

FATAL EXPERIMENT.

Our friend, D. Tomlinson of Schenectady, informs us that two of his neighbors having seen some publication recommending oil to kill caterpillars on fruit trees, applied oil to destroy worms on plum trees last spring, and all those trees died from the oil.

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* We have seen a dish of them picked the first day of winter.

FOREIGN INTELLIGENCE.

We have received our files of the Mark Lane Express, Farmer's Journal, to Dec. 4, and only *sixteen days* from that date, are quietly reading them at our desk!

The weather, during the month of November, had been generally fine, and the seeding of the wheat crop had been finished under favorable circumstances.

We are indebted to Mr. Geo. W. Atwood, of London, for a copy of his commercial circular of the date of Dec. 2, 1843. In regard to business generally, the circular says:

"I am pleased to notice a general improvement in trade throughout the whole kingdom, and a gradual recovery from its long depressed state, with a prospect for its continuance, and that the consumption of many articles of produce is greatly increased."

Speaking of the preparation of American provisions for the English market, the circular says:

"Any thing that is done in provisions for the English market must be done *nicely;* too much care cannot be taken. Low prices, also, must be looked for; and unless it can be well done here, at a low figure, it cannot be advised."

AYRSHIRE CATTLE IN GERMANY.

The Journal of the Royal Agricultural Society of England, contains an account of a meeting of the German Land-owners, at Doberan, in 1841, from which it appears that an Association of Farmers and Land-owners had introduced into Germany the Ayrshire breed of cattle, and at this meeting the merits of this breed for *dairy* properties, compared with the German breeds, was considerably discussed. The results of such experiments as have been made, show the superiority of the Ayrshires. Baron Malzahn Sommerstoeff, stated that in the year 1837 he went into Scotland on the part of an Association in Pomerania, and bought 185 Ayrshire cows—and that he had found no breed that gave so much milk upon moderate food, as the Ayrshires. "Mr. Stanginer said that he had put two Ayrshire cows, and two of his own cows, (supposed to be from Angeln,) in a grassy paddock. The two Ayrahires gave 32¼ pots per day, the two others, 29 pots. The Ayrshires were the hardiest, but their milk was not richer."

DISEASE AMONG CATTLE.

The Mark Lane Express says, that a new and most violent epidemic has broken out in the counties of Cumberland and Westmoreland. The disease is an inflammation of the heart, and the cattle die within eight hours from its commencement.

PRIZE BREEDS OF SWINE IN ENGLAND.

At the last exhibition of the Royal Ag. Society, the Berkshire and Lincolnshire breeds obtained the highest prizes for hogs of a "large breed;" and the Improved Essex and Suffolk, took the highest prizes for "small breeds."

PREVENTION OF SMUT IN WHEAT.

At a late agricultural meeting in Sussex, Eng., John Ellman, Esq., related the following account of an experiment in preventing smut in wheat. He took four sacks of smutty wheat, sowed one sack of it with brine only, as strong as he always made it, to bear an egg as large as a shilling; he sowed another with lime only; be sowed the third sack with brine, strong enough to bear an egg, and then let it lay in lime all night; and the fourth he sowed without any thing. The result was as follows: Where the brine only was used, every now and then there was a smutty ear, still not many; where the lime only was used, there was much about the same quantity of smut; where the lime and brine was used, there could not be found a single smutty ear; and where nothing was used it was a mass of smut.

PROPBR POINTS OF SHEEP.

A writer on Sheep-breeding, in the London Farmers' Journal, gives the following as the points of a good sheep:

"The head short, and without an angle or hollow; a tape passed from the throat round behind the ears, shall about equal a like girth from throat over the eyes and forehead; a quiet, but confident aquiline visage; ears woolly, short, well back and bent down, not rabbit fashioned; the neck not straight lined from the rump, but set on at the shoulders, at about a forty-five upward angle; not tapering over delicately towards the head, but thick, full, and fleshy along its whole length. Bladebones well spread, far back, and showing the chine above their working, which will produce a large, open, and heavy breast, not pitched downwards, as in the grey-hound, but rounded up to a frontage, like the fore keel of a ship. This enables the sheep to look you well in the face, and gives it a presence as if standing up hill, from whatever aspect it may be viewed. Capacious loin, spread-out hips, and well connected rumps, wide and fleshy in the twist, legs short, light boned, and under the sheep, not stuck out like four props to a hay-rick, and a well woolled belly."

Great preparations were being made for the annual Show of Fat Cattle, &c., at the Smithfield market, which was to take place in a few days.

PRINCE'S LINNÆAN BOTANIC GARDEN & NURSERIES,

FLUSHING, LONG-ISLAND, NEAR NEW-YORK.

PRINCE'S New Descriptive Catalogues *of the Linnæan Botanic Garden and Nurseries, al* Flushing, with very reduced prices, will be sent *gratis* to every *postpaid* applicant, and orders per mail will receive prompt attention. They comprise as follows, and the cost of publication was above $100:

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Portraits of Animals, Architectural Plans, Views of Buildings, New Inventions, Patent Machines, &c. &c., executed at a moderate compensation and with undeviating punctuality.

☞ Office, No. 4, third floor, Exchange, Albany. January 1, 1843.

TO FARMERS.

THE subscriber is prepared to furnish farmers with Stone and Shell Lime, either slaked or unslaked, at a rate which will make it an object for them to use it liberally in the improvement of their lands, for which purpose he has sold large quantities during the past year. He refers to John Townsend, C. N. Bement, and W. H. Sotham, Esqr's. who have used his lime extensively.

E. C. WARNER,

Albany, Dec. 1, 1843.—3t.* *Corner Market and Nucella-sts.*

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OF the very best quality for sale. Three barrels for $5, or ten barrels for $15—delivered free of cartage by the New-York Poudrette Company, 23 Chambers street, New-York. Orders by mail, with the cash, will be promptly delivered, and with the same care as though the purchaser was present, if addressed as above to

D. K. MINOR,

Dec. 1, 1843.—3t. *Agent.*

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Late Prince's, Flushing, L. I., near New-York.

THE new Descriptive Catalogue, not only of Fruit, but also of Ornamental Trees, Shrubs, and Plants, cultivated and for sale at this ancient and celebrated Nursery, (known as Prince's, and by the above title for nearly fifty years,) with directions for their culture, may be had gratis on application to the New Proprietors by mail, post paid.

The collection at this establishment is unrivalled, and prices generally very much reduced; and the proprietors flatter themselves that the Catalogue will be found to surpass in extent of information and usefulness, any thing of the kind ever before presented to the public; and to be worthy of a permanent place in the library of the Horticulturist. Orders will be promptly executed.

WINTER & CO.,

Flushing, Nov. 13, 1843.—2t. *Proprietors*

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☞ ADVERTISEMENTS inserted in this paper, at $1.00 per square of 12 lines for each insertion—100 words make a square.

SUBSOIL PLOW.

THE prices of the Subsoil Plow described on another page of this paper, are as follows, viz: No. 1, $8—No. 2, $10—No. 3, $12, with extra points. These plows may be obtained at 176 Market st., Philadelphia, of D. O. PROUTY.

WILLIAM HOVEY'S SPIRAL REVOLVING HAY CUTTER.

THESE celebrated machines for cutting all kinds of fodder for cattle and horses, such as hay, straw, corn stalks, &c., are made and sold by the subscriber, at Worcester, Mass. Also sold by Ruggles, Nourse & Mason, at the Boston Agricultural Ware House, and by several of the dealers in the city of New-York.

Retail prices of machine, with		6	knives on cylinder,	$15
do	do	6	larger balance wheel,	20
do	do	8	do geered,	25
To cut two lengths	do		2 inches long, 16 knives, splendid,	30

These knives are so constructed, that by turning 2 or 3 screws a little, each knife can be taken off from the cylinder separately, and in case of failure, new ones can be put on or ground and replaced without disturbing the other knives; and by means of 2 set screws under the inner edge of each knife, the edges of the knives can be adjusted by those set screws so as to come in equal contact with the hide roller, as they revolve in connection. This arrangement of adjusting the knives on the cylinder, is considered of vast importance to the usefulness of those machines, and belongs exclusively to the subscriber. For further information on the subject, the subscriber would refer to a communication in the December No. of this paper, by Caleb N. Bement, Esq. Albany. WILLIAM HOVEY.

Worcester, Nov. 27th, 1843.

COFFEE AND SPICE FACTORY.

ELIJAH WITHINGTON'S Coffee and Spice Factory, No. 7 Dutch Street, between John and Fulton street, New-York. E. W. manufactures and has constantly on hand and for sale, the following articles, viz:

Green Coffee, Roasted Coffee, Ground Coffee, Domestic Coffee, Prepared Cocoa, Mustard, Whole Nutmegs, Ground Cloves, Ground Cinnamon, Ground Pepper, Ground Alspice, Ground Ginger, Ground Cayenne, Ground Nutmegs.

☞ Coffee roasted and ground for Grocers. Roasting 50 cts. per hundred. Grinding, 50 cts. per hundred.

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Dec. 1. 1843.—3t.

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THOSE very superior Farms situated near Galway Corners, in the county of Saratoga, collectively known as the Earl Stimson Farm, will be sold cheap and on terms most accommodating to the purchasers as to credit. The property consists of about 340 acres, is so situated as to be conveniently divided into three or four farms, all having the necessary buildings, and will be sold together or in parcels, to suit purchasers. Each farm is properly divided into pasture, tilled and wood land, and is in the highest state of cultivation, fenced in the best manner and with the most durable materials. The property comprises among other buildings, a large and convenient hotel, which is a favorite resort of families in the summer on account of the superior healthiness and beauty of the country. The farming buildings of all kinds are most extensive and convenient for all the purposes of agriculture and the raising of stock. The premises also include a country store, a most eligible location for a country merchant, having been occupied as such for about forty years. It is within two hours drive of Ballston, Saratoga, and Schenectady. The farm is well known among leading agriculturists, and in the agricultural periodicals, as the Pattern Farm. For terms, &c., apply to J. OAKLEY,
Oct. 1.—tf. No. 75 Nassau street, New-York.

AGRICULTURAL PAPERS.

THE CULTIVATOR.—A new series of this well known and popular paper, was commenced on the 1st of January, 1844. The sheet was enlarged, and the form changed from a quarto to an octavo—each number containing 32 pages, instead of 16, as heretofore. Each succeeding volume (of which ten have now been completed,) of this work, has been received with increasing favor by the public. In its able correspondence, both at home and abroad—in its illustrations and mechanical execution, and the extent of its circulation, it is without a rival. No efforts will be spared to render the volume for 1844, superior to any that have preceded it. Price, $1,00 a year—Seven copies for $5,00—Fifteen copies for $10.

THE FARMER'S MUSEUM.—The proprietor of the Cultivator commenced the publication of a new Agricultural paper with this title, on the 1st of January, 1844. It is one-half the size of the Cultivator, and is printed and illustrated in the same neat and tasteful manner. Price, *Fifty Cents* a year for a single copy—*Fourteen* copies for $5—*Thirty* copies for $10.

⁂ Subscriptions for the above papers received by Postmasters throughout the country, and the Friends of Agricultural improvement generally are respectfully requested to act as Agents. Specimen numbers and Subscription papers will be sent to any person disposed to act as Agent.

⁂ All orders for the above papers must be accompanied with advance payments, and be addressed to

LUTHER TUCKER, Publisher,
Albany, N. Y.

Editors with whom we exchange will confer a favor by giving the above one or two insertions.

FROM THE STEAM PRESS OF C. VAN BENTHUYSEN & CO.

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VOL. I. ALBANY, FEBRUARY, 1844. No. 2.

THE CULTIVATOR

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☞ This paper is subject to newspaper postage only, being one cent within the state or within 100 miles of Albany, and 1½ cent for any greater distance.

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(Each no. containing 16 pages,)
Is made up of selections from this paper, and published monthly at 50 cents a year—Fourteen copies for $5,00—Thirty copies for $10.

THE CULTIVATOR.

MONTHLY NOTICES.

Communications have been received since our last from R. A. Avery, An Enquirer, (whose letter cost us 56¼ cents) A. S. S., A Virginia Farmer, P. Peterson, S., M., Quercus, S. C. Smith, George Geddes, J. M. Ellis, Georgian, J. Crawford, Edgar, (this as well as his previous communication was written with a pencil, and will cost us too much labor to decypher it,) A Practical Farmer, L. A. Morrell, M. Bingham, A Friend to Farmers, S. Weller, H. H. D., Geo. Bement, S. Peck, C. Colfelt, N. Loomis, S. Tillotson, F. J. Betts, N. Clean, J. Smith, A. McDonald, W. A. Dunlap, W. McKinster, S. W. Jewett, G. A. Mason, W. H. Sotham, A Cayuga Farmer, R., A Subscriber, N. W. C., L. Physick, J. S., Peregrinator, Richard Cowles, H. A. P., F. Rotch.

We are indebted to JOSEPH BRECK, Esq., Ed. N. E. Farmer, for copies of Dr. Dana's Prize Essay on Manures, and Mr. Foote's Prize Essay on the same subject—to Lt. Gov. DICKINSON for a copy of his Address before the Queens Co. Agricultural Society—to Dr. LEE for his Address before the Erie Co. Ag. Society—to C. P. HOLCOMB, Esq. Devondale Farm, Wilmington, and to some unknown friend, for copies of the Transactions of the Newcastle Ag. Society for 1843—to A. RANDALL, Esq. for the Western Farmer's and Gardener's Almanac for 1844.

CHANGE IN THE FORM OF THE CULTIVATOR.

A correspondent says:—I see no objection in the change of form, except that you cheat us a little in quantity by the increased amount of margin." In this, however, he is mistaken. The sheet has been *enlarged*, as he will see by comparing it with a former number, so that we give just the same amount of reading now that we did in the quarto form.

STATE AGRICULTURAL SOCIETY.

The annual meeting of the New-York State Agricultural Society, which took place in this city on the 17th inst., was well attended, and a good degree of interest was manifested in promoting the objects of the society. A brief account of the doings, will be found in another part of our paper.

THE ANNUAL CATTLE-SHOW AND FAIR.

It will be seen that Poughkeepsie is selected for the next Fair of the New-York State Agricultural Society; and the 18th and 19th of September are designated for the purpose.

☞ The Premium-List, which will be found in another part of this paper, is published thus early in the year, that further time may be given than has hitherto been allowed for preparation. This winter season, with its stormy weather and long evenings, furnishes abundant opportunities to farmers for examining the List, and making timely preparations for the stock or other articles which it is in their power to exhibit in competition at the Fair. The facilities of reaching Poughkeepsie by steamboats will render the transit of cattle and horses easier to a large section of country where many of the finest animals may be found; and the same facilities will enable visitors to arrive and depart more conveniently, and be better furnished with accommodations than could well have been the case hitherto. We mistake the spirit of the Poughkeepsie people if they fail in making early and adequate arrangements for the multitudes that will throng their town on the occasion.

EXPERIMENT WITH POTATOES.

MR. CHARLES COLFELT of Mifflin co. Pa., informs us that he raised last season, 90 bushels potatoes on a quarter of an acre of land, and he thinks he should have had 125 bushels if the season had been favorable. He planted the potatoes on the 8th of May, in rows 3 feet apart. After they came up, he hauled out 8 cart loads of barn manure about half rotted, and spread over the tops on the rows—then run a one-horse plow on each side of the rows, to throw the manure over the potatoes and cover the manure with earth. Harvested in November. The same man also raised 120 bushels of potatoes on a "third of an acre" of land, which had been previously planted to corn and was destroyed by "cut worms." He put on 8 four-horse loads of long manure, spread it, furrowed the ground 3 feet apart, dropped the potatoes and covered them with the plow.

RESULTS OF SUBSOIL PLOWING.

MR. C. N. BEMENT states that a few years ago, he subsoiled part of a piece of ground which he planted to Indian corn. The piece was on a light, loamy or sandy knoll, and he subsoiled it in "strips," leaving alternate strips not subsoiled, all being manured alike. He ran the *subsoiler* about eight to ten inches deep. The season proved very dry, and where the subsoil plow was *not* used, the corn was so burnt up that it produced little or nothing; but where the subsoil plow was used, the corn remained green and flourishing through all the drouth—the strips were plainly seen at a distance, and the subsoiled part produced a good crop.

Mr. B. made a similar experiment on carrots, and the results were even more strikingly in favor of subsoiling han in the case first cited.

MR. COLMAN'S TOUR.

Our readers will regret to learn that the publication of the first part of Mr. Colman's European Tour, has been delayed by an accident which befel him, and from which he came near losing his life. While visiting a farm near London, early in December, on horseback, he was thrown from his horse and so severely injured as to unfit him for mental or physical exertion for a considerable period. At the last dates, he had nearly recovered, and hoped to be able to prepare his first part for publication in the course of the present month.

COTTON IN NORTH CAROLINA.

We are informed that Col. Thos. Ousley, near Halifax, N. C., has made an experiment on Doct. Cloud's method of cultivating cotton. He says "he is fully convinced that even here, (though not a cotton country,) our crops may be made to yield on an average *four fold*, compared with the usual method pursued here, which will amply repay the expense of manuring, as recommended by Dr. Cloud, and leave the land in good condition for a succeeding crop."

KILLING BRIERS.

Mr. A. H. Halleck informs us that the best way he is acquainted with to kill briers, is to cut them "in the old of the moon in August, and the sign in the heart—some few may grow the next year, but will present a feeble appearance, and with the aid of sheep may be easily exterminated." The *time* and manner of cutting briers above given, we know to be good from experience, but whether the *moon* has any special influence in the matter is another thing.

FARMER'S CLUBS.

We have received from Wm. Makinster, a copy of the rules adopted by a Farmer's Club at Middletown, Ct. Mr. M. says the association has already produced considerable good. We have no doubt of it, and should be glad to see such clubs formed in every neighborhood. They are the very best means of eliciting knowledge on subjects connected with husbandry.

BIG BERKSHIRE.

Mr. Asahel Foote, of Williamstown, Berkshire co. Mass., slaughtered a Berkshire hog on the 9th of Jan., the dressed weight of which was 708¼ lbs! He was 2 years and 8 months old, and had been fattening only from the 10th of June last, at which date he was estimated to weigh 300 lbs. His fare for the first three months was whey with a little corn in the ear occasionally—during the last 4 months was Indian meal, as much as he would eat—or about 6 quarts per day. His rough fat was eighty pounds—that of his hams, pared unusually close, 52 lbs. each. Thickness of the heaviest of the clear pork was full 10 inches. Leaf lard, 80 lbs.

INQUIRY—APPLES.

A friend asks whether any information can be given in regard to a defect in apples called at the south the *ague*—"consisting apparently in a collection of watery matter under the skin—though that part is harder than the remaining part of the fruit." He says the disease in his "orchard has been confined to the *Pound Sweeting*." We have always supposed that this defect belonged only to certain kinds. And did not extend to varieties in general. We have seen it more frequently in *sweet* apples.

CORRECTIONS.

In the notice of Burrall's Clover Machine, last month, p. 12, for "two to six *hands*," read "two to six *horses*." Same No. p. 11, in the notice of Mr. Brush's premium crop of corn, it is stated that he raised 405 bushels on three acres. We are informed that it was 405 bushels of *ears* of corn.

AGRICULTURAL SURVEY OF NEW-YORK.

We state, in answer to the Goshen Standard, that Prof. Emmons has been engaged during the past season in making a collection of soils in different parts of the state, which he is now engaged in arranging and analysing. His object, if we understand it aright, is to make a thorough examination and classification of the soils of the state.

MAINE FARMER.

This paper is hereafter to be published at *Augusta*, Me. instead of Winthrop. Dr. E. Holmes, one of the most scientific men in the country, continues its editor, and Mr. Eaton, well known as formerly one of the publishers of the Kennebec Journal, is proprietor and publisher. We have received the first no. of the new series—it is much improved in style and appearance, and we would say to all well wishers to the prosperity of the *down east* state, if you *don't* take the Maine Farmer, you make a *bad calculation*.

NORTH AMERICAN REVIEW. JANUARY.

This is a capital number of this excellent quarterly. Its articles are, Griswold's Poets and Poetry of America—Palfrey's Lectures on the Evidences of Christianity—The German Tariff League—Gervinus' History of German Poetry—Debts of the States—Prescott's Conquest of Mexico—Sam Slick in England, with a copious chapter of critical notices. The North American has reached its 122d no., and as a record of American literature is unrivaled. The subjects of the present issue are treated with great ability, and will be read with interest. If the N. A. R. could take the place of the trashy picture magazines in the hands of many readers, we doubt not the result in creating a more healthy tone in the public mind would soon be manifest. Otis, Broaders & Co. 120 Washington st., Boston, publishers.

MORSE'S CERNOGRAPHIC BIBLE ATLAS.

The first no. of Mr. Morse's Bible Atlas has just been received, and has excited our surprise and admiration at the rapid advance he has made in that style of engraving, since his first specimens were before us only some two or three years since. This no. contains "Maps of the Countries mentioned in the Bible;" "Journeyings of the Israelites;" "Palestine from the latest authorities;" "Plan of Jerusalem;" and "The Environs of Jerusalem." The maps are large quarto, beautifully drawn and colored, and such as should be in possession of every reader of the inspired volume. Mr. Morse's Maps, or Atlasses, are furnished to the subscribers of his excellent paper, the Observer, we believe gratis, and are doubtless prized as they should be by its readers.

DURAND CORN.

We shall be obliged to Mr. Durand for a few ears of this corn, when he can send it by private conveyance.

ASPARAGUS.

Mr. J. C. Barber, Winstead, Ct., in a late letter to the Cultivator, says:—"Salt or brine will kill grass or weeds among asparagus, and be a benefit to the plant."

Western Farmer and Gardener's Almanac, for 1844: By A. Randall, Cincinnati. This is the best thing of the kind we have seen. It contains many interesting articles, with handsome illustrations, among which are twenty plans of houses—all "well got up."

Agricultural Improvement.—Dr. Lee of Erie, we are happy to say, has been made Chairman of the Committee on Agriculture in the House. He is very desirous of effecting such legislation as will advance the cause of good husbandry in this state; and would be happy to receive any suggestions from the friends of agricultural improvement.

☞ The American Farmer copies without credit "*Proper Points of Sheep*," "*Ayrshire Cattle in Germany*" "*Disease among Cattle*." and "*Prize Breeds of Swine in England*," all of which we had taken some trouble to condense from our foreign papers.

Diseased Potatoes.—Potatoes have been affected in some sections, the past year, by a disease which is by some supposed to be analagous to smut in wheat. "A Subscriber" from Monroe country, recommends that when potatoes which are thus affected, are planted, a compost should be applied to them to destroy the fungus. He says, "take salt, lime, and plaster, of each a bushel, and of ashes ten bushels—mix them together, and put a handful on each hill before covering. I would also put clear lime, and clear plaster on some hills. If any person raised potatoes last year that were not diseased, in the same section where others were so, it would be useful to describe the mode of cultivation."

VALUABLE COW.

P. H. Schenck, Esq. of Mattewan, Dutchess co., has given in the Am. Agriculturist, a statement of the milk and butter produced by a cow of his, during parts of the years 1842 and 1843. The cow is a polled cow, or hornless, and her color red and white. In 1842, Mr. S. kept her milk separate from that of his other cows for one week. She gave 18 quarts per day, and made 15 lbs. of butter. During this time she was kept on grass only. In 1843, Mr. S. had her milk kept separate from the 21st of May to the 10th of June, 21 days. She gave 16 quarts of milk per day, and this in the three weeks produced 65¼ lbs. of butter. On the 15th of June, from 15¼ quarts of milk, 3 lbs. 8 oz. of butter ready for the table, was made. This is certainly a most extraordinary yield of butter.

NEW ARTICLE OF FOOD FOR ANIMALS.

Mr. E. Rich of Troy, N. H., has communicated to the Keene Sentinel, the result of some experiments made by him on the value of the tops and roots of common Comfrey, (*Symphytum officinale,*) as food for cattle. Two cuttings in June and September, yielding six tons per acre of good fodder, and the root which should be harvested only once in two years, producing 2,400 bushels per acre. Experience showed both top and root to be very palatable and nutritious. Mr. Robinson, near Portsmouth, has also tried the plant for this purpose, and finds his stock of all descriptions to eat the tops when cut most greedily. His product was at the rate of eight tons per acre. This was on moist ground, which seems the best adapted to the growth of the plant. Mr. R.'s plants were in rows fifteen inches apart. This, we think, in rich ground would be too close planting. Comfrey is easily propagated by cutting the roots into sets, as is done with the potatoe. It may prove one of our most valuable plants for animals, but further experiments are necessary. They can easily be made.

TURNEPS AS A GREEN CROP FOR MANURE.

B. W. Cooper, a farmer of Camden, N. J., suggests in the Farm. Cab. the propriety of sowing turneps for enriching land. The suggestion is a good one, and would probably succeed. He says—"I have reason to believe that a crop of turneps when buried leaf and root, will be found superior to almost any other that can be obtained for the purpose of plowing in as a green crop for manuring." He recommends that a pound of seed, costing some 50 cents, be sown upon corn, which is of course when ripe, to be cut, and the turneps plowed under.

EFFECT OF GUANO ON CORN.

We find in the Boston papers, a notice of the Horticultural exhibitions in that city, at which some sweet corn was shown by Mr. Teschmacher of Boston, exhibiting in a striking manner the power of this celebrated manure on this plant. We perceive that a quantity has been imported at Baltimore, to give the farmers of that vicinity an opportunity of testing its remarkable qualities. It is sold at five cents per lb., and 100 lbs. is considered as ample supply for an acre. It can scarcely be doubted that science will yet furnish an artificial compound equal in value to this animal product, though the experiments hitherto made must be considered as partial failures. The Boston paper says—"A prominent object of attraction was the produce of two seeds of sweet corn, planted by J. E. Teshmacher, in the public garden, Charles st. on the 12th of May, in poor sandy soil. One without any manure, gave as product, one stalk and one ear, weight 1½ lbs. The other manured with guano, gave as product, eight good ears, and four or five useless ones, weight 8 lbs. Only two spoonfulls of guano were used on this hill."

HEAVY PIGS.

We copy the following from the Louisville Journal. Few litters of pigs, we think, can be found to exceed Mr. Spilman's, and those must be unreasonable, who with such evidence before them as is afforded by the weight of Mr. Sprague's or Spilman's hogs, still complain of the light weight of the Berkshires. "Mr. Thomas B. Spilman of Hunter Bottom, Carrol co. Ky., recently slaughtered 9 Berkshire pigs, full blood, of one litter, 20 months and 6 days old, weighing 3,429 lbs. Mr. S. says that these hogs were fed as a majority of farmers feed their hogs, no more care being taken of them than is generally taken of common hogs. The weight was certified by two respectable citizens. Three weighed over 400 lbs. each. Mr. S. banters the state to beat him with one litter of the same number of pigs."

NEW DOMESTIC FOWL.

In the Queen's aviary at Windsor, are many birds of the most rare and valuable kinds. Among these, according to the London Times, "are seven Cochin China fowls, five hens and two cocks, imported direct from Asia, and presented to the Queen. Such is the extraordinary size of these birds, that when full grown they will stand on the ground and feed from a table 3 feet in height; their usual weight being from 22 to 24 lbs. per couple. Their eggs, the shells of which are of a dark mahogany color, possess a delightful flavor, and are highly prized by the Queen. One of the pullets has laid 50 eggs in less than eight weeks." Sir George Staunton, in his "Macartney's Embassy to China," was the first to make this bird known to the European public, and it has been described by Temminck under the name of Fire-backed Pheasant of China, (*Euplocamus ignitus,*) and is a most beautiful as well as large and rare bird. It is figured among other pheasants in Temminck, and in the Encyclopedias. It is supposed that hybrids of this bird and the common domestic fowl, would be most valuable to the farmer or poulterer.

SALT AS A MANURE.

A writer in the Farmers' Journal says that Salt has the effect to keep soils moist in the heat of summer, and soft in the winter's frost; thus it suits dry soils and seasons, while most other concentrated manures require wet—that by this and its penetrating quality, it keeps every thing in the soil in the softest and most soluble state, best fitted to work on each other, and to be acted on by the air and weather.

SILK.

The Newburgh Telegraph contains a communication on the silk business, from Nathaniel G. Church. Mr. C. has been experimenting in this business for four or five years, successfully. He says he means to keep an exact account of all the expenses and results, in order to lay before the public, another season, satisfactory evidence of the utility and importance of the business. We hope he will do it—*facts* are what the people are waiting for.

LARGE HOGS.

The Boston Cultivator says that Capt. Daniel Chandler of the House of Industry Farm and Garden, at South Boston, has lately killed 27 hogs, which weighed on an average 415 pounds. They were one year old last spring. These hogs came (when young,) from Columbia county, N. Y., and were said to be a cross of the Berkshire and Grass breeds. "Capt. C." continues the account, "keeps his hogs in summer, on swill from the house, and vegetables from the farm and garden, until within three months of the time of killing, then meal is added to these articles."

BARBER CO. (ALA.) AG. SOCIETY.

A letter from a friend in Eufalla, Ala., informs us that an agricultural society had been formed, and a fair holden in that neighborhood, which promises to be very useful in exciting a spirit of improvement, &c. The writer describes the country as new, but improving rapidly. Ten years ago, it is said, it was an unbroken forest. Cotton is now selling at as high prices as are brought in the United States—a considerable quantity has lately changed hands at 8½ to 10½ cents per lb.; the farmers and planters are vying with each other in the production of a good and beautiful article. The writer of the letter alluded to above, wishes to know whether marl should be spread on the land immediately after being dug—what time and manner it should be applied, in what quantity, whether mixed with other manures, &c.

THE CULTIVATOR FOR PREMIUMS.

During the last month the Cortland Co. Ag. Society of this state, have ordered 24 copies of the Cultivator—the Newcastle, (Del.) 20 copies—the Ohio and Brooke counties (Va.,) 14 copies, and the Muskingum (O.) 8 copies for premiums.

FARMING IN THE WEST.

THE farm of Mr. THOMAS NOBLE, near Massillon, Stark county, Ohio, furnishes one of the best examples of systematic and *profitable* cultivation, to be met with in the country. Mr. Noble is by birth an Englishman, and came to this country and settled where he now resides, some eight or ten years since. His staple products are wheat and wool. The soil of the farm is not naturally of the richest kind, but is well adapted to the course of husbandry pursued by its owner. With the exception of the roughest and poorest part, the whole is, in its course, alternately pastured with sheep and sown to wheat. Sheep admirably prepare the land for wheat, and a better course could not perhaps be pursued. He keeps fifteen hundred Merinoes, and a small flock of Leicesters. The latter were imported a few years since by Mr. Henry Parsons, late of Massillon, now of Hamilton, Canada. These were a very superior lot of sheep, of most beautiful form, and equal to any we have ever seen of that noted breed. Mr. Noble says he can "feed and clothe" a given amount of population, from less land and with less expense, with this breed of sheep, than can be done with any other stock. These sheep, though fed no better than the Merinoes, show an astonishing accumulation of fat. A buck from this flock, which had never been fed with any thing but hay and grass, got cast on his back last summer, and strangled. His carcass was found completely encased with fat, like a fat hog's, from one to two inches in thickness. The average weight of their fleeces is from six to seven pounds of washed wool.

The Merino flock is a very valuable one, and has generally averaged over three pounds of wool per head, which for the last eight years has been sold in New-York at an average price of fifty cents per pound. Mr. N. has lately crossed some of this flock with an excellent buck descended from the Paular sheep imported from Spain some years since by William Jarvis, Esq. of Weathersfield, Vt. This has proved a very valuable variety for the northern section of the country. They are very hardy, are better formed, and produce considerably more wool than the Merinoes generally do.

Mr. Noble feeds his sheep on a very judicious and and economical plan. They are all sheltered under his barns and in sheds, in winter, and are fed with cut straw; a bushel of wheat shorts and a bushel of potatoes or turneps, being allowed to every hundred sheep daily, in addition to what straw they will eat. The ewes, just before lambing, have hay instead of straw. The straw is cut with one of Eastman's cutters, worked by horse power. It performs well, and Mr. N. is satisfied that there is a great advantage in cutting nearly all the fodder which he uses—clover hay and straw particularly. By cutting, the stock eat it much more readily, and none is wasted. The turneps or potatoes, (Mr. N. prefers the latter,) are cut by a machine brought from England, and which does the work much better than any other kind we have seen. A man can readily cut with it a bushel of roots per minute, and it cuts them in the very best shape for the sheep to eat: that is, in pieces half an inch thick, and three-fourths of an inch wide. It is not likely to get out of order, even in cutting frozen roots, and if a knife should get broken, it can be replaced by a new one in a moment. It is called *Gardener's root cutter*, and is, we see, highly recommended in the English agricultural journals.

The manner in which Mr. N. raises his potatoes, is also worthy of particular notice, as the plan may be profitably adopted on many other farms. We will, as briefly as possible, describe what we saw and learned of Mr. N.'s process of cultivating twelve acres of potatoes. The ground had been in grass for several years before, and was pastured with sheep the previous year. The field was level, and the soil of middling quality, free from stones or other obstructions. On a part of the field, some manure was put, and as the ground was plowed, this was scattered into every *fourth* furrow, and the potatoes at once dropped on it, at the distance of twelve to fourteen inches, taking care to drop them at the edge of the furrow, that the sprout might be the less obstructed in coming up. The next furrow covered the manure and the potatoes. In this way the whole field was planted, excepting that on the part for which there was no manure, the potatoes were planted without it. A roller was then drawn over the field lengthwise of the furrows, to even down the edges. When the potatoes were coming up, a light harrow was passed along the rows, after which a double mold board plow, run once between the rows, completed the cultivation. The average yield on the twelve acres, was 250 bushels per acre. The planting was deferred till the season was so far advanced that the potatoes vegetated quickly, and the rapid decomposition of the sod and manure caused them to grow so vigorously that they got the start of all weeds, &c. and soon covered the ground with their tops. To adopt this plan successfully, it is necessary that the ground should be free from stones—at least, such ones as would be any hindrance to the passage of the plow,—and it should be nicely plowed, with rather a shallow furrow. The plow which Mr. Noble used, was the celebrated *Ransome plow*, which is so highly esteemed in England, and which has taken the highest premiums at the most particular trials made there. It performed its work in most admirable style. The ground on a part of it was rather hard trodden, yet the work was all done without the least balk or defect, and with great ease, by two horses. It would be generally considered rather a ponderous implement, compared with the Eagle plow of Ruggles, Nourse and Mason, or the Center-draft plow of Prouty and Mears, but it evidently runs very easy, and will cut the furrow to any desired depth with the greatest exactness. It is made with two wheels, one larger than the other, to run in the furrow, but it may be used with only one. The handles are both fastened to the beam, the mold-board being movable, and so small that it may be drawn nearer to the beam, or thrown out wider from it, according to the width of furrow it is desired to turn. Corresponding to this contrivance of the mold-board, there are shares of different width, to be used as the various kinds of soil and the different objects of the farmer may render expedient. Mr. Noble does not object to the weight of this plow, and the plowman never attempts to throw it round at the ends—the horses, (as all teams should be,) are so well broken that they take it just where it is wanted, to an inch, and the furrows are cut through the field as straight as if they were done by a line. The English plowman prides himself much on the excellence of his work, and bred to it as a *profession*, he arrives at great perfection.

Mr. Noble has also the celebrated Scotch plow, made by WILKIE, wholly of iron. It is quite similar in shape to Ransome's, but has shares of wrought iron and steel. Several shares, varying considerably in width, are designed for the same plow—some are very narrow, not more than four or five inches wide—calculated for hard and stony ground. This plow is much used on the hard flinty lands of Scotland and Wales, and Mr. Noble states that in such situations they will do much better work than any other plow he has seen. The narrow and long pointed share, together with the great strength of the implement, render it particularly well adapted to such work.

Mr. Noble raises about two hundred acres of wheat annually. He adopts generally the *drill* method of cultivation, which he thinks has many advantages over the broadcast method—particularly in the security it gives the crop from rust and mildew. Mr. N. states that he has repeatedly known a drilled crop to mature well, and give a good grain, with a bright straw, when that sown broadcast, and in the same circumstances in other respects, was spoiled by mildew. The greater chance for the circulation of air, which the drilled crop possesses, is thought to be the cause of this difference. For sowing in rows, Mr. N. practices two modes, viz: sowing with a machine, and sowing by hand. The machine is drawn by a horse, and sows three rows at once, sixteen inches apart—finishing the work in the neatest manner as it goes along. In the other method the ground is prepared as in the usual manner, and a small plow called a "ribbing plow," of singular construction, which makes a narrow furrow two or three inches deep, is then drawn across the field at intervals of sixteen to eighteen inches; after which the seed is sown by hand, and a harrow passed lengthwise of the furrows, which draws the wheat into the furrows, and buries it with so much nicety that it looks as if it was sown in rows. Grain sown in either of these ways, stands the winter better than if sown broadcast. The rows of grain being in a small hollow, the rains instead of washing the earth away from the roots, and leaving them to perish by exposure to the winds and frost, are constantly bringing a little more earth to the plant, which enables it to retain its hold, throw out more lateral roots, and push vigorously forward with the first favorable weather.

Mr. Noble uses as much seed as if he sowed broadcast. He sows two bushels per acre, which he thinks is preferable to a less quantity, for soils of medium richness. The richer the land, the less seed is required; because plants tiller out or spread in rich land, more than they do in poor. The yield of Mr. N.'s wheat is usually about 25 bushels per acre. In 1842, he had one field of 40 acres, that turned out an average of 35 bushels.

Mr. Noble keeps no more horses and cattle than are necessary to carry on the farming operations—that is, to perform the work and supply meat and dairy productions for home consumption. By wintering all his stock in a great degree on straw, (which he takes great care to save in good order,) with roots and some shorts, or meal, he is saved the necessity of appropriating a large quantity of land to meadow, and the expense of making a great deal of hay. But his animals are all well sheltered and taken care of, and are, though with moderate expense of feed, kept in fine order.

Mr. Noble's implements are all of the best kinds, and when not in use, are put under shelter from the weather. His harrows in particular, as well as the tools we have mentioned, are much better than are commonly used; and in the construction and use of this implement, it is believed the English are generally ahead of us. Many of our farmers make their harrows, especially for clear land and for seeding, too heavy. The work would be better, more easily and more expeditiously done, by using a *lighter* harrow, with more slender and sharp teeth.

Mr. Noble pays particular attention to the substitution of machinery and the labor of animals, for that of men, wherever practicable. In the adoption and prosecution of all his plans, *profit*, ultimate or immediate, is his primary object. Chimerical or visionary schemes on the one hand, and the errors of antiquated habits on the other, he alike endeavors to avoid. With a far-reaching glance, he clearly sees that the true course by which to attain the desired end, is the adoption of all *real improvement*—the observance of system and order—doing every thing in the right time and in the right manner. He superintends his business in *person*—constantly exercising a vigilant oversight of all, remembering the Prompter's adage, "*the* EYE *of the master will do more work than his hands*."

VALUE OF TIMOTHY HAY.

MR. LEWIS SANDERS, a very distinguished farmer of Kentucky, says, through the Louisville Journal, that he believes Timothy hay (*Phleum praténse*,) is of little or no value, that sheep and cattle will die if fed alone on that kind of hay—that it was remarked by Thomas Gough, a noted cattle breeder, "that he would prefer giving his cattle dry leaves in winter, to Timothy hay"—that Gen. Jas. Shelby, another noted stock breeder, is nearly of the same opinion. We think this rather too severe a denunciation of Timothy hay, even for the latitude of Kentucky—at the same time, we are of the opinion that many persons much overrate the value of this hay. It seems necessary that Timothy should be cut at a critical time, or its value is much diminished. If cut too early, it is light and chaffy; if cut too late, it is hard and strawy. It is very common to let it stand till it is dead ripe, and those who practice this, contend that it is the best mode; first, because it requires less making, and second, that great benefit is derived from the *seed*. Tavern keepers sometimes prefer the "ripe" hay, because it "spends well." Horses will eat *hard* hay better than cattle and sheep—their jaws and teeth seem better calculated for *grinding*—consequently, horses will get along with Timothy hay that was dead before it was cut, better than other stock; but even they find living on that *alone*, a pretty "poor business." But if Timothy is cut *exactly* in the right time, when it is nearest in full bloom, and well cured, we have found it to make hay which both cattle and sheep eat very well, and which seems to be quite nutritious.

EFFECTS OF TEMPERATURE ON VEGETATION.

A REQUEST.

IT is well known that one of the effects of an approach to or receding from the equator, is a corresponding increase or retardation of the coming forward of vegetation, particularly its blossoming. Several efforts have been made to ascertain how far such influence of temperature, as developed in successive latitudes, extended; but in countries where a meridian line of some twenty degrees would pass several kingdoms, sufficient unity of action could scarcely be expected to secure very useful results. Another difficulty in the way, is finding any plant or tree which will thrive under the equator and in the latitude of 50° or 60°. We are not aware that more than one attempt has been made in the U. States, to turn this scale of nature's graduation to account, though the extent of a meridian line wholly within our own territory, would seem to be very favorable for such an examination. A few years since, Prof. Bigelow of Boston, entered upon the task by means of correspondence, and the results as obtained by him are given in an ingenious although imperfect memoir in the 4th vol. of the American Academy. Among the trees, the period of the flowering of which was noticed, the peach tree was the most extensively returned, and it may be remarked that this tree is perhaps better suited than any other for this purpose, it flowering in the open air from the equator to at least the forty-fifth degree of latitude. The following are some of the results obtained from this tree:

Place of Notice.	*Lat.*		*Long.*		*Peach in Blossom.*	
Fort Claiborne, Ala.	31°	50′	87°	50′	March	4.
Charleston, S. C.,	32	44	80	39	“	6.
Richmond, Va.,	37	40	77	50	“	22.
Lexington, Ky.,	38	06	85	08	April	6.
Baltimore, Md.,	39	21	77	48	“	9.
Philadelphia, Pa.,	39	56	75	8	“	15.
New-York, N. Y.,	40	42	74	9	“	21.
Boston, Mass.,	42	23	70	52	May	9.
Albany, N. Y.,	43	39	73	30	“	12.
Brunswick, Me.,	43	53	69	55	“	16.
Montreal, L. C.,	45	78	73	11	“	21.

From this table, and from other evidences, Prof. Bigelow infers with much probability, that the difference caused by temperature in the north and south of the U. States, is at least two and a half months; a most important fact, and which does not seem to be generally taken into the estimate of the agricultural capabilities of the respective sections. Longitude appeared to produce little difference in the results, but if the country west of the Rocky mountains were to be taken into the account, such would not be the case, it being ascertained that the average temperature at the mouth of the Columbia, does not vary far from that of Georgia, though many degrees to the north. It appears that in the year alluded to by Prof. B. that at Valencia in Spain the peach blossomed on the 19th of March; the apple tree at London, May 8th; and the cherry and pear at Geneva in Switzerland, April 3.

We should esteem it a great favor if such of our friends and correspondents as keep floral calendars, or such records as enable them to determine such matters, would inform us of the time of the blossoming of the peach or apple; the average times of planting corn, and its ripening; the sowing of wheat and its harvesting. If this could be generally done, and the information so embodied collected in tables, many useful inferences in reference to our climate, &c. might be deduced.

Mr. D. T. Whitmore, near Williamsburg, Va., says that he has a piece of meadow land so completely covered with peppermint that nothing else will grow, and he wishes to know what would be the best course to extirpate it. Will some one who has had experience on the subject answer the inquiry?

FIRES FROM ASHES.

The records of our Fire Insurance offices show that the most common cause of fires is the use, or rather abuse of stoves; and the next in frequency is the deposit of ashes in wooden vessels, or other unsafe places. Strange as it may seem, not one-half of the dwelling houses in this country are provided with safe places of deposit for the ashes daily accumulating from our wood fires, and in a majority of them a barrel or box performs the office that should devolve on an ash house of brick or stone. This wooden depository is not unfrequently placed in the wood house, or some other of the out-buildings, ready at any time to ignite, or if disturbed by winds, to furnish the spark that will kindle a destructive conflagration. It is generally considered the extreme of prudence, if the ashes, when taken from the hearth and glowing with red hot embers or coals, are placed in holes dug in the center of the surface of the cold ashes, and slightly covered with them, and not allowed to come in actual contact with the sides of the box or barrel. To us it seems most strange that under such circumstances fires from ashes do not more frequently occur, and the great danger of such a disposition of ashes would prevent its recurrence were the evil fully understood.

Almost every family that is unprovided with an ash house of brick or stone, and that is in the habit of using a wood substitute, must have met with cases in which, in spite of all their care in depositing their ashes, serious danger from fire has arisen, the boxes have been burned. charred, or destroyed, greatly to the wonder of the parties interested. Houses are burned, and the misfortune is placed to the account of the incendiary, when it should be placed to the account of the ash box. There are some facts connected with this subject that should be more generally known, as they might have the effect of placing house keepers and house builders more on their guard.

Not long since a friend of ours on taking possession of a place which had been unoccupied for several weeks, when he came to take up the first ashes made from his fires, found that his predecessor had used an old hogshead, and on examination this was found about half full of ashes, covered so as to exclude the rain. A hole was made in the center of these old ashes and the new ones deposited. The next day there was an alarm of fire, and the hogshead was found in flames. Fortunately the fire occurred in the day time, or his buildings, valuable as they were, would most certainly have been destroyed. This occurrence is not an unusual one, and the frequency of losses from this source, induced Prof. H. of Vt. to enter upon a series of experiments to ascertain the cause. From instances that had fallen under his notice, he was induced to believe that when embers or live coals are placed among dry ashes, no matter what may be their age, or how long they have been deprived of fire, a second ignition takes place, which sometimes does not cease until the whole mass has been burned over, although it is frequently arrested before it has reached this extent. Boxes filled with cold ashes, had a quantity of red hot embers and live coals from the hearth placed in their center, and then carefully covered and closed. It was found that the heat gradually increased, the fire extended through the whole mass, the box became charred on the inside, and when air was admitted combustion ensued at once. The same result took place when the box was burned through to the outside. In order to determine whether the combustion of the ashes took place in consequence of the coals which are usually left in ashes, boxes filled with sifted ashes were tried in the same way, and ignition took place as before; proving either that a sufficient quantity of fine particles of coal remained to support combustion, or that a sufficient amount of nitrous matter was obtained from the atmosphere to allow ignition to take place. In either supposition, the manner in which numerous fires annually take place seemed clearly established, and the danger of placing ashes in wood vessels of any kind clearly shown. Nothing but absolute necessity should allow the practice of having barrels or boxes of ashes about our dwellings or out-houses. A safe ash house is as indispensable as a kitchen, and no house should be built where this receptacle is not provided. To the farmer, ashes are of great value, and to waste them or sell them as many do, is the worst kind of prodigality. Leached, or unleached, they are one of the best promoters of fertilization, and should be saved with great care; but never at such frightful risks as the destruction of the farm buildings. Of this there is not the least necessity; the cause of the danger once understood it can be readily guarded against, and if insurance companies would look to this matter in their policies, the evil might be arrested without difficulty.

MR. PELL'S FARM AND DR. UNDERWOOD'S VINEYARD.

At a meeting of the New-York Farmer's Club, a spirited and valuable association, Mr. Meigs made the following statements respecting the farm of Mr. Pell of Ulster co., and the vineyard of Dr. Underwood, at Croton Point, Westchester co. We copy in substance from the Report given in the N. Y. Tribune.

Mr. Pell uses lime extensively on his farm; has used 300 bushels per acre, prefers oyster shell lime. He has used charcoal at the rate of 52 bushels per acre. With this charcoal dressing he last year obtained wheat at the rate of 78 bush. 24 qts. per acre. [For Mr. Pell's account of this wheat, see Cult. for 1843, p. 197.] Mr. Pell had cut wheat so early that milk would be forced from the berry by the pressure of the thumb and finger. This wheat weighed 64 lbs to the bushel, and was of the most beautiful quality. Mr. P. had cut clover and housed it on the same day, sprinkling about a bushel of salt over every load. This clover retained its color, and was preferred by cattle to that cured in the old way. Mr. P. has 20,000 apple trees in full bearing. He has sent to market 4,000 barrels of apples in a year, many of which are sent abroad and sold at the rate of eight or nine dollars per barrel. He kills the apple tree caterpillar by touching a sponge dipped in ammonia to the worm nests, and has banished them from his orchards. In dry weather he applies lime about the roots of his trees, and finds trees so treated retain their verdure and grow better in dry seasons than those not so treated. Mr. P. had 10,000 trees grafted by a company from Vermont. Two sawed the branches, two made the incisions, two inserted the grafts, and two more applied the wax composition. Of 20,000 grafts not one failed. The expense was $150.

Dr. Underwood's vineyard contains 20 acres of Isabella and Catawba grapes, bearing as much fruit as the Dr. pleases to have remain on the vines. It is one of the finest vineyards in the United States. He has also on his farm, 1,700 apple trees, 2,700 peach trees, large quantities of the finest quinces, and many other fruits. His apples are of the best and choicest varieties, and command the highest prices in the New-York markets. These are only a few of the farms and orchards, which will well repay an examination by the lingering traveler, along the margin of the noble Hudson.

ADVANTAGES OF MARL FOR COTTON.

Mr. J. H. Hamond furnishes to the South Carolina Ag. Society, a statement of his experiments in the use of marl, from which we gather the following:

Experiment No. 3.—Very light sandy soil, 1843.

Unmarled acre,	361	lbs. Seed Cotton.				
100 bushels do.	451	do.	Increase	90 lbs.	24·9	per cent.
200 do do.	384	do.	do.	23	6·3	"
300 do do.	173	do.	decrease	188	52·	"

The land being very old, is bare of vegetable matter for marl to act on, to which, more than to the texture of the soil, inferior as it is, I attribute the failure of any great improvement from it. I make the statement, however, because it is valuable in many respects. It shows the danger of heavy marling on worn land, without previous rest or manure. The acre with three hundred bushels has been destroyed. There is one rich spot, the bottom of a small basin in the center of it, which produced nearly all the cotton gathered. On the rest of it the weed mostly died as soon as it came up—one hundred proves a better quantity than two hundred bushels, and perhaps a little less would have been still better on this soil.

DR. LEE'S ADDRESS.

THE notice which we had prepared of the proceedings of the Erie Co. Agricultural Fair, was mislaid, and we only refer to it now for the purpose of giving some extracts from the excellent address of Dr. Lee before the Society. The papers prepared by Dr. L. on agricultural topics for the Buffalo Com. Advertiser, had proved him to be adequate to the important duty assigned him, and the address is of the first order. We are happy to state that Dr. Lee is now in the Legislature, a worthy representative of the agricultural interests of the farmers of Erie and the state. We would remark that in the matter of oats and barley, Erie will probably remain without an equal in 1843. The crop of oats that took the premium, was 100 bushels to the acre, and that of barley 80 bushels to the acre. Both these crops were grown by John Carpenter of the town of Wales.

Our first extract will relate to the value of ammonia to plants, and the best mode of obtaining it; and the second to the importance of warmth and quiet to domestic animals. The whole of the address will well repay perusal, and we are glad to perceive it has been embodied in a pamphlet form, with the proceedings of the Society.

VALUE OF AMMONIA TO PLANTS.

"I have stated to you that most plants require, in addition to water and carbon, a portion of nitrogen. This also comes from a gaseous substance in the atmosphere. Although nitrogen forms the largest element in the air, (*79 per cent,*) yet it has been pretty well settled that *plants do not* obtain their nitrogen by decomposing common air, but derive it from ammonia, which is furnished to the atmosphere in great abundance by a world of decomposing vegetables and animals. It is the ammonia that escapes from putrifying substances that causes their offensive smell. Now, again comes up the practical question: How are we to collect this highly volatile gas, and transform it at the cheapest rate, into wheat, beans, cheese and wool, of which it is an important element? Rain water has a strong affinity for ammonia—which is a compound of 14 parts of nitrogen and 3 of hydrogen. Water at 50° will absorb 650 times its bulk of this vegetable food. Every rain then, brings considerable quantities of it to the ground. It is the ammonia in rain water that imparts to it its peculiar softness in washing the hands or clothes. It is the ammonia in snow that makes it valuable as a manure; and it is the ammonia in rain water that causes it to putrify in some degree, like an animal substance, when water is permitted to stand in warm weather in a close vessel above ground. The first fall of rain after a long drouth, is much the richest in this gas. Being extremely volatile, it escapes into the air again after a warm shower, much quicker than water evaporates. What then will aid the cultivator of plants, and seize this volatile ammonia, as lime does carbonic acid, and hold it permanently about their roots, in such a shape that it will feed them all they need, and no more? For an excess of this stimulating alkali, like an excess of salt in our food, will destroy life instead of supporting it.

Common charcoal is the cheapest, and therefore the best material to apply to cultivated fields for this purpose. It will absorb 90 times its bulk of ammonia, and will give it out slowly to the vital attraction of the roots of plants. Most of you know that charcoal will correct the taint in meat—will purify rain water in a suitable cistern, so as to render it the purest water for culinary purposes. Such charcoal should be often renewed in filtering cisterns, and when saturated with ammonia, is an extremely valuable manure. The liberal application of this well known substance to the wheat fields in France, has mainly, in connection with the use of lime, added within the last ten years, 100,000,000 bushels to the annual crop of wheat grown in that kingdom. The charcoal should be sown in May, at the rate of 75 bushels per acre, well pulverised. This subject is one of vast practical importance. By studying the science of agriculture, you may grow fifty bushels of good wheat on any acre of your land, I have good reason to believe, every year, bating of course extreme casualties.

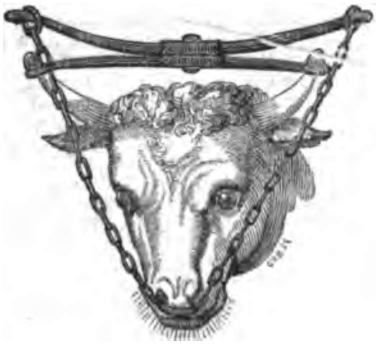
"You all know that a single kernel of wheat, will sometimes, when its fecundity is highly stimulated, send up 20 stalks, and that each stalk will bear a head containing 100 kernels. Here is a yield of 2,000 fold. Nature then has rendered it practicable to harvest 2,000 bushels of good wheat from one bushel of seed. The most skeptical among you will not deny that 2,000 kernels have been produced from one kernel, and that the same natural causes that produce such a result in one instance, will ever operate, at all times, under like circumstances, in the same manner. Hence it is but reasonable to say that nature is quite as willing to produce 50 bushels of good wheat on an acre of ground every year, mark me, *if her laws be obeyed,* as she is to grow fifty bushels of weeds every year on the same ground."

IMPORTANCE OF WARMTH AND QUIET TO DOMESTIC ANIMALS.

"Permit then, a practical agriculturist, who has devoted the best energies of his mind for years, to the study of agricultural chemistry, vegetable and animal physiology, to say to those of you who are wool growers, that by keeping the animal warm in winter, cool in summer, and quiet throughout the year—by stimulating with the elements of wool the organs that secrete this valuable covering of the sheep, it is practicable to clip six pounds of wool as the product from the same amount and value of raw material that now yield you but three pounds. To accomplish this important result, this physiological change in the products of this living machine, you must *quiet the action* of the lungs. These expel from the system every moment, night and day, a needless quantity of animal food, which under more favorable and other circumstances, might have been converted into wool, tallow and muscle. Mark me. There is a positive loss, a needless throwing away of 20 to 50 per cent of the food in wintering all domestic animals, which is literally burned up by nature in this cold climate, to keep their blood and the whole animal some 40 or 80 degrees warmer than the temperature of the air with which they are surrounded. It is not merely the hay, oats and corn in domestic animals, and the bread and meat in man, which are consumed like the animal oil in a lamp, to warm the system, that are lost; but by inhaling a cold and dense atmosphere, and bringing a larger amount of oxygen gas into the lungs, and through them into the blood, than is needed, inflammations are generated, ending in consumptions, alike in man and beast. An animal is an electrical battery or machine. It is practicable so to excite the organs that form fat in a pig, in a positive degree; and so to quiet all the other organs of the animal by a kind of negative electricity, that the animal shall transform nearly all of its food that can be converted into fat, into that well known substance. The same remarks will hold true, in a good degree, when applied to the secretion of milk in cows, and the secretion of wool in the capilliary organs of the sheep. On the other hand, it is quite as easy to make a pig secrete an enormous amount of bone, and an enormous amount of gristle—to have a hide as thick as a board, a nose like a plow beam, ears like sides of sole leather, and legs like an elephant!"

FRAUD IN LAND SALES.

A friend in Marysville, Tenn., informs us that extensive frauds are being perpetrated in that vicinity in the sale of lands. As our informant has not permitted us to use his name in connexion with his statements, we must of course withhold the names of the persons implicated, and can only give the information furnished us in general terms. It is stated "that some two or three years since, a grant was obtained through fraud, of Gov. James K. Polk, of a vast tract of land, purporting to be located in the county of Blount." It is further stated that those who have bought land under this fraudulent grant, have ascertained on removing to it, that it had been granted to others, who have occupied it for at least 20 years. Some people from New-Jersey, who had purchased land in this situation, it is said, after spending all their means in getting to it, have found too late that they have been imposed upon, and are now struggling by hard labor, to get money to take them back to their native state.



PREVENTION OF ACCIDENTS FROM BULLS.

When we were at Mr. **Thos. Hillhouse's** the other day, looking at his stock, a fine young imported Durham bull was led out. That he might be seen to better advantage, he was let loose in the yard. He directly showed himself much inclined to display his activity and strength by pitching battle with somebody—still he did not seem to be really *vicious*, but merely wanted to display his prowess. But when the man went to put him into the stable, the bull gave him a *gentle* warning to keep his distance, by catching him on his horn and throwing him over his back! Fortunately the man was not seriously injured. On a second attempt being made to put the bull in the stable, he "showed fight" in earnest, and it was not till the tine of a pitchfork had been broken in his head, that he would yield ground an inch!

Bulls, like *every body else*, have a great desire to do *as they please*—and we find this disposition quite as strong in those whose propensities would lead them to do *wrong*, as in others—hence, for common safety, *all* animals should be placed under some restrictions, and these restrictions should be more or less rigorous, according as the disposition and character of the individual shall show to be necessary.

We here give a contrivance for the prevention of accidents from unruly bulls, which we think is the best thing of the kind we have seen.

It is copied from the Complete Grazier, and is thus described: The above engraving furnishes a good representation of a front view of the apparatus as affixed to the head of the animal. It consists of a straight piece of iron, stretching from horn to horn, perforated at each end so as to pass over the tips, and strongly fastened on the horns. On the center of this is riveted a *curved* bar of iron—or which is better, steel—bending upwards, which moves easily on the rivet, and has holes at each end containing the upper round link of a chain. These chains again unite in a strong iron or steel ring, which opens with a hinge and screw and passes through the bull's nose. The effect of this contrivance is, that if the bull should make a push forward, the curved bar will prevent any bad consequences, and if he move in the smallest degree to the right or left, the bar communicating by the chain with the ring in the nose, will bring him immediately to check.

Every bull should have a ring in the nose, and the best way to lead him is by a strong stick, like a hoe handle, with a hook and spring at one end, to be attached to the ring in the nose. The animal is thus kept at a proper distance from the person who leads him.

DAIRYING.

Phineas Hardy, near Luray, Jefferson co. in this state, keeps 49 cows. He made last year 14,000 lbs. cheese, and 2,000 lbs. butter. He rears his cows. His cows gave an average of 14 to 15 quarts per day, on pasture; in the best part of the grass season, the best of them give 20 quarts per day. He has tried a cross with the Durham breed, and is satisfied that it is an improvement; prefers the *half* bloods to those which have either more or less of the Durham; they are better milkers, keep easier, and hold out longer—that is, their constitutions are better. Mr. Hardy has taken several premiums on cheese, at our state and county shows.

DEMAND FOR LONG WOOL.

We have great pleasure in laying before our readers the following letter from **Samuel Lawrence**, Esq. of Lowell, in answer to one we addressed him, enclosing samples of wool from some Leicester sheep, owned by Mr. **Howard**, associate editor of the Cultivator. It will be seen from this letter that rapid advances are making in this country in the manufacture of such goods as require long wool, such as is produced by the breeds of sheep known as Cotswolds, Leicesters, Linconshires, &c. and that the increasing demand for this kind of wool affords encouragement to the breeders of these sheep, which they have not heretofore enjoyed. It will be seen also, that Mr. S. expresses great confidence in the belief that the prospects of the wool grower are fully equal to those of any other branch of husbandry.

Lowell, Jan. 10, 1844.

Editors of the Cultivator—My numerous engagements at the opening of the year, have prevented an earlier reply to your respected favor of the 28th ult.

I have examined the two samples of wool, and am of opinion that they are admirably adapted to combing purposes for the manufacture of *Mouslin de Laines*. The staple is long, strong and lustrous, qualities not desirable for felting purposes, especially the two latter. I judge these samples to be from Cotswold sheep, a breed which it is very desirable to propagate in this country, as the worsted business is just coming into existence. The secret of England's advance of all the world in the manufacture of worsted goods, lays in the fact of her possessing better breeds of sheep for the production of combing wools, and not from her superior skill in working them.

The worsted business in its various shapes, is to be of immense importance in this country, and it affords me sincere pleasure to be able to say to you that it has already been commenced in this state upon a liberal scale, by parties whose means and intelligence are a guaranty of its success. A great deal of talent and skill have been brought to bear upon this branch of industry, and if I am not greatly deceived, the time is near when old England herself will be astonished at our success. A number of hundred looms on mouslines are already in operation, and more in progress. In addition to the works already projected, a company is now being formed in Boston, with a capital of a million of dollars, for works on Mouslin de Laines, &c.

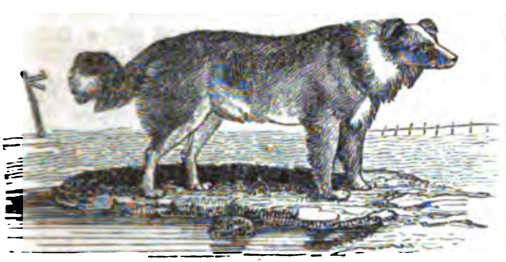
In reply to your inquiry about the kinds and quantities of wool used in the Middlesex mills, I have to say that we use about a million of pounds yearly, of such kinds as are considered in this country the choicest produced; say full blood Saxony, and Saxony mixed with Merino. We are very fastidious in the selection of our wools, both as regards the blood and condition; and in consequence, we are in the habit of paying prices which many manufacturers think absurd.

I am clearly of the opinion that no branch of agriculture promises better than the culture of wool, and I sincerely hope more attention will be given to it than has been paid for the last few years.

Yours, **Sam'l Lawrence.**

DEVON COWS.

Mr. **C. P. Holcomb** received the first premium of the New Castle (Del.) Co. Ag. Society, for a Devon cow. "The result of 12 weeks trial with this cow, gave 174 lbs. 12 oz. butter, averaging 14 lbs. 9 oz. per week; the highest product in any one week being 19 lbs., and the lowest 12½ lbs. The week she made 19 lbs., she made one half of it the last three days of the week. Her feed the first part of this time was hay, with dry oat and corn meal mixed; subsequently this was changed to slop—two buckets a day was regularly given her, containing about two quarts of corn meal and as much wheat bran, mixed in a bucket of warm or tepid water, with a little salt. The week of her great trial in June, she was fed on three gallons of meal a day, at three feeds, mixed as above. She had a good run of pasture, and was also for a time fed on green oats, and again with corn fodder that had been sown broadcast."



THE SHEPHERD'S DOG.—(Fig. 00.)

Where sheep husbandry is practiced on a large scale, this dog performs so important a part, that some notice of his qualities cannot be deemed irrelevant. The variety which is above delineated, is found chiefly in the extensive sheep walks of the northern part of England and in Scotland, where the purity of the breed appears to be preserved in the greatest perfection. Its docility and sagacity, indeed, surpass those of every variety of the canine race. Obedient to the voice, looks, and gestures of his master, he quickly perceives his commands and instantly executes them. A well trained kog of this kind, is, to a shepherd, an invaluable acquisition. The faithful animal anxiously watches the flock, keeps them together in pasture, from one part of which it conducts them to another, and if the sheep are driven to any distance, he will infallibly confine them within the road, and at the same time prevent any strange sheep from mingling with them.

In keeping sheep on the large prairies of the west, or on extensive hills and mountainous ranges of country, this kind of dog would be found very serviceable. Those who wish to see a specimen of their sagacity, will find one in possession of Mr. Sotham, of "Hereford Hall," which will perform about all that is attributed to any of the species.

FARM OF GEO. GEDDES, ONONDAGA CO. N. Y.

Product and Expense of Cultivating Twenty Acres, for Twelve years.

We consider the following Farm Report of Mr. Geddes, worthy of notice on several accounts. It furnishes an example of the debt and credit system which every farmer should keep with his several fields, and also the ease with which great productiveness is kept up in a naturally well constituted soil. We had the pleasure last autumn of inspecting Mr. Geddes' beautiful farm, his well constructed barns, stables, &c.; his machinery, worked by water, for raising water to his yards and buildings, sawing his wood, and for other mechanical purposes; and he called our attention in particular to the field, the course of cultivating which he has here described. It lies on the gypseous shales at the base of the Onondaga limestones, and is a deep sandy loam, easily worked, and containing evidently both lime and gypsum in considerable quantities. In its geological position and chemical constitution, it appears to resemble those fertile soils, the analysis of which is given by Sprengel, and one of which had been constantly cropped for 160 years. Few fields of corn we have seen the past season, showed a finer growth than that of this field, but it was much injured by the premature frost of September. To the excellent chemical and mechanical condition of the soil must be attributed its continued fertility, materially aided no doubt, by the clover and plaster used upon it. It should be understood that Mr. Geddes did not offer his farm for examination by the County Committee, but it was visited by them, for the pleasure which every good farmer must feel in witnessing the improvements in agriculture, conducted under the supervision of a man of wealth and intelligence.

Messrs. Brown, Ellis and Cleaveland—Having been absent from home when you visited my farm last summer, to examine the growing crops, I take this mode of giving you such information in relation to the mode of culture, and the results obtained, as I think will be necessary to enable you to judge correctly in the matter.

The land upon which you saw the corn growing, had been pastured two years, and was manured slightly this spring with straw that had been trampled under foot in the barn yard last winter. The manure was drawn on the ground before plowing, and plowed under as well as could be done by one pair of horses before one of the plows known as the Nourse and Ruggles' plow, marked "Sward C.;" the plow going about five inches deep. The ground was then rolled and harrowed. The corn was planted the eleventh and twelfth days of May; the hills three feet apart from center to center, both ways, averaging about five stalks in the hill. As soon as the corn came up it was plastered, and in due time hoed twice. The implement used to prepare the ground for the hoe both times, was a cultivator having steel teeth, which was passed once in each row both ways of the field.

This mode of culture, made the ground, as you must have observed, very clean. Here permit me to say, that ground that is free from stumps and stones, and is plowed well, rolled and thoroughly harrowed, will be clean when the corn is harvested, if it is faithfully hoed twice, unless some very bad weed is to be subdued. Three times cultivating under the circumstances above supposed, will in my opinion, do more injury in breaking the corn down, and trampling it under foot, than benefit. I wish to be understood when I speak of hoeing corn, I mean that every plant besides the corn, is to be cut up or buried, and the work in all respects faithfully performed.

The season will not allow my corn to be harvested in time to report the quantity to you before the annual meeting of the Society. It is now cut up and in stooks.

I had at the time of your visit, a field of barley growing, that may have attracted your attention. It has been carefully measured and weighed, and the ground upon which it grew accurately measured. It produced by measure, forty-nine and one-third bushels to the acre; by weight, fifty-one and a half bushels to the acre, and a small fraction over.

I propose to give you the history of the ground upon which this crop grew, as showing what our best lands are capable of doing, even under ordinary management.

Forty-five years ago, this land was cleared of a moderate growth of oak and hickory timber, interspersed with wild cherry, butternut, box wood, aspen, &c. and sown to wheat. The course of tillage for the first thirty-three years, I know little of, save that barn yard manure has never been used except once, and then in a very small quantity, and on only a small part of the field. Clover and plaster, however, have been used freely from the earliest period that they could be obtained in this country.

Twelve years ago, I came into possession, the land being then covered with clover. The course pursued, and the results obtained from that time, I give you below:

First Year—I summer fallowed, receiving from the land only the pasture, during the fore part of the season, say four weeks, a cow being kept upon each acre at 25c. per week,	$1·00
Second Year—Harvested wheat. The crop was sown early, and grew large in the fall, and the snow was very deep, and remained on the ground till late, and the crop was so injured that probably not more than five acres were harvested. One hundred bushels only was obtained, it being at the rate of five bushels to the acre on the whole piece, at one dollar per bushel would give per acre,	5·00
Third Year—Put in corn, and had by measure, a little over sixty bushels per acre, sold at 50c. per bushel,	30·00
Fourth Year—Corn again, estimated at fifty bushels per acre, at 50c.	25·00
Fifth Year—Oats, measured seventy bushels per acre, at 37½c.	26·25
Sixth Year—Harvested wheat, put in after oats, measured twenty bushels per acre, and sold at $1·50	30·00
Seventh Year—In pasture. An acre will keep one cow for six months, at 25c. per week,	6·50
Eighth Year—Sowed oats, measured sixty-five bushels per acre, at 37½c.	24·37
Ninth Year—Wheat after oats, 19¾ bushels per acre, sold at $1·31¼	25·87
Tenth Year—Summer fallowed and pastured, say one cow 4 weeks, at 25c.	1·00
Eleventh Year—Harvested wheat, injured by rust, fifteen bushels per acre, sold at $1·00	15·00
Twelfth Year, 1843—Barley, fifty-one and a half bushels per acre, sold at 37½c.	19·31
Total value of product of one acre for twelve years,	$209·30

From this sum is to be deducted the cost of cultivation, seed, plaster, and clover. No account has been kept of these items, but practical men, like yourselves, can judge of the estimate I herewith submit.

You will recollect that this land is free from stone, stumps, and every thing that can obstruct the plow, and that clay and sand are so mingled, that it is of very easy cultivation.

First Year—Summer fallowed.	
Second Year—The first crop, wheat was harvested, and cost as follows:	
Breaking up one acre, with one span of horses, two-thirds of a day,	$1·33
Harrowing same one-fifth of a day,	40
Cross plowing same twice, one day,	2·00
Harrowing same three times, half a day,	1·00
Seed wheat, and sowing same,	1·50
Harvesting 20 bushels of wheat to the acre, and drawin same,	1·50
Threshing 20 bushels of wheat, at 10 cts.	2·00
Cost of first crop, per acre,	$9 73

This crop being a failure, the charges above for harvesting and threshing are high.

Third Year—The second crop, corn, cost—	
Plowing and harrowing one acre, one day,	$2·00
Marking both ways,	25
A man one day, planting one acre,	75
" " hoeing "	75
" " " " second time,	75
The cost of cultivating one acre for both hoeings,	50
A man three days harvesting at 75 cts.	2·25
Seed corn, and drawing corn to crib,	25
Cost of second crop per acre,	$7·50
Fourth Year—Third crop, corn, cost same as second,	$7·50
Fifth Year—Fourth crop, oats, cost—	
Plowing one acre, half a day,	$1·00
Harrowing in seed, quarter of a day,	50
Three bushels of seed oats, at 37½ cts.	1·12
Harvesting one acre,	1·25
Threshing seventy bushels of oats, at 4 cts.	2 80
Cost of fourth crop per acre.	$6·67
Sixth Year—Fifth crop wheat, put in after oats, cost—	
Twice plowing one acre, one day,	$2·00
Harrowing one acre, quarter of a day,	50
Seed, and sowing,	2·00
Harvesting and drawing into barn,	1·50
Threshing 20 bushels of wheat, at 10 cts.	2 00
Cost of one acre of fifth crop,	$8·00
Eighth Year—Sixth crop, oats on clover sod, cost—	
Plowing one acre,	$1·33
Harrowing in oats, quarter of a day,	50
Three bushels of seed oats, at 37½ cts.	1·12
Harvesting one acre,	1·25
Threshing 65 bushels of oats, at 4 cts.	2·60
Cost of one acre of sixth crop,	$6·80
Ninth Year—Seventh crop, wheat sown after oats, cost—See fifth crop,	$8·00
Eleventh Year—Eighth crop, wheat, summer fallowed, cost—See first crop,	$9·73
Twelfth Year—Ninth crop, barley, 1843, cost—	
Plowing one acre of sod,	$1·33
Harrowing seed quarter of a day,	50
Rolling the ground after sowing,	25
Three bushels of seed, at 50 cts.	1·50
Harvesting,	1·25
Threshing 51½ bushels, at 6 cts.	3·09
Cost of one acre of ninth crop,	$7·92
During these twelve years, clover was sown four times, and plaster six times, costing in all about,	$4·00
The total value of products of one acre, is	$209·30
The total cost of production for an acre, is	75 85
The value of products over cost of production,	$133·45
Which divided by the number of years, gives for the annual profits,	11·11¼

In this estimate, nothing has been charged for fences or taxes. On the other side of the account might have been credited to the land, the value of pasture after the wheat had been harvested; the straw too was worth something, and the cornstalks; these three items will more than balance the fencing and taxes.

No very large crop has been raised during the whole time, unless the barley should be so considered. The prices for which I have sold, have not been extraordinary, and I have suffered one almost entire failure, and one partial failure of a wheat crop. No particular skill has been applied, nor is there any particular good fortune to credit the result to. The soil alone, by its native energy and good qualities has produced the result, the last crop of the series being the heaviest of all. Production has been pushed more with a view to see when the soil would be exhausted, than how fine crops could be obtained, or how the most money could be realized.

Respectfully your friend, Geo. Geddes.

Camillus, N. Y., Sept. 28, 1843.

MERCER OR CHENANGO POTATOE.

We have heard some complaints within a few years, that this potatoe was not as good as it used to be, or that it had degenerated. The following extract which we make from a well written communication in the Maine Farmer, agrees so well with our experience and opinions, that we feel a pleasure in laying it before the readers of the Cultivator. The remedy he proposes will not fail.

"But has the Chenango degenerated? We answer yes. The Chenango when first introduced into this state, was a mixture of two distinct varieties; one kind is always very good, and always produces its like, while the other is comparatively bad, and yields after its kind. Every body knows, for every body has eaten Chenangoes, that some of them when cooked, are white, dry, and good flavored, while others are very dark blue through the whole potatoe, watery and strong flavored. The light kind is always fit for the table, and the dark, never. The light kind are the best formed and yield the best. The dark kind does not ripen so early as the light. In the raw state, it is difficult, if not impossible, to distinguish in all cases the one from the other, but when cooked or cut, they are easily distinguished. The dark variety has increased upon the light, and being unfit for the table, has caused the Chenango to be less esteemed. As we planted this year but two acres, we concluded to *improve* the Chenango for our own use; and accordingly when cutting our seed, we rejected the dark kind; and the barrel we send is a fair sample of the produce. The result is as we expected, and is satisfactory. We now know the Chenango can be so improved in a single season, as to be as perfect a variety as ever grew; that is, that every potatoe of suitable size to cook, will be *good* when cooked."

IMPROVED VARIETY OF RICE.

The South Carolina Temperance Advocate, publishes the proceedings of the State Ag. Society of that state, among which we notice that mention is made of a new variety of rice, called the "big grained rice." It was first discovered in 1838. A person found a part of an ear lying in the barn yard during the threshing season, and from its peculiarity was induced to preserve it. Subsequent experiments have proved it to be unusually productive. Mr. Joshua John Ward, states that in 1840 he planted not quite half an acre with this seed, which yielded 49¼ bushels of clean winnowed rice. In the year 1842, he planted four hundred acres with this seed, and being so perfectly satisfied with both the product and the improved quality of the same, he was induced in the succeeding year (1843,) to sow with it his entire crop. The first parcel, when milled, consisting of eighty barrels, netted *fifty cents* per cwt. over the primest new rice sold on the same day.

Mr. Ed. T. Heriot, states that he planted of this seed in 1839, two fields, one of 15, the other 10 acres, which yielded 73 bushels per acre. The average crop from the same fields had been only 33 bushels per acre.

KNITTING MACHINES.

A correspondent inquires where the rotary knitting machines may be had? Can any one answer?

A meeting was recently held at Burlington, New Jersey, at which it was resolved to form a State Horticultural Society.

NEW-YORK STATE AGRICULTURAL SOCIETY.

ANNUAL MEETING.

The annual meeting of the New-York State Ag. Society for 1844, was held at the Geological Museum, Albany, on the 17th of January,—the President of the Society, James S. Wadsworth, Esq. in the chair.

The first business attended to was the admission of members—89 being admitted, paying $1,00 each.

The Report of the Committee on Field Crops, consisting of Messrs. Hillhouse, Bement and Howard, was then read as follows:

The Committee to whom was referred the examination of the statements of the competitors for premiums offered by the N. Y. State Ag. Society, on "*Field Crops*," having attended to that duty, respectfully offer the following Report:

BARLEY.

1. To Bani Bradley, East Bloomfield, $10. Product, 140 bushels 21 lbs. from two acres and 21 rods.

2. To George Geddes of Camillus, $5. Product, 51 82-100ths bushels, average on five acres.

3. To Wm. Wright of Vernon, vol. of Transactions. Product, 82 bush. 22 lbs. on two acre.

INDIAN CORN.

There were three competitors for the premiums on Indian corn, neither of whom, the committee state, had sufficiently complied with the requisitions of the Society to justify the award of a premium.

WINTER WHEAT.

1. To. N. S. Wright, Vernon, $10. Product, 80 bush. 55 lbs. on two acres.

2. To Wm. Wright, Vernon. Product, 73 bush. 12 lbs. on two acres.

SPRING WHEAT.

1. To Uri Beach, West Bloomfield, $10. Product, 75¾ bush. on a fraction over two acres.

RYE.

1. To Geo. M'Geoch, Jackson, $10. Product, 77 bush. on two acres.

PEAS.

1. To. Geo. K. Smith, Utica, $10. Product, 46 bush. 20 quarts, on one acre and 14 rods.

2. To Myron Adams, East Bloomfield, $5. Product, 43½ bush. per acre.

OATS.

1. To Joseph F. Osborn, Port Byron, $10. Product, 109¾ bush. on one acre, 11 rods and 90 links.

2. To David Jones, Kendall, $5. Product, 209 bush. 11 lbs. on three acres and 11 rods.

RUTA BAGAS.

1. To H. S. Randall, Cortlandville, $10. Product, 950 bush. on one acre and two rods.

CARROTS.

1. To Wm. Risley, Fredonia, $10. Product, 1,350½ bush. on one acre.

POTATOES.

1. To H. D. Grove, Hoosick, $10. Product, 518 bush. on one acre and 72 rods.

ESSAYS.

The President then read the Report of the Committee on Essays, from which it appeared that the prize for the best Essay

1. On the Diseases and Insects injurious to the Wheat Crop, was awarded to John J. Thomas of Macedon, Wayne county.—$20.

2. On the Varieties and Culture of Wheat, to Rawson Harmon, Jr. of Wheatland, Monroe county.—$20.

3. On the Introduction and Culture of new Agricultural Products, to John J. Thomas, of Macedon, Wayne county.—$20.

REPORT OF THE COR. SECRETARY.

H. S. Randall, Esq. Cor. Sec'y, not having prepared his Report, made a brief statement, from which it appeared that his efforts have been continued through the past year, with untiring zeal in behalf of the cause.

TREASURER'S REPORT.

The Treasurer, E. P. Prentice, Esq. read his annual Report, from which it appeared that there was in his hands at the last annual meeting, the sum of $1,843 92

Received at annual meeting from 69 members,	69 00
Of Joseph Fellows, Geneva,	100 00
Of James Wadsworth, Geneseo,	50 00
Of James S. Wadsworth, "	50 00
Of W. W. Wadsworth, "	25 00
Of Wm. P. Van Rensselaer, Albany,	25 00
Of J. M. Sherwood, Auburn,	22 00
Of J. B. Murray, Mt. Morris,	10 00
Of R. L. Pell, Pelham,	10 00
Of A. Ayrault, Geneseo,	7 00
Of Edmund Kirby, Brownsville,	5 00
Of Orville Hungerford, Watertown,	5 00
Of C. H. Carroll, Groveland,	5 00
Subscriptions at Rochester,	278 00
Monroe Co. Ag. Society,	328 00
589 Memberships at annual Fair,	589 00
Receipts at gate in sums less than $1,	1,606 78
From the State Treasury,	700 00
For interest on funds,	92 99
Various other sources,	87 25
	$5,906 94
Advanced by Treasurer,	139 63
	$6,046 57

The payments from the Treasury during the year were as follows:

For premiums, expenses, &c.	$2,956 57
Invested in Albany City stock,	3,000 00
Premium on do.	90 00
	$6,046 57

Mr. Denniston of Orange, introduced a resolution directing the appointment of a Committee of one from each Senate district, by the chair, to report the nomination of officers for the ensuing year, which, at the suggestion of Mr. Bockee, was increased to three from each district.

Mr. Randall moved as an amendment to Mr. D.'s resolution, that the Committee consist of one person from each county represented, to be appointed by the delegation from the several counties, and that this committee, in addition to nominating officers, report on the *place* for holding the next Cattle Show.

This resolution and the amendments proposed, drew out a debate of considerable length, in which Messrs. Denniston of Orange, Lott of Kings, Johnson and Seymour of Oneida, Hogeboom of Columbia, Randall of Cortland, Nott of Albany, and several other gentlemen whose names we do not recollect, participated.

Mr. Denniston finally accepted the proposition to amend his resolution so as to refer to the Committee the question of selecting the place for the Fair, in which shape it passed, and the following gentlemen were appointed the Committee to nominate officers and to select the place for holding the next Cattle Show:

First District—Messrs. Lott and Rappelye of Kings, and F. S. Williams of New-York.

Second District—Messrs. Denniston of Orange, Bockee of Dutchess, and Youngs of Queens.

Third District.—Messrs. Hogeboom of Columbia, Vail of Rensselaer, and Prentice of Albany.

Fourth District.—Messrs. Cheever of Albany, Delavan of Saratoga, and Clark of Washington.

Fifth District.—Messrs. Kirby of Jefferson, Enos of Madison, and Seymour of Oneida.

Sixth District.—Messrs. Mack of Tompkins, Collier of Broome, and Faulkner of Livingston.

Seventh District.—Messrs. Sherwood of Cayuga, Rhoades of Onondaga, and Randall of Cortland.

Eighth District.—Messrs. Lee of Erie, Follett of Genesee, and Backus of Monroe.

Mr. Randall submitted the following, as a proposed amendment to the Constitution:

Resolved, That the Presidents of County Ag. Societies shall be ex-officio members of the Executive Board of the N. Y. State Agricultural Society.

On motion of Dr. Beekman,

Resolved, That the President of the Agricultural Society of the State of New-York, be authorised to appoint three individuals, members of the society, whose duty it shall be for each to read an essay on some subject connected with agriculture, and that the essays be read at the meeting of the Society in January next.

On motion of Mr. O'Reilly, resolutions were adopted—1. That a committee of seven be appointed to compile and make arrangements for the publication of volumes from the Prize Essays of the Society, of suitable size for Common School Libraries—2d. That a premium of $100 be offered for the best series of Essays "on the importance of scientific knowledge in prosecuting successfully the ordinary pursuits of Agriculture"—said series to be published also in one or two volumes suitable for the School District Library, the author being entitled to the copy-right. [The Committee subsequently appointed by the newly elected President, (Dr. Beekman,) in reference to these publications, consists of the Hon. John Greig of Ontario, Gov. Seward of Cayuga, Lieut. Gov. Dickinson of Broome, John A. King of Queens, James S. Wadsworth of Livingston, Judge Savage of Washington, and Henry O'Reilly of Albany.]

The Committee on nomination of officers, &c. reported that they had agreed upon *Poughkeepsie*, as the place for holding the next Cattle Show of the Society.

They reported a nomination of officers, which, after an amendment, was accepted as follows:

John P. Beekman, Columbia, *President.*

Vice Presidents.

1st Dist.—James Lennox, New-York.
2d Dist.—Thomas L. Davies, Poughkeepsie, Dutchess.
3d Dist.—Joel B. Nott, Guilderland, Albany.
4th Dist.—John Savage, Salem, Washington.
5th Dist.—Edmund Kirby, Brownsville, Jefferson.
6th Dist.—George J. Pumpelly, Owego, Tioga.
7th Dist.—H. S. Randall, Cortland Village, Cortland.
8th Dist.—Rawson Harmon, Jr. Wheatland, Monroe.
Benjamin P. Johnson, Rome, *Cor. Secretary.*
Henry O'Reilly, Albany, *Rec. Secretary.*
Thomas Hillhouse, Albany, *Treasurer.*

Additional Members of the Executive Committee—George Wilkinson, Poughkeepsie; J. M'D. M'Intyre, Albany; George Vail, Troy; Alexander Walsh, Lansingburgh; Joel Rathbone, Albany.

[The nominating Committee reported the name of James S. Wadsworth for re-election as President, and Luther Tucker for re-election as Recording Secretary—both of which nominations were unanimously approved by the Society. But both of the individuals named, were compelled, by other avocations, to decline a continuance in their respective offices. E. P. Prentice, who was on the nominating committee, declined a re-nomination as Treasurer, which was warmly pressed upon him.]

The Society assembled in the evening at the Capitol, where the newly elected officers took their respective stations. After some brief remarks from the President in reference to the duties which he had just been elected to discharge,

The Annual Address was delivered by Mr. Knevels of Dutchess county. The address was replete with facts and arguments illustrative of the importance of Agriculture in all its branches, and in its varied connexions; and was listened to with marked attention during the hour and a half which its delivery occupied.

In addition to members of the Society, the Assembly Chamber was filled with other citizens, embracing various distinguished friends of agriculture from different parts of the state. Among them were Ex-President Van Buren, Lt. Gov. Dickinson, several of the State officers, members of the Legislature, &c.

Resolutions were passed, tendering the thanks of the Society to Mr. Wadsworth, President,—to Mr. Prentice, Treasurer, and to Messrs. Randall and Tucker, Secretaries of the Society, for the able and faithful manner in which they had discharged the duties devolving upon them while occupying those stations.

On motion of Major Davezac of New-York,

Resolved, That the thanks of the Society be tendered to Mr. J. W. Knevels for the able and instructive address delivered by him this evening, and that he be requested to furnish a copy for publication.

On motion of Mr. S. Smith of Putnam,

Resolved, That a committee of three persons be appointed to petition the Legislature to extend the operation of the existing law for the promotion of Agriculture, and for other purposes.

Mr. John Dickson of Ontario county, gave notice that a motion would be made at the next annual meeting of this Society, to amend the Constitution thereof, so as to give to *the Society*, instead of the Executive Committee, the power of fixing the place where the Annual Fairs are to be held.

On motion of Mr. Daniel Lee of Erie,

Resolved, That this Society regards the establishment of an Agricultural Institute and Pattern Farm in this state, where shall be taught thoroughly and alike, the *Science*, the *Practice*, and the *Profits* of good husbandry, as an object of great importance to the productive agriculture of New-York.

The Society then adjourned.

AGRICULTURAL READERS.

In the early part of our experience as publisher of an agricultural paper, we found that the readers of such journals could be divided into two classes, one of which read with profit, the other with very little if any. Of course we do not include in either of these classes, those farmers who already know every thing, despise all agricultural reading, and treat the idea of any improvement in husbandry with the most profound contempt. The number belonging to this class is much reduced, but specimens are occasionally met with.

Farmer A. belongs to the class of readers that receive and peruse agricultural papers with little profit. The reason is, he does not sufficiently exercise his own judgment in reference to the details of farming. He reads a statement that such a farmer was eminently successful in the cultivation of such a crop; the growing or fattening of such or such an animal; or the management in general of a farm on the principles of rotation; and he determines at once to do the same. He does not stop to inquire whether his soil is suited to the particular crop he wishes to grow, whether it is too wet or too dry, too light or too heavy, rich or poor, but pursuing the course pointed out by the successful farmer, he miserably fails in his crop, or his animals, and frequently throws on the publication, or its correspondent, the blame which fairly belongs to himself.

Farmer B. on the contrary, is one of a class of readers that find a decided profit in the perusal of agricultural papers. He takes the same papers as A., but wholly escapes the mistakes into which A. is constantly falling. The reason is to be found in the fact that he exercises his judgment in managing his farm; and is fully aware that a course of husbandry that would be successful on one kind of soil, or one particular location, would be ruinous on another. Because a great crop, or fine animals, have been produced under certain circumstances, he does not go on to infer that they will be so in all, and it is in this discrimination and adaptation, that the cause of his success is found. He reads, compares, reflects, and decides whether a course is suitable for him, his soil, or circumstances, before he adopts it. His agricultural reading furnishes him the means of doing this correctly, and in that he finds a great advantage.

Agricultural publications are not intended to supersede the use of the judgment in matters of practice, among those who receive them; their great office is to enable the farmer to judge correctly as to the proper course for him to pursue; to bring to his notice all improvements in husbandry and agricultural implements, that he may choose wisely for himself; to show what has been done by others, and the way it has been done, that if in the same circumstances, and it is desirable, he may do so too; and to excite to improvement by showing it is practicable and profitable. The farmer must do as do men in other cases, obtain all the light and information possible by reading, and then reflect, reason, decide, and practice for himself.

The range of earthly good is narrow and soon trodden; after a short time there is no variety, and the enjoyment is without hope.

ANNUAL EXHIBITION

Of the N. Y. S. Ag. Society, to be held at Poughkeepsie, September, 18 *and* 19, 1844.

List of Premiums for 1844.

MANAGEMENT OF FARMS.

For skill and improvement in the management of a farm, taking into view the land, stock and produce, with all the appendages,

First premium, a gold medal—Second and third, silver medals.

No premium will be awarded unless an accurate description of the farm and statement of the crops, &c. with all the expense of the management and profit of the farm, is furnished. These premiums will be awarded only to those whose farms are improved in a manner that renders them examples worthy of imitation.

ESSAYS FOR PUBLICATION IN THE "TRANSACTIONS."

For the best series of Essays on the importance of scientific knowledge in prosecuting successfully the ordinary pursuits of Agriculture,	$100
For the best essay on Farm Management, including all the details connected with the successful management of a farm,	$20
For the best essay on the Rotation of Crops adapted to the climate of this state,	20
For the best essay on Subsoil Plowing, with the results of actual experiments in the state of New-York,	20
For the best essay on the Culture and Manufacture of Silk,	20
For the best essay on the cultivation of the Apple, for exportation as well as domestic use,	20

EXPERIMENTS AND IMPROVEMENTS IN AGRICULTURE.

Turning under Green Crops.

For the most satisfactory experiment of turning under green crops as a manure, on not less than one acre of land, with a detailed statement of the whole process in writing, $10—For the second best, 2 vols. Trans.

Preparation and Application of Manures.

Best experiment in the preparation and application of manures, with a detailed statement of the expense and all matters connected with it, $10.

Improvement of Agricultural Implements.

To the person who shall exhibit at the next Fair, any new or improved agricultural implement of his own invention, which shall in the opinion of the committee merit a premium, a Silver medal.

Proof must be given of the work performed by the implement previous to its exhibition, and of its having been used and approved by some practical farmer. To be open for competition to any citizen of the United States.

Comparative value of Crops as food for Cattle.

For the most satisfactory experiment upon a stock of cattle not less than four in number, in ascertaining the relative value of the different kinds of food used, as compared with hay, with a detailed account of the fodder used, and the expense of raising and feeding the same. The experiments to be made in three winter months, or whenever satisfactory experiments can be made, $20—Second best, 2 vols. Trans.—Third best, Diploma.

Experiments in Indian Corn.

A premium of $25 for the best, $15 for the second best, and $10 for the third best conducted series of experiments in the cultivation of Indian corn. Not less than one acre of ground to be planted.

The experiments to be made with a view of ascertaining what are the peculiar laws relating to that crop—particularly how thick it should be planted, how the plants should be distributed on the ground—whether in hills, drills or otherwise, what kind of manure, and how it should be applied, the manner of cultivation, and the kind of corn planted, to be particularly stated. The cost of each process, the amount of corn raised by each of the different modes of culture, and the relative profits, to be accurately and minutely stated in the report to the committee.

Irrigation.

Best conducted experiment in the flooding and irrigation of lands, $10.

Sheep.

Best managed flocks of sheep, including particular statements of the breed, expense of keeping, increase, amount of wool, value, &c. $12, or a Gold medal.

Dairy.

Best managed dairy, with a detailed statemnt of expense, and every thing connected with the management as well as profits of the same, $12, or a Gold medal.

For the greatest quantity and best quality of butter produced on any farm, from a given number of cows in 30 days the present year, with a particular statement of the method of making and preserving the same, with a satisfactory account of the manner in which the cows have been fed, and the general management of the milk and butter—a Silver medal.

CATTLE.

Class I.—*Best of any breed.*

Best Bull, 3 years old,	$20	Best Cow, 3 years old,	$20
Best Bull, 2 years old,	15	Best Cow, 2 years old,	15
Best yearling Bull,	$10	Best yearling Cow,	$10
Best Bull calf,	6	Best heifer calf,	6

Class II.—*Durham Cattle.*

Best Bull, 3 years old, ······ $15 | Second best, ·············· $10
Third best, Diploma.
Best Bull, 2 years old, ······ $10 | Second best, ·············· $5
Third best, Diploma.
Best yearling Bull, ······ $10—Second best, ·············· $5
Third best, Diploma.
Best bull calf, ·········· $5 | Best Cow, 3 years old, ······ $15
Second best, ········ Diploma. | Second best, ·············· $10
Third best, Diploma.
Best Heifer, 2 years old, ·· $10 | Second best, ·············· $5
Third best, Diploma.
Best yearling Heifer, ······ $10 | Second best, ·············· $5
Third best, Diploma.
Best heifer calf, ·········· $5 | Second best, ········ Diploma.

Class III.—*Herefords.*

Best Bull, 3 years old, ······ $15 | Second best, ··· 2 vols. Trans.
Third best, Diploma.
Best Bull, 2 years old, ······ $10 | Second best, ····2 vols. Trans.
Third best, Diploma.
Best yearling Bull, ········ $6 | Second Best, ······ vol. Trans.
Third best, Diploma.
Best bull calf, ············ $5 | Best Cow, 3 years old, ······ $15
Second best, ·········Diploma. | Second best, ···· 2 vols. Trans.
Third best, Diploma.
Best Heifer, 2 years old, ·· $10 | Second best, ····2 vols. Trans.
Third best, Diploma.
Best yearling Heifer, ······ $6 | Second best, ······ vol. Trans.
Third best, Diploma.
Best heifer calf, ·········· $5 | Second best, ········ Diploma.

Class IV.—*Devons.*

Best Bull, 3 years old, ······ $15 | Second best. ·············· $10
Third best, Diploma.
Best Bull, 2 years old, ······ $10 | Second best, ·············· $5
Third best, Diploma.
Best yearling Bull, ········ $10 | Second best, ·············· $5
Third best, Diploma.
Best bull calf, ············ $5 | Second best, ·········Diploma.
Best Cow, 3 years old, ······ $15 | Second best, ·············· $10
Third best, Diploma.
Best Heifer, 2 years old, ·· $10 | Second best, ·············· $5
Third best, Diploma.
Best yearling heifer, ······ $10 | Second best, ·············· $5
Third best, Diploma.
Best heifer calf, ·········· $5 | Second best, ········ Diploma.

Class V.—*Ayrshires.*

Best Cow, ················ $15 | Second best, ·············· $10

Class VI.—*Crosses of Native and Improved.*

Best Cow, 3 years old,	$12	Best Heifer, 2 years old,	$9
Second best,	8	Second best,	6
Third best,	vol, Trans.	Third best,	vol. Trans.

Class VII.—*Native Cattle.*

Best Cow, 3 years old,	$12	Best Heifer, 2 years old,	$9
Second best,	8	Second best,	6
Third best,	vol. Trans.	Third best,	vol. Trans.

Class VIII.—*Dairy Cows of any breed.*

For the best Dairy Cow, from which shall have been produced in thirty successive days, the greatest quantity of butter—quality as well as quantity considered—which shall be exhibited at the time, ·············· $15
For the second best, ······ $10 | For the third best, ·· Diploma.

The manner of feeding the cow, the management of the milk, and the method of making the butter, with the time it was made, the breed of the cow, if known, and the time after calving, must all be accurately stated in writing. The cow and the butter to be exhibited at the time, with certificates from the person or persons who milked, managed the cream, and prepared the butter.

Working Oxen and Steers.

Best, over 4 years old,	$15	Third best,	vol. Trans.
Second best,	10	Fourth best,	Diploma.

Best 3 yoke of oxen or steers 2 yrs old, belo'ng to 1 person, $15
Second best, ·············· $10 | Third best, ·········· Diploma.
Best ten yoke of oxen from any one town, ················ $20
Best yoke of steers, 3 yrs. $15 | Second best, ·············· $10
Third best, Diploma.

[In awarding these premiums, particular reference will be had to the matching, training and docility of the animals, as well as their general appearance.]

Best yoke of steers, 2 yrs. $8 | Second best, ······ vol. Trans.
Third best, Diploma.
Best yoke of steers, 1 yr.· $10 | Second best, ········ Diploma.

Fat Cattle.

Best yoke, ················ $20 | Second best, ·············· $15
Third best, $10.
Best fat ox, ·············· $15 | Second best, ·············· $10
Third best, vol. Trans.
Best fat cow or heifer, ···· $15 | Second best, ·············· $10
Third best, vol. Trans.

☞ A fat ox taking a premium as one of a pair, cannot compete singly for another premium.

HORSES.

Best Stallion, 4 years old,	$20	Best breeding Mare,	$20
Second best,	10	Second best,	10
Third best,	vol. Trans.	Third best,	Diploma.
Fourth best,	Diploma.	Best Mare, 3 years old,	$10
Best Stallion, 3 years old,	$15	Second best,	vol. Trans.
Second best,	10	Third best,	Diploma.
Third best,	Diploma.	Best pair matched farm,	$10
Best pair matched,	$10	Second best,	vol. Trans.
Second best,	2 vols. Trans.	Best pair market horses,	$10
Third best,	Diploma.	Second best,	vol. Trans.
Best gelding horse,	$10	Second best,	vol. Trans.

The variety of horse which possesses size, strength and endurance for field labor, combined with that action which qualifies for the carriage or saddle—in short, the "horse of all work"—is probably the most profitable class which our farmers can now engage in rearing; and to such, therefore, will the preference of the Society be given. Horses taking premium in pairs, cannot compete singly for the premium for geldings.

SHEEP.

Class I.—*Long Wooled.*

Best buck,	$10	Best ewe,	$10
Second best,	5	Second best,	5
Third best,	Diploma.	Third best,	Diploma.

Best pen of five lambs, $5.

Class II.—*Middle Wooled.*

Best buck,	$10	Best ewe,	$10
Second best,	5	Second best,	5
Third best,	Diploma.	Third best,	Diploma.

Best pen of five lambs, $5.

Class III.—*Fine Wooled.*

Best buck,	$10	Best ewe,	$10
Second best,	5	Second best,	5
Third best,	Diploma.	Third best,	Diploma.

Best pen of five lambs, $5.

Class IV.—*Fat Sheep.*

Best,	$10	Second best,	$5

Third best, vol. Trans.

Applicants for the premiums on fat cattle and sheep, must furnish statements of the manner of feeding the animals, and the kind, quantity and cost of the food.

The term "long wooled" is designed to include the Leicesters, Lincolns, Cotswolds, and all the English varieties of sheep which furnish the quality of wool suitable for combing—the "middle wooled" includes the South Down, the Norfolk, Dorset, Cheviot, Native, &c.—the "fine wooled" includes the Spanish and Saxon varieties of the Merino and some of their crosses.

SWINE.

Best Boar, over 10 months,	$10	Best Sow,	$10
Second best,	5	Second best,	5
Third best,	Diploma.	Third best,	Diploma.

Best lot of pigs under 10 months, not less than 4 in number, $5

Second best, Diploma.

In awarding premiums on hogs, reference will be had not merely to size or present condition, but that proportion between bone and meat which promises the greatest value from the least amount of feed.

FARM IMPLEMENTS.

Best plow,	$15	Best cultivator,	$5
Second best,	Silver medal.	Second best,	Diploma.
Third best,	Diploma.	Best drill barrow,	5
Best subsoil plow,	$10	Second best,	vol. Trans.
Best Dynamometer,	20	Best farm horse cart,	5
Best Farm wagon,	10	Best ox cart,	5
Second best,	vol. Trans.	Best horse rake,	5
Best half doz. hand rakes,	Dip.	Second best,	vol. Trans.
Best grain cradle,	3	Best ½ doz. grass scythes,	Dip.
Second best,	Diploma.	Best " cradle "	Dip.
Best half doz. hay forks,	Dip.	Best " dung forks,	Dip.
Best harrow,	5	Best threshing machine,	15
Second best,	vol. Trans.	Second best,	vol. Trans.
Third best,	Diploma.	Third best.	Diploma.
Best fanning mill,	Silver med'l.	Best straw cutter,	Silver med'l
Second best,	vol. Trans.	Second best,	vol. Trans.
Third best,	Diploma.	Third best,	Diploma.
Best improved ox-yoke,	5	Best clover machine,	10
Second best,	Diploma.	Second best,	Diploma.

Best flax and hemp dressing machine, $10.

Articles not presenting any new and valuable improvements, will not be entitled to premiums. Implements and machines must be tested as far as possible, in the presence of the committee.

DAIRY.

BUTTER.—*Not less than 50 pounds.*

Best sample,	$15	Fourth best,	Silver medal.
Second best,	Silver medal.	Fifth best,	" "
Third best,	" "	Sixth best,	" "

CHEESE.—*Not less than 100 pounds.*

Best sample,	$15	Fourth best,	Silver medal.
Second best,	Silver medal.	Fifth best,	" "
Third best,	" "	Sixth best,	" "

The butter offered for premiums must be presented in butter tubs, jars or firkins.

The claimants for premiums must state in writing the time when it was made; the number of cows kept on the farm; the mode of keeping; the treatment of the cream and milk before churning; the mode of churning, winter and summer; the method of freeing the butter from the milk; the quantity and kind of salt used; whether saltpetre or any other substances have been employed.

Those who present cheese for the premiums offered, must state in writing the time when it was made; the number of cows kept; whether the cheese is made from one, two or more milkings; whether any addition is made of cream; the quantity and kind of salt used; the quantity of rennet used, and the mode of preparing it; the mode of pressure, and the treatment of cheese afterwards.

MAPLE SUGAR.

Best sample, 15 lbs.	$15	Second best,	Diploma.

CORNSTALK SUGAR.

For the best experiment in the manufacture of sugar from cornstalks, from one acre of northern corn cultivated for the purpose, so as to obtain the greatest quantity of sugar, $25.

The process of manufacture and clarifying must be particularly stated in reference to the maple and cornstalk sugar.

SILK.

Best specimen manufac'd,	$15	Second best lb. reeled silk,	$5
Second best,	10	Third best,	Diploma.
Third best,	5	Best half bu. cocoons, 1844	10
Fourth best,	vol. Trans.	Second best,	5,
Best pound reeled silk,	10	Third best,	Diploma.

DOMESTIC MANUFACTURES.

Best woollen blankets, $5—Second, 4—Third, 3.
Best ten yards flannel, $5—Second, 4—Third, 3.
Best 10 yards woolen cloth, $5—Second, 4—Third, 3.
Best woolen carpet, $5—Sec'd, 4—Third, 3.
Best tow cloth, 15 yards, $1—Second, diploma.
Best 10 yards linen, $5—Sec'd, 4—Third, 3.
Best 10 yards linen diaper, $5—Second, 4—Third, 3.
Best hearth rug, $5—Second, 4—Third, 3—Fourth, 2—Fifth, 1—Sixth, diploma.
Best ten yards kersey, $3—Second best, 2—Third, 1.
Best rag carpet, 15 yards, $3—Second, 2—Third, 1.
Best double carpet coverlet. $4 Sec'd, 3—Third, 2—Fourth, 1.
Best pair woolen knit stockings, $2—Second, 1—Third, Diploma.
Best wove woolen stockings, $2—Second, 1—Third, dip.
Best cotton wove stockings, $2—Second, 1—Third, dip.
Best lb. of linen sewing thread, $2—Second, 1—Third, dip.
Best linen woven stockings, $2—Second, 1—Third, diploma.
Best linen knit stockings, $2—Second, 1—Third, diploma.
Best knit cotton stockings, $2—Second, 1—Third, diploma.

VEGETABLES.

For 6 best stalks Celery,	$2	2 best purple egg plants,	$1
3 best heads Cauliflower,	2	Best h'f peck Lima beans,	1
3 best heads Broccoli,	2	Best " Windsor do.	1
12 best white table turneps	1	Best bunch double parsley,	1
12 best Carrots,	1	3 best Squashes,	1
12 best table Beets,	1	Largest Pumpkin,	1
12 best parsneps,	1	12 best ears seed corn.	1
12 best Onions,	1	Best h'f p'k table potatoes	2
3 best heads of Cabbage,	1	Second best " "	1
12 best Tomatoes,	1	Best variety seedling "	5

Discretionary premiums will be awarded on choice garden products not enumerated above.

FRUITS.

For the greatest variety of table Apples, $5.

For the second greatest, $3 | For the third greatest, vol. Tr.

For the best twelve sorts, not less than three of each, $3.

Best new seedling Apple, $5.

For the greatest variety of table Pears, $3.

For the second greatest,	Vol. Transactions.
For the greatest variety of Winter Pears,	" "
For the best twelve Quinces,	" "
For the best twelve Peaches,	" "
For the best twenty-four Plums,	" "
Far the best six bunches of native Grapes,	" "
For the best six bunches of foreign Grapes,	" "

FLOWERS.

For the greatest variety and quantity, $5.

For the second greatest, $3 | For the third greatest, vol. Tr.

For the best Floral Ornament, $5.

For the second best,	$3	For the best s'dl'g Dahlia,	$3
For the third best,	vol. Trans.	For the second best,	2

For the best twenty-five varieties of Dahlias, $5.

For the second best, $3 | For the third best, vol. Trans.

PLOWING MATCH.

First premium,	$15	Third premium,	$10
Second premium,	12	Fourth premium,	6

Fifth premium, Diploma.

Each competitor will be required to plow one-fourth of an acre of sward land in 75 minutes; the furrows not to be less than 12 inches wide and 6 deep—plowman to drive his team.

FIELD CROPS.—(*At Winter Meeting.*)

Best crop of wheat not less than two acres, $15.

Second best, $10 | Third best, 2 vols. Trans.

Best two acres of spring wheat, $15.

Second best, $10 | Third best, 2 vols. Trans.

Best crop of Indian corn, not less than two acres, $15.

Second best, $10 | Third best, 2 vols. Trans.

Best crop of Barley, not less than two acres, $10.
Second best,··············· $5 | Third best, ······· vol. Trans.
Best crop of Rye, not less than two acres, $10.
Second best,··············· $5 | Third best, ······· vol. Trans.
Best crop of Oats, not less than two acres, $10.
Second best,··············· $5 | Third best, ······· vol. Trans.
Best crop of Potatoes for table, not less than one acre, $10
Second best,··············· $5 | Third best, ······· vol. Trans.
Best crop of Potatoes, quant'y considered, not less than 1 ac. $10
Second best,··············· $5 | Third best, ······· vol. Trans.
Best crop of Sugar Beets, not less than half an acre, $10.
Second best,··············· $5 | Third best, ·······vol. Trans.
Best crop of Maugel Wurzel, not less than half an acre, $10.
Second best,··············· $5 | Third best, ······· vol. Trans
Best crop of Ruta Baga, not less than one acre, $10.
Second best,···· ········ $5 | Third best, ······· vol. Trans.
Best crop of Carrots, not less than one acre, $10.
Second best,··············· $5 | Third best, ······· vol. Trans.
Best crop of Peas, not less than one acre, $10.
Second best,··············· $5 | Third best, ······· vol. Trans.
Best acre of corn for fodder, sown broadcast, $5.
Best half acre of hops,···· $5 | Best half acre of tobacco, $5
Best " " flax, ···· 5 | Best acre of cabbage,····· 5
Best acre of broom corn, $5.

Those who present claims to premiums for farm crops, must state in writing the following particulars:—The condition of the soil at the commencement of cultivation for the crop; the previous crop and cultivation, and quantity of manure used upon it; the quantity and kind of manure the present season; the quantity and sort of seed used; the time and manner of sowing, cleaning and harvesting the crop; the amount of the crop determined by actual weight or measurement; and the expense of cultivation. The land shall be measured by some sworn surveyor, and the claimant of the premium, with two other persons who assisted in measuring, shall certify under oath as to the quantity produced from the piece of land mentioned in the certificate of the surveyor.

DISCRETIONARY PREMIUMS,

Will be awarded for such implements, products. &c. not enumerated, as shall be deemed worthy of notice or encouragement.

COMPETITION FROM OTHER STATES.

Premiums in form of Silver Medals, open to competition from other states, will be given

For the best bull and cow of any breed—Second best, 2 vols. Transactions.
For the best yoke of working oxen—Second best, 2 vols. Tr.
For the best pair of fat cattle—Second best, 2 vols. Trans.
For the best pair of matched horses—Second best, 2 vols. Tr.
For the best pen of 5 fine wooled ewes—Sec'd best, 2 "
For the best fine wooled buck—Second best, 2 vols. Trans.

REGULATIONS.

The premiums for Essays and Agricultural Implements, will be open to citizens of other states; all others will be confined to residents of this state. who are members of this Society, or who may become so by the payment of one dollar on entering their articles.

The trial of plows will take place at Poughkeepsie, on Monday, the 16th day of September.

No premiums will be paid on any animals or articles taken away before the close of the Fair.

Premiums not claimed within four months after they are awarded, will be considered as donations to the Society.

All persons who intend to exhibit Cattle, Horses, Sheep or Swine, should give notice to THOMAS L. DAVIES, Poughkeepsie, or HENRY O'REILLY, Recording Secretary, Albany, previous to the 10th of September, that the necessary arrangements may be made for their accommodation—and all animals must be on the ground by 9 o'clock, A. M. of the 19th September.

All those who intend to compete for the premiums on agricultural implements, butter and cheese, sugar, cocoons, silk. &c should have their specimens on the ground on the 17th, that they may be deposited in their appropriate places, and the rooms suitably arranged on the day previous to the Fair.

Applicants for premiums are requested to pay particular attention to the notes attached to the premiums on Dairy Cows, Fat Cattle and Fat Sheep, Butter and Cheese, Field Crops, Maple Sugar, &c.

The statements required from those who compete for field crops, must be sent to HENRY O'REILLY, Rec. Secretary, Albany, previous to the 1st of January, 1845, and the premiums will be awarded at the annual meeting of the Society, on the third Wednesday of January.

Competitors for the premiums on Essays, must forward their manuscripts to the Rec. Secretary, Albany, previous to the 1st of January, 1845, free of postage.

No premium will be awarded, unless, in the opinion of the Judges of the Class in which it is offered, the animal or article is worthy of such premium.

Prize animals and implements at the previous exhibitions, will be allowed to compete for the prizes: but they must receive a higher prize, or in a different class, to entitle them to a premium. Should the same premium heretofore given them be awarded, they will receive a certificate to that effect, instead of the prize.

Animals and other articles offered for competition, must be labelled with the names and residence of the owners at full length.

FOREIGN INTELLIGENCE.

By the arrival of the mail steamer at Boston on the 20th ult. we were put in possession of our usual supply of Foreign papers and Magazines; but our pages were too full, on their receipt, to enable us to give extracts this month. We also received letters from two of our friends—that from Mr. ROTCH we are compelled to lay over till next month—from the other, we have only room for the following extracts, giving an account of the great show of Fat Cattle, at the Smithfield market:

London, Dec. 31, 1843.

GENTLEMEN—I know not that I have anything to communicate that will be regarded by you as possessing much interest. Considerable excitement prevails here among the farmers at this time, on account of the recent declaration of Earl Spencer, in favor of the Anti-Corn-Law-League. The sensation however, is not likely to be lasting. His Lordship is not an *excitable* man; the sentiments which he has lately very temperately declared, being only those which he has entertained for several years; and although his present position will not, probably, (judging from his well known character,) be very strenuously maintained, yet his reputation as a statesman and agriculturist is such that his opinions cannot be without their influence.

The great show of fat stock, farm implements, &c., at Smithfield, on the 7th, 8th and 9th of Dec., was superior in numbers to any previous one, and the quality of the animals is said by connoisseurs who have had the opportunity of comparing, not to be inferior. The spirited competition between those two rival breeds of cattle, the Short Horned and Herefords, resulted this time somewhat in favor of the former. Last year the Herefords seemed to have rather the advantage—they taking all the first, and seven out of the eleven prizes on *oxen*. Of the prizes given for oxen and steers, the Herefords took *six*, the Short Horns *three*, and the Devons, *two*. For cows and hiefers, the Short Horns took *four*, a cross bred Short Horn and Ayrshire *one*, the Herefords none. The most successful prize takers, were, for the Short Horns, Sir C. R. Tempest and Earl Spencer—for the Herefords, Mr. Perkins, the Earl of Warwick, and others—for Devons, Mr. Umbers took both prizes.

The show of fat sheep was particularly fine. The Leicesters and Improved Cotswolds, among the long-wooled breeds, and the South Down among the short-wooled, as usual bore away the palm. Mr. Twitchell and Mr. Umbers, were the most successful with the long-wools, and Mr. Grantham and Mr. Webb with South Downs.

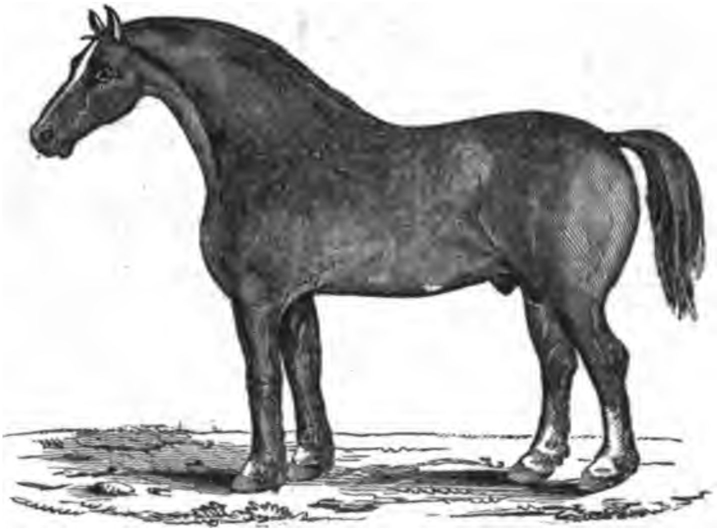
The show of pigs was very good. The Improved Black Essex, exhibited by Mr. W. Fisher Hobbs, were most esteemed, and took the highest prize. There was a pen of three Suffolk pigs exhibited by His Royal Highness, Prince Albert, which were very pretty, and were much admired; but as the judges in this case, as heretofore, showed themselves to be no "respecters of persons," the Prince's animals, although acknowledged *good* and highly creditable to him as *a farmer*, could take no prize. The Prince attended the show, and particularly examined the stock and implements, with all which he was much gratified.

Among the horses exhibited was a most enormous Cart Horse, which, though not five years old, was nineteen hands high!

For a particular and highly interesting account of this show, I refer you to the Farmers' Journal of Dec. 11.

The impression seems to prevail here, that the last grain crop was less than an average, and that the demand for American flour will increase. Considerable agitation exists in regard to the Corn-market, and in what the controversy in regard to the corn-laws, will finally result, cannot now be forseen—a considerable reduction of rent, is all that can reconcile the tenant farmer to the system of reduced duties.

You will see by the papers an account of the death of Mr. J. C. Loudon, the well known author of many very valuable works on agriculture, horticulture, floriculture, &c.



ENGLISH CART HORSE.

THE DRAFT HORSE.

The above cut represents a Stallion of the improved draft breed, for which the first prize of fifty sovereigns was awarded to the owner, at the meeting of the Highland Agricultural Society, at Aberdeen, Scotland, in 1840. The general characteristics are evidently those of the improved English Cart Horse, which, on the authority of British writers, may be summed up as follows:

This breed are generally small headed for their size, short necked, with thick shoulders, standing rather upright to the collar, short in the back, very wide in the breast, deep and round in the body, with broad backs and loins; the quarters thick, the thighs and fore arms very strong, the legs short, with large round hoofs. They possess great strength, and though somewhat slow, they are not deficient in bottom, and from their great weight, as well as muscular power, they go through draft work that could be performed by no other animal.[*]

From what we have seen of this class of horses, we are inclined to the opinion that they possess properties that are well calculated to improve the stock of this country for farming purposes. Several years ago a grey horse called *Columbus*, was sent into Massachusetts by Gen. John Coffin of the British army—a gentleman, who with his brother, Admiral Sir Isaac Coffin,[†] expended much money in the purchase of the best cattle and horses in England, which were sent as *presents* to the Ag. Soc. of Massachusetts, their native state. Columbus was kept several years in the different counties of Massachusetts, and his progeny were esteemed as the most powerful draft horses that could be had.

Messrs. Corning & Sotham of this city, have an imported English Cart Horse, which we think worthy the notice of those who wish to rear horses for farming purposes, or for heavy draft. The form and size of this horse indicate prodigious strength, and though a person who was unacquainted with the breed might suppose his motions were sluggish, we are satisfied from having seen him in harness, that his natural walk is faster than that of horses in general, and that he is sufficiently active for the plow or wagon. Though not yet five years old, and not within two years of his full weight and power, he will move off with a load that would astonish the driver of a common horse. He is hardy, and is kept fat with only moderate feeding.

The best of the heavy Dutch horses of Pennsylvania, bear a considerable resemblance to the horses above described, and some of them are excellent for draft.

SURFACE AND DRILL MANURING.

Messrs. Gaylord & Tucker—Doubtless when materials and facilities are had, the best general manner of enriching the soil, is that of incorporating or diffusing the manure therein, so as to have it mixed throughout. But then, in given circumstances, it may be acknowledged that surface and drill manuring have their peculiar advantages. As to my own experience at least, I have found striking benefits in the latter practice. I have doubled my crops of wheat and other small grain, in some cases, by a covering of an inch or so of pine straw or leaves; either applied immediately after sowing, or, as to wheat and rye, in the winter, at my leisure; and them in the spring sowed my clover seed; the growth of which, protected by the shade of the surface covering, (even in light sandy soil,) stood a drouth that otherwise would have proved destructive. And if not sowing clover, I find the surface covering (partly decomposed,) after shading the small grain, plowed under with the stubble, a great advantage to a succeeding crop. My practice in planting corn, is to drill 7 feet, and plant a row of southern field peas between each row of corn. I plow deep, and then putting the manure in the furrow, (into which the old cornstalks are previously thrown,) I run a furrow each side so that the manure is covered, with a hollow left directly over it, in which the seed is put at proper distances; and the manure, through which the perpendicular roots run, is never disturbed by after culture. And therefore, as in some other ways of applying the manure, no danger of firing or injury thereby through dry weather. As to the ruta baga, or other turneps, or cotton crop, or other tap rooted plants, the aforesaid plan of drill manuring does finely. On ordinary land, by this plan, I have raised at rates of 600 bushels of ruta bagas to the acre. And by putting a shovel full or so of manure, put in deeply and covered at distances of 6 or 7 feet, and pumpkins planted thereon, I have raised fine crops in old worn out fields. By plowing and harrowing for after crops, succeeding those of surface or drill manuring, the soil is gradually renovated or brought to a desirable state of fertility. But more of this another opportunity, in the meantime yours, &c. with all due respect.

Brinkleyville, N. C. Jan. 1844. Sidney Weller.

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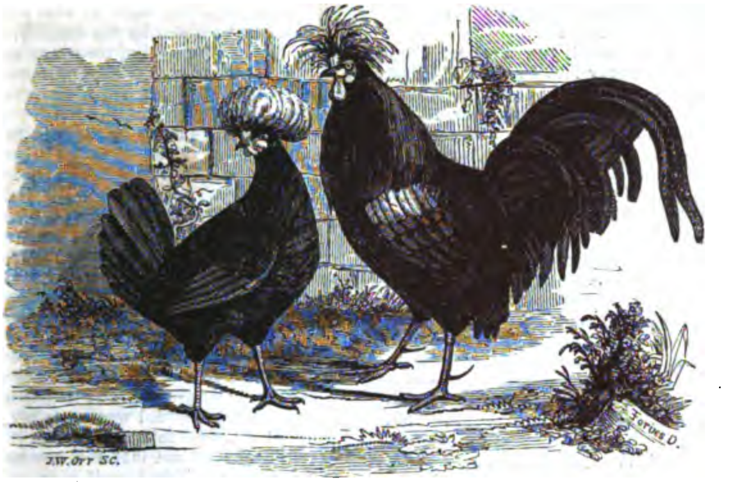
[*] Complete Grazier, and Low's Illustrations of British Animals.

[†] Admiral Coffin presented the Mass. Ag. Soc. at different times, a bull and cow of the Durham breed—(*Admiral* and *Annabella*)—a bull and cow of the Hereford breed—(*Sir Isaac* and ——) two stallions and a mare of the Cleveland Bay breed, an o stallions of the racing breed—(*Barefoot* and *Serab*,) Barefoot was afterwards reshipped to England to run a great race.


J.W. Orr Sc.
Forbes D.

POLAND COCK AND HEN.

CRESTED FOWLS.

THE varieties of *crested* fowls, or those having a crown of feathers proceeding from a fleshy protuberance on the *back of the head*, are numerous. We have been informed by a gentlemen of much observation who has several times traveled through Europe, that they are common in France, Italy, Holland, Belgium, Germany, Poland, and England. Their general characteristics are the same, although they are to be met with of every grade of color, and are the more highly prized as the colors are more beautiful and rare. They are occasionally met with having five toes to each foot, like some of the Dorkings, and some of the Bantams. Their combs and gills, or wattles, are usually much smaller than in other breeds, and there are some whose heads are almost entirely destitute of these appendages. It is this race of fowls which the poultry fanciers of the old countries have mostly cultivated, and hence it is that particular tribes are found, each possessing some striking or fanciful peculiarity, which has become more or less fixed and hereditary, according to the degree of care and skill which has been bestowed in breeding. They are considered good layers, seldom or never wanting to 'set,' and though their growth is slow, their flesh is better and more delicate than that of common breeds. Their size is about a medium. Where birds of prey abound, these fowls are reared with more difficulty than others, as, owing to the obstruction of the sight from the crown of feathers, they are more easily caught.

Where the object is eggs, we know of no breeds that are preferable to these. They will lay more eggs until they are two or three years old, than any other sort with which we have ever had any acquaintance. As before observed, they are not inclined to set, but will sometimes lay two days out of three, except in the season of moulting, for two or three years—this has given them the name of "everlasting layers." But from the circumstance of their constantly laying, they *break down* or grow old sooner than those kinds which have intervals of setting—the same as cows that give a great deal of milk, and continue to do so all the year, generally fail sooner than those which give less, and go dry a part of the time.

Where it is desired to breed these fowls, it is best to have some kind that set well, (the *game* hen is *first rate* for this,) to hatch the eggs and rear the chickens.

Of the varieties of the crested fowl, those are most prized by the fanciers which are most rare. Such as *black*, with white tops—the *clear white*—the *white*, with *black* tops, (very rare)—the silver and the golden, a pheasant, a rare and very beautiful kind.

The originals from which the figures at the head of this article were drawn, belonged to Mr. C. N. BEMENT, and were of the variety which are black with white tops, commonly called the Black Polanders.

PROFITS OF POULTRY.

MESSRS. EDITORS—Agreeably to your request, I herewith forward you the account which I have kept with our fowls the past year. They have been confined in a yard of about half an acre, with a house and shed made expressly for them. The house is thirteen feet square, and two stories high. The first is devoted to feeding hoppers and nests, and the second to the roosts. In the shed is dry sand for them to roll in, and boxes of lime, gravel, &c. The fence is made of pickets six feet high, which we find sufficient; after they have been confined for a short time, they become attached to the yard, and seldom attempt to fly over the fence. Around the yard, close to the fence, is set a hedge of white pine trees, and a cluster in the middle, where the fowls resort in hot weather, and as a shelter from hawks.

Most of the fowls were of fancy breeds. The geese of the large Bremen and Chinese varieties. They have been allowed as much grain as they would eat, and a few boiled potatoes fed to them while warm, and occasionally animal food, such as boiled liver, &c. in winter, with lime, gravel, and a constant stream of water running in the yard. Their food was changed often. It consisted of oats, wheat screenings, millet and corn. We found that twelve quarts of oats were sufficient for seventy fowls per day, and other grains in proportion to their weight.

Poultry Establishment.	*Dr.*	*Contra.*	*Cr.*
To 15 Cocks, 50c. each,	$7·50	By 3978 Hen's eggs 12c.	39·78
69 Hens, 37½c.	25·87½	39 Duck's eggs, 12c.	39
3 Turkeys, 62½c.	1·87½	39 Turkey's eggs, 12 c.	39
7 Geese, $1.	7·00	50 Guinea hen's eggs, 6c	25
1 Fancy Duck, $1.	1·00	47 Geese eggs, 36c.	1·41
1 Guinea Fowl, 25c.	25	41 Fowls sold,	46·31
71 bu. screenings, 15c.	11·25	5 Geese sold,	7·00
4 bush. Millet, 50c.	2·00	30 Fowls killed,	7·06
14¼ bush. Corn, 42½c.	6·07	2 Geese killed,	2·00
30¼ bush. Oats, 24c.	7·26	2 Turkeys killed,	1·00
8 bush. Potatoes, 25c.	2·00	11 Fowls died,	
32 Fowls purchased,	15·09	1 Turkey died,	
3 Turkeys purchased,	1·13	6 Fowls presented,	
	$88·30	32 bu. manure sold to the Morocco Tanner,	6·00
		54 Hens on hand, 37½c. ea.	20·25
		18 Cocks, 50c.	9·00
		6 Geese, $1.	6·00
		1 Duck, $1.	1·00
		10 Turkeys, 50c.	5·00
		2 Guinea fowls, 25c.	50
			$153·34
		Expense,	88·30
		Profits,	$65·04

Valuing them at the price of common poultry, that is 15 cents a piece for the fowls, and 50 cents for the turkeys and geese, leaves a profit of $30,51.

Albany, Jan. 8, 1844. GEORGE BEMENT.

"EXPERIMENT WHEAT."

MESSRS. EDITORS—I send you a short chapter on wheat. On the 6th of May last, I sowed 11¼ bushels of experiment wheat, on six acres of ground, which I understand has been under the plow for 8 or 10 years. I threshed my wheat a few days since, and had the pleasure of measuring 140 bushels of wheat, and 6 bushels of screenings from the six acres. See Cult. v. X, p. 133.)

One acre I suppose, did not yield more than 10 bushels, as it was drowned out. Some of the best I suppose, yielded 35 to 40 bushels to the acre.

The expense of cultivating the six acres, was	$59.00
Credit.	
144 bushels of wheat,	144.00
Straw,	4.00
Screenings,	2.00
	$150.00
Deduct expense,	59.00
Leaves nett profit,	$91.00

Thus my wheat cost me a little less than 40 cents per bushel. The wheat is good and handsome, and the flour is good for all purposes. I consider it more sure than other kinds of wheat, because it is perfectly acclimated.

Cazenovia, N. Y., Jan. 4, 1844. S. PECK.

SALINE MANURES APPLIED TO INDIAN CORN.

MESSRS. GAYLORD & TUCKER—I promised you early last summer, to furnish you with a detail of the result of my experiments in saline manures applied to maize, (Indian corn.)

I mixed each of the following salts with dry, well pulverized muck, 2 oz. of salts to 4 quarts of muck, and applied such mixture to *ten* hills of maize, taking care to incorporate it thoroughly with the soil. The hills were as nearly equal in the number of stalks, and quality and condition of the soil, when the manure was applied, as it was practicable to have them, and were three feet and a half apart from the center of the hill each way. The manure was applied on the 10th of July.

When the corn was cut up, the *ten* hills of *each kind* were carefully preserved by themselves, and at the time of husking, I took into the field my scales, and accurately weighed each kind, noted the weight, and counted the number of ears. The result I give you below. There was no difference perceptible to the eye, in the quantity of stalks of the different kinds, except in the case of No. 1; the stalks and ears of corn of that were smaller than either of the others; and you will perceive that it produced more ears and less weight of corn than either of the others.

No. 1.	Carbonate of ammonia,	61 ears,	weighing	21 lbs.	12 oz.
2.	Muriate of ammonia,	49 "	"	22 "	4 "
3.	Nitrate of ammonia,	47 "	"	22 "	4 "
4.	Phospate of soda and ammonia, equally mixed,	50 ears,	weighing	24 lbs.	8 oz.
5.	Phospate of soda,	48 ears,	weighing	23 lbs.	12 oz.
6.	Nitrate of potash,	46 "	"	22 "	6 "
7.	Muriate of lime,	49 "	"	24 "	

I was induced to make the experiment from seeing in the New England Farmer, a suggestion that Doct. Jackson of Mass., whose scientific researches have afforded many valuable suggestions to the agricultural community, was desirous of having accurate experiments made with these and other salts, (the others I was unable to obtain,) and I regret that the late day when the suggestion of the experiment came to my notice, and a considerable delay afterwards, arising from the difficulty of obtaining the salts, prevented me from applying the manures as early as I think should have been done to be certain of their full practical effect.

The yield you will perceive is very large. According to the table in the Cultivator Almanac for 1844, there would be 3,556 hills of corn in an acre, planted 3½ feet apart each way, and at the rate of 70 lbs. of ears to a bushel of corn, an acre manured as No. 4 was, would produce about 124½ bushels of corn; the rest of that field averaged 69 bushels of corn per acre.

I am unable to learn at what price these several sal could be obtained by the quantity, but at druggist pric by the small quantity, they cost more than the corn worth. I think it likely, however, that they may b purchased at prices which would render them cheap manures.

Seeing statements by farmers in western New-York of enormous yields of maize when planted in drills, last spring planted about an acre and a quarter three fe apart one way, and eighteen inches the other—thre stalks together; the field was in better condition than m other maize fields, and was manured as highly as the were. The crop looked remarkably well, and I anticipated an enormous yield; but was greatly disappointe upon husking, to find that it produced only a little mor than 102 bushels of ears to the acre; when an acre planted 3½ feet apart each way, yielded 193¾ bushels of ears the amount of *stalks* in the drilled field greatly exceede the other, but they were far from compensating for th deficiency of *grain*. The experiment was fairly tried and the drilled field was certainly *as well* cultivated a the other, for I intended to offer it for premium; and th result satisfied me that the common mode of planting three and a half feet apart each way, is much the mos productive, unless such an enormous quantity of manur should be applied to the field as to render the crop *unprofitable*.

I give this statement because I deem the detail of *unsuccessful* experiments, of quite as great value to farmers, as that of *successful* ones. FRED. J. BETTS.

Newburgh, Dec. 19, 1843.

NUT GRASS.

MESSRS. EDITORS—In your Nov. no. an inquiry is made by Mr. H. Bond of Kingston, N. C., how nut grass may be destroyed. If by nut grass, is meant coco, of which there is much in Louisiana, we would say it is difficult to destroy. Dig it up and burn it, is the surest way. Cotton seed, or Bagasse, so called, after the juice is expressed from the sugar cane, placed, say two feet thick, we believe will destroy it; but what substitute would effect it in North Carolina, where these cannot be obtained, we cannot say. Where it has spread over an extent of surface, it must be let alone, and ditch around it to prevent its spreading.

CORNSTALK SUGAR.

We planted last summer, 4 acres of corn in a proper manner, and cultivated it with great attention. It grew finely, and matured well; the juice weighing 8 degrees, and yielded 450 gallons of juice per acre which produced 50 gallons of syrup per acre, yielding no sugar. In the same field, and immediately adjoining, we planted sugar cane, and harvested it last week, and manufactured it into sugar. It yielded nearly three, or over two and a half hogsheads of sugar, and upwards of 150 gallons of molasses, per acre.

We had supposed we could compete with the north in making cornstalk sugar, but we give it up; and reckon the north will soon do the same in the attempting to compete with the sugar cane.

GRASS

Of all the grasses ever tried in the south, the crab grass exceeds all; and in quality is equal to the best northern grasses. It may be somewhat surprising to some northern farmers, to learn that we plow up our meadows yearly, and sow them yearly. We plow them in January, February, or March, and sow them in oats, which are harvested in May or June; during this time, the grass seed, shed and left deposited on the ground from the season previous, springs up; and by September produces from one to two tons of hay per acre.

It grows rapidly if the season is not too dry, and is sometimes mowed twice or three times the same season. It makes excellent pasture. The white clover grows luxuriant here, on the Mississippi bottoms; and our pastures are now, the last of December, supplied with feed in abundance. It is a fine country for persons in moderate circumstances, as well as those of ample means. We have no paupers here. S. TILLOTSON.

New River, La. Dec. 21, 1843.

KEEPING CATTLE IN WINTER.

MESSRS. EDITORS—Will you permit an old subscriber to give you some of his opinions on the subject of wintering stock. Here, where our winter is some five months long, economy or prudence would dictate that the methods the best for the animals, and the most conducive to profit, should be adopted; but it seems certain that the means best adapted to produce these results, are sadly neglected by my brother farmers generally.

It is frequently the case that animals are too long neglected in the fall. The cold weather comes on, the ground freezes, and the snow falls, yet the sheep or cattle are allowed to run at large, shivering in the open air, and gleaning as they best can from the frozen earth, something to satisfy their hunger. All animals, and man himself, feels the necessity of protection more on the first attack of frost, than after the system is accustomed to its action; and there is no time in the year when care and attention to stock is better rewarded than in the first setting in of winter. It cannot be too firmly impressed on the mind of every farmer, that it is much easier to keep an animal in good condition, and will require much less food to do it, by not allowing him to fall away, than to restore him after he once becomes poor. Instead then of keeping my fodder until March, to raise my animals after the flesh is nearly all gone, I endeavor to so manage them that from the first cold weather, there shall be no falling off in their food or their flesh.

Providing proper sheds or stables for stock of all kinds is indispensable, where the comfort of the animal and the profit *of the breeder* is at all consulted. Occasionally animals *that* are unprotected, come through the winter well; but *such* animals are usually of the hardiest kind; and it must *be remembered*, that if unprotected, they come out in good condition, in all probability with protection and the same amount of food, spring would have found them fat. Such instances are the exceptions to a general rule, as the multitudes of poor stock that may be seen every where in the spring, where proper care and attention is not given, abundantly proves. One great office performed by food is to keep the animal warm, and where this is done by stabling or sheds, so much food may be spared. Comfort is essential to taking on flesh, and the man who allows his stock to remain exposed and uncomfortable, must furnish extra supplies of food, or find his animals mere skeletons in the spring. Animals are grateful for their treatment, and the farmer who visits his yards daily with *his* basket of "nubbins," or his poultry yards with his pockets filled with corn, will find as they gather around him, plenty of evidence that such is the case.

But experience has taught me, Messrs. Editors, that food is not all that animals require. They may live with this, but this alone will not give them high health, or keep them in the sleek condition the skillful farmer desires. How often do we see animals during the winter compelled to go without drink, or to obtain it encounter such obstacles as nothing but burning thirst could overcome. The exertion of wallowing through snow drifts, and traveling perhaps a mile daily for a drink of water, will take off more flesh than an ordinary feed of hay can give, and in the end will make the beast poor. There is scarcely a farm where this inconvenience might not be remedied, if more pains were taken to select a site for the farm buildings, with reference to this and other farming comforts, rather than an anxiety to get as near the highway as possible, as if living in the road was the proper place for the farmer. Salt is necessary for the health of stock during the winter, but it should be fed to them frequently, and not in large quantities at a time.

Sheep should never be kept together in large numbers. One hundred is the utmost limit that should be allowed, and if not more than half this number, so much the better for them. Disease is usually induced by crowding too many into confined spaces, and when once introduced into such places is sure to spread. All animals should have their stables, yards, &c. well ventilated, and plenty of room for moving, or else should be occasionally allowed a chance for exercise. The good farmer is characterized by benevolence to his animals, not less than by the general management of his tillage, or his crops. He will keep no more than he can keep well, and find his profits rather in their excellence, than in their numbers.

Orange Co., 1843. W.

A GREAT FAIR PROPOSED AT BALTIMORE.

IT has been, I think, most happily suggested that the occasion of the great Conventions to be held in Baltimore in May next, should be used for a grand *display of American products, inventions, and manufactures of every kind.*

Never before have there been so many men of superior intelligence and influence at home, collected at one point, from all the states in the Union, as there will be then at Baltimore, including the members of the two conventions, which it will be remembered, are to come off within a week of each other. No description that could be written of any great improvement or discovery in agriculture, art, or manufactures, if inserted in every paper of the Union, could so widely and so accurately disseminate a knowledge of it as would such an *actual display* of such improvement or discovery to the more than 50,000 people who will undoubtedly attend these two conventions.

An obvious effect of such an exhibition would be a wonderful distribution of practical knowledge, and the establishment of agencies for vending the best machines and implements employed in every branch of industry, and the most finished products of American ingenuity. The "premium flour at Rochester," was branded and sold as such, in all the towns of this district. The object is so national, and free from all party or sectional taint, that all patriotic editors and citizens may unite in promoting it. Like many other things, however, proposed for the public good, the question is, *how is it to be brought about?* Who is to move in it, and how? Let me suggest an outline of proceeding, to be superseded by any better one that can be thought of.

There is, for instance, a "Mechanic's Institute" in Baltimore; let them be called together, and a committee appointed to procure a suitable place and make the necessary arrangements for the exhibition. Doubtless other societies would unite in this useful enterprise. The city authorities would consult the interests of their constituents, and the reputation of their city, by doing the needful, and by inviting agriculturists, artizans, and manufacturers, to send forward the fruits of their industry and skill from all parts of the country. Let the Franklin Institute and other associations move in it in Philadelphia—in New-York—in Boston. Steamboats might be chartered expressly for the occasion. Proprietors of railroad and steamboat companies would doubtless agree to reduce their charges for cars and boats for the transportation of things intended for the exhibition, no less from patriotic motives, than the consideration of the rich harvest they will reap from these conventions. Nothing can be accomplished without a beginning. Let then meetings be called by even a few public spirited individuals in all the towns, and then the project will make its own way; one thing is certain—if we can get the *editors of papers to take it in hand*, the work is already half achieved; for after all, they are the great levers now by which to *move a nation*; nor is there a class of men which, as a class, contributes as much as the corps editorial, to public enterprises and public charities. If they give not as much as some more opulent classes directly in money, they accomplish much more by the *labor and the publication of thought?* A ten line paragraph will often effect more than ten times ten "silver dollars."

Washington, Dec. 21, 1843. I. S. S.

CORN CROP.

THE editor of the *Kent News*, (Md.) raised the past season, 80 bushels of corn to the acre, on a lot of two acres—or measuring the lot so as to avoid loss by turnings, the yield was 84 bushels to the acre. The lot was clover sod, and was not plowed till planting season, when the clover was growing finely—a dressing of "common" manure was plowed under with the clover—the corn was the "white twin sort," and was planted in rows five feet apart, and the bills two to two and a half feet apart in the row.

DEARNESS OF LABOR—EFFECTS OF PLASTER OF PARIS OR GYPSUM—IRRIGATION.

THAT land in Europe produces more, acre for acre, than in this country, whether under the plow or laid down to grass, is not to be attributed to the principles of productiveness being there better understood than here, but chiefly to the want of capital and the dearness of agricultural labor in America. Is there any country where proprietors possess so little means of improving land in proportion to the land they own, as in ours? Many in the southern states, owners of hundreds of acres, have not money enough to buy a new saddle; resembling in their condition, that of a man who may be supposed to perish with cold in the midst of a forest, for want of a spark of fire, or a steel and flint to strike one. Hence the great value of labor saving machinery in our country; and as necessity has been aptly called the mother of invention, no country has displayed so much ingenuity as ours in the invention of contrivances to economise labor.

Far from being behind hand in the *art* of agricultural improvement, no people on the globe excel us in agricultural knowledge; nor has any made greater improvement in comparison with the *labor at the command of the farmer*. Every one understands for example, the paramount importance of increasing his pile of manure; but in no one thing is the dearness of labor so much felt as in the quantity of it which is required to collect the materials for manure, and to haul out and distribute it after it is made. Herein consists the great value of gypsum on lands to which it is congenial; for on some, as for instance on the eastern shore of Virginia and Maryland, owing perhaps to their alluvion soil or saline atmosphere, or to both, it is said to have but little effect; while in other parts of both these states, its effect is absolutely magical. The very small quantity required—a bushel to the acre—and the quickness with which it is applied, has arrested the progress of exhaustion in some of the counties, which, before it was introduced, were on the high road to ruin. In some other respects its effects have been remarkable. It has been the cause, in Prince George's county for example, of increasing the possessions and fortune of land holders, and diminishing the aggregate population. The rapidity with which large bodies of the poorest could be converted into tobacco land, yielding 1,000 weight to the acre, the high price of that article, and the improvements in the implements and modes of culture, by which planters have come to make four or five hogsheads "to the hand," enabled the enterprising land proprietor and slave owner, to make his land, purchased on time, *pay for itself*. Thus, small proprietors of land, owning few or no slaves, were bought out, and moved away to the west large estates have been accumulated by individuals, while the actual population of that county, perhaps the most productive in the state, and within striking of Baltimore, with its population of 100,000 inhabitants, and bordering on the cities of the District of Columbia, has diminished from 20,216 in 1820, to 19,539 in 1840.

The following are among many similar cases to show the operation of the influences to which I have referred; the facts are stated on indubitable authority. The late Governor Robert Bowie, a man of singular energy of character and of the highest moral worth, at the time and under the state of things already referred to, purchased two hundred acres of poor "broom sedge land" for $1400. He put half of it in corn, and probably gathered not more than 10 or 15 bushels to the acre; sowed it down to oats the next spring, and on them sowed clover and plaster of Paris or gypsum. Plastered the clover the succeeding spring, and the spring following planted in tobacco, and sold from it 100,000 weight at $10 per hundred; making $10,000 for half of the land, which three years before he had purchased, probably "on time," for $1400! Many similar instances might be given of the *effects of plaster of Paris* in producing all the results I have stated, but I am wandering from my subject.

Much and effectively as our ingenuity has been taxed in the invention of every expedient to save labor, it seems to me that there is one means of augmenting our crops of grass in a manner as wonderful or at least as great as the effect of plaster of Paris on cultivated crops—which much practiced in some parts of Europe, but strangel neglected in a country, where of all others, circumstances invite the use of it—I mean IRRIGATION.

You, Mr. Editor, would render an essential service American Husbandry, if you would yourself give, prevail upon some one to give an essay on that subjec especially, if you have at your command, so far, the kin offices of some correspondent who has seen the manne in which irrigation is conducted in Europe. I know great man who could do it, but the game would hardl be worthy of the falcon. If I had time, I would colle the materials and digest such an essay, were it only fo the benefit of a few friends who have all the resources fo irrigation at command. I. S. S.

Washington, Jan. 1, 1844.

"CLIMATE AND PRODUCTIONS OF THE SOUTH."

MESSRS. GAYLORD & TUCKER—A more cooly impertinent defence or rather *attack*, than that of the "EDITOR OF THE FARMER'S ENCYCLOPEDIA," who is he?) I have never before met with. He *dares* undertake to *cut down* and *fill up* such a work as Johnston's Encyclopedia, to "adapt it to general circulation" in this country, and admits such an article as the one in question—a perfect mass of false statements, and calculated, if allowed to go uncontradicted, to do decided injury to the interests of the South—and when those directly interested, point out the falsehoods, he turns round and tells us, "*he* did not write the article, but that a *Southern man, born and educated in South Carolina,* did write it," and therefore it should be received as gospel! A precious specimen of a *Southern man* he must be! Assuredly *not* a Southern man with Southern principles. For my part I cannot believe that the writer of it was ever south of Mason & Dixon's line. "The author is abundantly capable of taking care of himself, should he feel called upon to do so." He is, eh? Well, if he does not feel himself called upon to do so, when told again and again, that his data are almost invariably incorrect, and most of his statements untrue, he must be made of strange stuff for so bold a writer. I do not myself believe that "he will condescend to notice" the corrections that have been made of his *ingenious data*, because no man is capable o sustaining them. If he thinks he is, let him try. As to the *Editor* in question, his "explicitly stating from whence the article was taken," does not clear him of being suspected of a desire to do the South injustice; he has foisted a mass of false statements upon the public, and given it weight and shelter, by doing so under the wing of a work of superior character. His defence is not calculated to aid in the circulation of his edition in the South.

NUT GRASS OR COCO.

A correspondent dating from Kingston, N. C., is desirous of knowing how to destroy Nut Grass. By this I presume he means *Sweet Coco*. If the *Bitter Coco*, which is ruining some of the finest lands on the Mississippi, and spreading rapidly through the interior, I know no means of destroying or even checking it. But if it be the first named, which is dug up by the children for its nut-like root, it can be destroyed; not without much labor, however. Let your correspondent continue *during one entire summer*, to cut it up before going to seed, taking care to go deep enough to bring it away *below* its tuft of fibrous roots, which branch off at about half an inch below the surface, and the *nuts* will die. If the ground is already full of seed, it will require more than one year to destroy it. It is a troublesome grass, but a mere trifle to its cousin, the *Bitter Coco*.

RAT PROOF CELLAR.

The method adopted by your correspondent A. B. N., for keeping moles out of his garden, will also suffice to keep rats out of a cellar; they will dig down under the wall of a house, to a considerable distance in a straight line, but will not attempt to go round an abutment at the base or L. Yours, THOMAS AFFLECK.

Ingleside, Adams co., Miss., Nov. 30, 1843.

Idleness is the Dead Sea that swallows all virtues.

PHILOSOPHY OF WOOL.—No. I.

MESSRS. EDITORS—I propose to furnish your readers with several chapters on the subject of wool—embracing the anatominal structure of the fibre—the peculiarities which constitute its felting property, and other characteristics it possesses indispensable to its manufacture into broadcloth. From the extent to which the production of wool has already arrived in our widely extended and now once more prosperous country, and the certainty that it is destined to increase beyond the calculations of the most sanguine, it will be readily admitted by all, the subject is an important one. My attention has been directed to it, principally, from the ignorance which so generally prevails with farmers, and indeed with very many high above them in general intelligence, as to the felting principle of wool. All well know the fact, that cloth of wool, after being taken from the loom and subjected to a process of the manufacturer called *pulling*, will thicken to almost any degree desirable, by a general and uniform contraction of its dimensions. Now let the reader at once put the query to himself, what is the cause? and if he can render a philosophical solution, he may be considered an exception, not among hundreds, but thousands.

In the discussion of the subject, I beg leave to state that no claim is set up to originality; therefore, all I can claim of your readers is their thanks for imparting information difficult of access to all, condensing what I have found in many instances diffuse, and making more perspicuous what I have found in a measure obscure. The first thing deemed necessary to notice is the

STRUCTURE OF THE SKIN.

The skin of the sheep, and of animals generally, is composed of three coats, or layers. The external one is called the *cuticle* or *scarf skin*, which is exceedingly tough, devoid of feeling, and pierced by innumerable small holes, for the passage of the wool and insensible perspiration.

The next layer is termed the *mucus coat*, a soft structure, its fibres having scarcely more consistence than mucilage, and consequently separated with much difficulty from the coat below it. From the fact that the pulpy substance of this layer uniformly approximates the color of the hair, or wool, it is supposed that here resides the coloring matter. This is the seat also of sensation; the nerves, or rather their terminations, ramifying minutely in its substance.

The third or lowermost layer is the *cutis* or *true skin*, a dense firm elastic substance, in order to fit closely to the parts beneath, to yield to the various motions of the body. and the resistance of external injury. The true skin is composed almost entirely of *gelatine*, so that although it may be dissolved by much boiling, it is insoluble in water at the common temperature.

It is well known the skin of the sheep is seldom fully tanned, but is prepared in a peculiar way, and used for the common sort of binding for books, or is converted into parchment, which, from its durable nature, is used for the inscription of documents of more than ordinary value. Other uses made of the pelts of lambs in foreign countries, mention will probably be made hereafter.

ANATOMY AND CHEMICAL COMPOSITION OF WOOL.

Although the fibre of wool has been tested by severe examinations of powerful microscopes, its internal structure is not yet definitely settled—whether solid, or consisting of a hard exterior tube with a pith within. The weight of testimony, however, is much in favor of the supposition of the latter. The fact may be adduced in support of this conclusion, that a sheep when in high condition, the wool growing upon it is coarser than another whose condition is the reverse, the fibre being distended apparently from no other cause than the superabundance of secretive matter designed for its growth. Could it be otherwise were it not tubular in its conformation? It may, however, proceed from another cause, for it has been well ascertained that the fibre is vascular, being supplied with vessels which convey nourishment from the pulp, which seem to accompany it to a considerable distance from the root, if not through its whole extent. The learned Dr. Good says:—"The *Plica polonica*, a disease whose existence is doubted by some, but of the occasional occurrence of which there is abundant testimony, completely establishes the vascularity of the hair; for it is an enlargement of the bulk of the hair itself; an enlargement of the individual hairs, so much so as in some cases, to permit the passage of red blood, for the hair will bleed when divided by the scissors." Admitting it to be true that the hair is vascular, it follows that the fibre of wool is also; and hence if a sheep is in more than ordinary condition, the consequent repletion of the fluids would cause an increased bulk of the fibre, without the necessity of a tubular conformation. But I take leave of the question, with the repetition that the preponderance of testimony is in favor of the theory that the fibre is hollow.

Each fibre of wool is composed of a number of filaments or smaller hairs, ranged side by side, which cannot be perceived without difficulty, from the tendency it sometimes has to unravel at the point. Mr. Bakewell has remarked on this as follows: "Hair is frequently observed to split at its points into distinct fibres—a division has also been seen in the hair of wool. This seems to prove that they are formed of distinct long filaments uniting in one thread or hair. In large hairs I have discovered a number of divisions from the root to the point. In one hair I distinctly perceived fifteen of these divisions or fibres lying parellel to each other, and in some of the fibres a further subdivision was distinguishable. Probably these subdivisions were each composed of others still smaller, which the limited power of our instruments may prevent us from discovering. If such be the structure of the hair of some animals, it is at least probable that the hair of all others may have a similar conformation, although the fibres of which they are composed may be too minute, or adhere too firmly together to permit us to separate or distinguish them."

The fact has long since been established that the chemical composition of nails, hoofs, horns, hair, wool, and even feathers, is substantially the same. According to Henry, they are made up of an animal substance resembling coagulated albumen; and sulphur, silica, carbonate and phosphate of lime, and oxides of iron and manganese. The similarity of the odor of hoofs, horns and hair, perceptible when burned, is within the experience of all. It is also well known that the horns of cattle are made up of elongated fibres or hair, which will be obvious to any one who will take the trouble to examine with the aid of a microscope. Indeed, without this instrument, the fact can be established as exemplified in the horns of the deer, at certain stages of the growth, and also those of the giraffe, on the surface of which hairs can be distinctly traced. Other testimony may be found in the circumstance, uniformly the same, that the horns conform in the degree of their twist or curve to the hair or wool of the animals on which they respectively grow. Thus, in the Angora goat and wild sheep of the Rocky mountains, the horns are, like the hair and wool they produce, comparatively straight; while the horns of the Saxon and Merino resemble the beautiful spiral curve of their wool. The yolk, with other matters, will be considered in my next. L. A. MORRELL.

Lake Ridge, Tompkins co., N. Y., Jan. 4, 1844.

PRESERVING POTATOES THROUGH WINTER.

AN intelligent neighbor practices the following modes by which he rarely loses one bushel in five hundred. The potatoes are placed in a large heap on dry ground, and covered with straw in sufficient quantity to be at least one foot thick around the heap when closely packed. Three or four inches of earth are then shoveled upon it. During the mild weather of autumn, a hole is made in the top for ventilation, which is closed on the arrival of the severe frosty weather in winter. J. J. T.

BLACKWOOD'S MAGAZINE.

THE New World edition of the Dec. no. is received. It is issued by J. WINCHESTER, New World Press, No. 30 Ann st., New-York, at $2 a year in advance; *cheap enough*, for it is one of the best publications "a-going."

IMPROVED PAULAR MERINOES.

Messrs. Gaylord & Tucker—In the 10th vol. of your truly valuable paper, p. 168, after giving the prices obtained for the wool from two very superior flocks of Saxony sheep, you request other breeders of sheep to inform you of the average weight of fleeces, and the prices obtained, that the comparative profits of the different breeds may be seen. You ask me, in particular, to give you the price received for the wool of my flock.

This principle of comparison is certainly a correct one; that we should be informed of the average weight of fleeces, prices received, and in fact the entire profits of the flock, is equally desirable.

An individual may give to the public the weight of wool from one or two superior bucks, and thus convey the impression that *his* is the best and most profitable flock. Another may give the price received per lb. for his wool, without saying any thing of the weight of fleece, and in the estimation of many, *he* has the most profitable sheep. But let us do as our friends Grove and Morrell have done, and as you request others to do—give the weight of fleece of the entire flock, and the price received per lb., and it is the easiest thing imaginable for any farmer to draw a comparison, and decide which will be the most profitable for him, as an individual, to keep. In forming this decision, his location, and the nature and quality of his lands, will not be overlooked.

But to the answer of your question. I ought perhaps to say in the outset, that I had a portion of the wool, (20 fleeces,) from my flock of Paular Merinoes manufactured. For that which I sold, I received 40 cts. per lb. Now, allowing that the other fleeces should give as great a net profit as those sold, and the result will be, as the entire flock averaged 5 lbs. 5 oz., that I received $2.12½ per head. And this, you will recollect, is from a lot of breeding ewes, each of which reared a lamb, and yearling bucks and ewes, with the exception of one stock buck.

It may not be unacceptable to add an account of the profits of my little flock for one year. I find by reference to my book in which I keep an accurate account of all my sheep transactions, that I had on hand on the 1st Nov. 1842, 103 sheep. On hand Nov. 1st, 1843, 128 sheep, which is, as you will perceive, an increase of about 25 per cent above all sold and all losses. I have received in addition to this,

In wool, ...	$191.80
In bucks sold, ...	372.00
	$563.80

Now, gentlemen, I know not but other flocks are better and more profitable. I will only say that I have endeavored to improve my flock since I commenced with them, and think I have succeeded in some degree at least; and am desirous that they should stand upon their own merits. I will also add, that an extensive wool grower, of the denomination of Friends, after having examined them with much care, a short time since, said, (to use his own plain language,) "Thee ought to call thy flock the *Improved* Paular Merinoes." I have no objections to this addition, and if after the several accounts which you have had of this flock, you do not think it assuming too much, you will please place as a caption to this communication, "Improved Paular Merinoes." Truly yours, R. A. Avery.

Galway, Saratoga co., N. Y., Dec. 20, 1843.

SALT FOR CUT WORMS.

Salt has been repeatedly recommended in many of the agricultural papers as an infallible repeller of the cut worm. I have tried only one experiment, which is as follows: Cabbage plants were encircled a few inches from the stem, with a ring of salt about an inch wide and quarter of an inch thick; in other cases the salt was thickly strewed about them and in contact with the stems. In neither case, the cut worms paid the least regard to the salt, but walked right through it and destroyed the plants. In one instance, a cut worm was found after having eaten off a plant, quietly reposing with all the apparent ease and indifference of a philosopher, in a white bed of nearly clean salt.

The best remedy appears to be the application of a roll of paper around the stems when the plants are set out, extending one inch above the surface, and three or four below. A burdock leaf wound round the stem, will answer the same purpose where cultivators are so fortunate as to have this plant on their grounds. J. J. T.

THE CARROT.

Messrs. Gaylord & Tucker—The improvements in the ancient and honorable art of agriculture in New England, within the last quarter of a century, are truly obvious, and particularly for the last few years it has become a subject of interesting contemplation to every lover of his country.

Though the writer is desirous to contribute his mite to the laudable object of the pursuit of agriculture, it is because it is so intimately connected with the interest and well being of his country and the community. Within the last few years the cultivation of the carrot has engrossed a greater share of his attention than that of any other vegetable. If then the few ideas which are hastily thrown together upon this subject, shall ultimately lead to the best method of cultivating this valuable and nutritious root, he will be richly rewarded for whatever pains he may have taken in observing and superintending its growth. We are satisfied from experience that this plant may be brought to great perfection in any part of New England, and with suitable attention will abundantly remunerate the husbandman for all his necessary care and labor. Were our farmers who keep a large stock, to devote a spare acre to the cultivation of this root, we make no doubt they will at the harvest, find themselves in possession of a large store of feed of valuable and rare qualities for sheep, horses, and cattle, which will save largely of hay and other fodder, in times of scarcity of such crops. The three varieties of carrot that constitute the subject of these observations, are the long yellow, the large field, and the Albringham white. Scarcely any vegetable during its growth presents a richer appearance than the carrot, whether we contemplate the yonng plant or the mature root. Hence it may be said in truth, to be an ornamental as well as profitable crop.

For the table, the long yellow is preferable. Its surface is smooth and fibre very compact. In proportion to its size, it doubtless yields the greatest amount of nutriment. Next to this is the large field variety, on which the horse feeds and thrives well, and it gives to the hair a peculiar smooth and glossy appearance. This root is short and rough, often sending off large radicles or branches of roots. When it grows luxuriantly, it is frequently hollow at the upper part. It yields a larger crop than the former, but is better adapted to stock than the table. The Altringham white is a long beautiful root, much less nutritious than either of the other varieties, and resembles some of the finest specimens of the long white turnep. It is a hardy plant, requiring less care in its cultivation than the other varieties. Stock feed and thrive well upon it.

The soil best adapted to the carrot, is a deep rich loam, free from gravel or sand. If it be too adhesive or lumpy, ashes or lime may be mixed with it. If manure be used, it should be entirely decomposed or rotted, and intimately mixed with the earth. The ground should be plowed or spaded fine and deep, the whole being made mellow.

The seed should be planted early in April, in drills not less than 22 inches apart. When the plants spring up, they should be early freed from weeds and the earth loosened around them. The feeble plants should be pulled, leaving only the most hardy ones. At the second weeding they should be thinned again, leaving the most healthy to grow, and thus continue, leaving the most thrifty ones not less than 20 inches apart, so as to give large room for the tops. In this manner, the writer has raised the yellow carrot no less than 7 inches through, and at the rate probably of 600 or 700 bushels to the acre.

Middletown, Ct., Dec. 23, 1843. M.

FARM LANDS OF VIRGINIA.

The call of our Orange Co. correspondent in the Dec. no., has brought us the following: "*A Virginia Farmer*," who dates from Lynchburg, says:

"The most desirable part of Virginia, as it regards health, original fertility of soil, and cheapness of price in proportion to its value, is the vein of red land called the Piedmont region, and embracing the counties of Orange, Albemarle, Nelson, Amherst, and Bedford. It is a belt of land from fifteen to twenty-five miles wide, east of the Blue Ridge mountains. The rocks are all primitive, consisting of quartz, sandstone, &c. with occasional beds of granite. It is that region of country in which the finest Virginia tobacco has been raised. The soil is generally red, with occasional changes to grey or sandy. The growth upon it is white and red oak, hickory, poplar, ash, dogwood, and very rarely pine. It is admirably adapted to the growth of clover, and gypsum produces a powerful effect upon it. The lands when improved produce fine wheat, Indian corn, tobacco and oats, as well as garden esculents and fruits. As you advance from the lower part of this region of country to the counties of Nelson, Amherst and Bedford, the lands become cheaper in proportion to their quality. In Amherst and Bedford counties, great advantages will be derived from the James river and Kenawha canal, which is now in operation as far as the town of Lynchburg, and within about 20 miles of the Blue ridge. It will be soon carried through the mountain. The lands have been generally cleared for the cultivation of tobacco, and are in a state to be improved by judicious farming. Lynchburg furnishes a ready market for the products of Amherst and Bedford counties. The schools are such as are generally found in Virginia. A teacher is generally engaged in every neighborhood, and churches of the different denominations of christains may be found at convenient distances. It will not be necessary to bring stock of any kind, or farming utensils, or furniture, if the farmers wish to settle in Amherst or Bedford. In the other parts of the Piedmont region, the writer is not so well acquainted. The cheapness and facility of getting the products of the farm by water carriage, give to those two counties a decided advantage over the other counties. The prices of land in this region, vary from five to fifteen dollars per acre, according to quality and improvements. The best course to be pursued by persons wishing to purchase land in this region of country, would be to send an agent to examine the country. To examine the northern part of this region, the agent would pass from Alexandria in the District of Columbia, through the counties of Fairfax, Fauquier, Madison and Culpepper, to Orange and Albemarle. To examine the other counties along the line of James river, he would pass through Richmond, and with the packet or steamboat go to Lynchburg, where he could pass into the counties of Bedford, Amherst and Nelson. The land is generally in a bad state of cultivation, but is susceptible with judicious management, of the highest improvement. Being neither a land seller nor buyer, the writer has written this for no other purpose than to answer the inquiries in the Cultivator."

Mr. Nathan Loomis, who moved from the Mohawk Valley to Fairfax co. (Va.) two years since, after stating the condition of churches and schools, and some other matters for which we have not room, says:

"I believe it is a pretty general opinion at the north, that the land here was originally very poor, and that it has been starved out—exhausted. Such opinion is erroneous. Fair crops of tobacco, wheat, corn and oats, have been produced on the poorest land in Fairfax. That constant cropping without applying manure, will deteriorate land in a long series of years is most true; should any one want proof of this, let him examine this county and be convinced. Its fertility has been impaired, but not exhausted. Reduced soil may be easily improved so as to equal its original fertility. The like examination will establish this fact. A large portion of the land in this county has been thrown out to commons, which produces a vigorous growth of sedge; or when sufficient time has elapsed, the sedge is supplanted by pines of rapid growth. The sedge makes a thick strong turf. It requires a stout pair of horses to break it up, and it should lie a year after being well turned over before it is cross plowed. I have cross plowed some six months after turning over; but this checks decomposition, the exposed roots become dry and strong, and are slow to decay. Clover and timothy take, even without manure of any sort. Plaster and lime operate finely. Nova Scotia plaster is had in Georgetown, D. C. 15 miles from this place, ready for use, at 5½ per ton. I need not say any thing of such portions of plantations as have been continued in cultivation, and from which people obtain their support and produce for market; nor of the unbroken forests of oak, hickory, chestnut, &c. which remain in large parcels. People will examine before they purchase. I suppose the inquiries were made to learn whether it is worth the while to make the examination. The price of land varies from $3 to $12 or $15 per acre."

Another correspondent, who resides four miles from Mount Vernon, says:—"The sandy or loamy land upon or near navigable water, is cheap, and well watered, and capable of high and rapid improvement. Oyster shells or lime can be had in any quantity. 150 bushels of lime, 2 gallons of clover seed, and 2 bushels of plaster, will more than restore pristine fertility. Churches are plenty, but the preachers badly paid. Schools can be made in any neighborhood, and to the taste of those who pay the teacher. Every article a farmer can want may be purchased in Alexandria. Horses, cows, sheep and hogs are plenty, and not inferior to any in New-York, that are not better fed. Sheep do well without feed, save when snow covers the ground. Horses, cows, sheep and hogs have more extensive liberty than man, for they range over the whole state, save the enclosures that are five feet high, and so close that the animal trespassing cannot creep through."

LIEBIG'S FAMILIAR LETTERS ON CHEMISTRY.

Editors of the Cultivator—In the latter part of Nov. ult. while in the commercial metropolis of our state, I visited the large book establishment of Wiley & Putnam, and gave you a hasty sketch of an examination of their long catalogue of agricultural and other books.[*]

It is now intended to present some remarks on one of the books brought with me at that time, from that great mart of modern literature and science. It is a recent publication, and strongly recommends itself to the attention and perusal of the farmer and his sons during the reign of winter evenings. Since the nights have lengthened and the field labors closed, I have read it with profit and delight, and I feel assured that other cultivators of the soil, both young and old, will reap benefit by following suit. The book is small and cheap and good. If the reader do not understand all that its pages contain, it will nevertheless cause him to reflect, to think deeply, and to inquire what he knows concerning the condition of agriculture in his neighborhood, its susceptibility and means of improvement. "To think," says a medical author, "is to theorise." Therefore he who thinks and acts, puts theory in practice. We are all more or less theorists, whether we be of the Knickerbocker stamp, obstinate and unchangeable, and haters of book farming; or whether we yield to the impulse of the times and seek for improvement with the advance of the arts and sciences. The old fashioned unchanged farmer, thinks and theorises upon the ancient method of his forefathers, and determines that method to be the only true and correct one. He is unwilling to read, to study, or be instructed in the art he has long practiced. Dr. Rush[†] says that persons in a state of derangement often reason correctly, but upon false premises. So some of the old farmers are like monomaniacs, so set in their own way that they think agriculture requires no aid from books or periodicals, and that it requires no alteration or improvement. Let us then call upon the young to read and to study the *science* as well as the *art* of agriculture.

Here then is one of the books for them. It is entitled "*Familiar Letters on Chemistry, and its relation to Com-*

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[*] This "hasty sketch" has never been received.—Eds.

[†] Rush on Diseases of the Mind.

merce, Physiology and Agriculture. By Justus Liebig, M. D. Professor, &c.” This is a late work of the celebrated author of “Organic Chemistry in its applications to Agriculture and Physiology,” so often spoken of with deserved praise in the pages of the Cultivator.

These letters are sixteen in number, and we recommend them to attentive perusal. They are contained in a small duodecimo volume of 170 pages, price twelve and a half cents, or bound in boards 25 cents. Cheap enough in all conscience.

“The letters contained in this little volume,” says the author, “embrace some of the most important points of the science of chemistry, in their application to natural philosophy, physiology, agriculture and commerce. Some of them treat of subjects which have already been, or will hereafter be, more fully discussed in my larger works. They were intended to be mere sketches, and were written for the especial purpose of exciting the attention of governments, and an enlightened public, to the necessity of establishing schools of chemistry, and of promoting, by every means, the study of a science so intimately connected with the arts, pursuits, and social well-being of modern civilized nations.”

“For my own part, I do not scruple to avow the conviction, that ere long a knowledge of the principal truths of chemistry will be expected in every educated man, and that it will be as necessary to the statesman and political economist, and the *practical agriculturist*, as it is already indispensable to the physician and manufacturer.”

“In Germany, such of these letters as have been already published, have not failed to produce some of the results anticipated. New professorships have been established in the Universities of Gottingen and Wurtzburg, for the express purpose of facilitating the application of chemical truths to the practical arts of life, and of following up the new line of investigation and research—the bearing of chemistry upon physiology, medicine and agriculture,—which may be said to be only just begun.”

“It only remains for me to add a hope that this little offering may serve to make new friends to our beautiful and useful science, and be a remembrancer to those old friends who have for many years past, taken a lively interest in all my labors. [Part of author's preface, p. 6.]

These interesting and readable letters of Liebig contain a continued argument in favor of the application of chemistry to the arts. Among them are some strong and striking illustrations which we would be glad to extract, but we must confine our observations to the agricultural part.

“Agriculture is both a *science* and an *art*. The knowledge of all the conditions of the life of vegetables, the origin of their elements, and the sources of their nourishment, *forms its scientific basis*.”

“From this knowledge we derive certain rules for the exercise of the *art*, the principles upon which *the mechanical operations of farming depend*, the usefulness or necessity of these for preparing the soil to support the growth of plants, and for removing every obnoxious influence.” [Letter 12th, p. 125.]

The remainder of this letter treats of the “Necessity of Chemistry, Rationale of Agricultural Processes, Washing for Gold.” It concludes with a happy illustration of sowing or planting, and reaping for a series of years without manure, until crops fail, as in certain cases the washers for gold, eager to get all, wash and rewash the same sands, obtaining less every time, until they realize nothing to compensate for their labor.

The 13th letter treats of the illustration of the necessity of chemistry to advance and perfect agriculture—Manner in which fallow ameliorates the soil—Uses of lime—Effects of burning—Of marl.

On the action of lime we make the following extract:

“Common potter's clay, or pipe clay, diffused through water, and added to milk of lime, thickens immediately upon mixing; and if the mixture is kept for some months, and then treated with acid, the clay becomes gelatinous, which it would not have done without the admixture with the lime. The lime in combining with the elements of the clay liquifies it; and what is more remarkable, liberates the greater part of its alkalies. These interesting facts were first observed by Fuchs, at Munich; they have not only led to a more intimate knowledg the nature and properties of the hydraulic cements, *what is far more important, they explain the effects of c tic lime upon the soil, and guide the agriculturist in the plication of an invaluable means of opening it, and se free its alkalies*—substances so important, nay, so in pensable to his crops.”

“In the month of October, the fields of Yorkshire Oxfordshire, (in England,) look as if they were cove with snow. Whole square miles are seen whitened with quick lime, which during the moist winter mon exercises its beneficial influence upon the stiff clayey of those counties.”

“According to the humus theory, quick lime ough exert the most noxious influence upon the soil, beca all organic matters contained in it are destroyed by (the lime,) and rendered incapable of yielding their mus to a new vegetation. The facts are indeed direc contrary to this now abandoned theory; the fertility the soil is increased by the lime.” (Page 136.]

We had marked several other pages for notice or tracts, but our space is limited and we must hasten t conclusion, again recommending it to young farme hoping they may receive as much pleasure as the wri has in its perusal. A Practical Farmer.

Staten Island, Dec. 23, 1843.

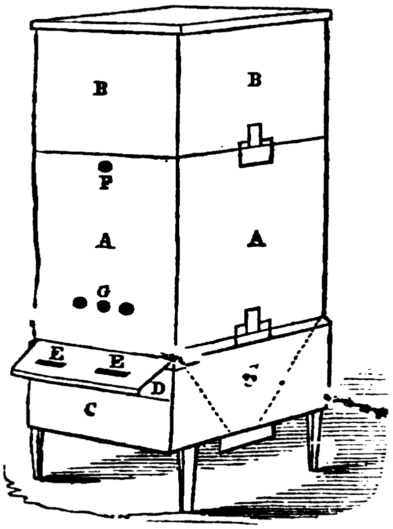
THE VERMONT STUMP MACHINE.

Messrs. Gaylord & Tucker—As your corresponde “M. A.” cannot understand so simple a machine for stu pulling as the one of which I sent you an account, *I ho* in this article to explain his difficulties. When I wro you first, I was building a machine on a small sca wheel 12 feet in diameter, height 8 feet, breadth *10 fee* calculated for two horses to work among small ha wood stumps, which had been cut 4 years. I have ha it in operation a good while, and I assure you *it beat m* expectations. If “M. A.” is going to build one, let h shaft be the stiffest and toughest stick of second grow white oak that he can get; let the gudgeon fit the *hole* the post as exactly as possible, consistently with its tur ing freely, and at the foot of the posts, instead of “firm ly morticing them into the sills,” let the tennon be roun about 4 inches in diameter, and not pinned; the weig will keep it in its place. This will allow the post turn a little on the sill, and thus keep it from *splitting* and the gudgeon from breaking. He must also have tw good iron bands around the top of each post, one abov and one below the gudgeon, and the same on the end o each gudgeon outside the posts. In drawing a stump your machine must be directly over it, so that the chain will draw plumb. If there is any elevation or unevenness in the ground, *have the same end of both sills raised o lowered alike, and never one sill higher than the other.* H must have a notch in the outside of the posts, about 7 fee from the ground, and if a little cramping is unavoidable, let him put a pole or rail with one end stuck in the ground, and the other in this notch. He *must not* use frisky cattle at moving the machine, for if one team should stop and the other keep on, some mischief would follow. The machine of which I sent a description, at first sight seemed to me to be the most rickety shackling old concern I ever *did* see. Its creaking could be heard a mile; it swayed over from one side to the other with great violence. The wheel was crooked and twisted out of shape, and it would stand as much cramping, twisting and straining as any thing I ever saw. Yet it would raise a weight of 100 tons, and stand all that three yoke of cattle could draw. If “M. A.” intends to build a machine, and follows my directions to the letter, I will warrant *him* a good, substantial and effective implement, which will neither “crush to the ground” nor “split in the post.” It will not work, however, on a side hill, but *only on level* ground and gentle declivity.

H. T. C.

Burlington, Vt., Dec. 11, 1843.

N. B. If “M. A.” or any one else, builds a machine, I should like to be informed of their success through your columns.



BEE HIVE.—(Fig. 20.)

Messrs. Gaylord & Tucker—I send you a plan and description of a bee hive which I have constructed during the past season, and which I conceive possesses some advantages over any I have seen. If any others are of like opinion, they are at liberty to use it. It may be used as a chamber hive, or on the subtended plan, at the pleasure of the apiarian.

A. A.—Body of the hive 16 inches square on the outside, and 12 inches high, made of inch boards.

B. B.—Upper apartment, 8 inches high. This may be made separate from the lower part, as in the figure, or both posts may be made together, as in the Vermont and other chambered hives.

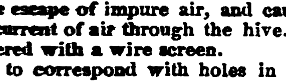
C. C.—Base or protector, 6 inches high, and 17½ inches square; the part projecting beyond the hive, being sloped off to prevent water from running under the hive; made of 1½ inch boards.

D.—Lighting stool for the bees.

E. E.—Entrances for the bees, 2 inches wide and one quarter of an inch high.

F.—Ventilator immediately under the chamber floor, to permit the escape of impure air, and cause a slight but regular current of air through the hive. This hole must be covered with a wire screen.

G.—Holes to correspond with holes in the feeding box, which may be hung on the front of the hive when it is necessary to feed the swarm. These must be kept closed at all other times.



H.—Screen to slide in a groove under the protector. The spaces between the wires one-tenth of an inch.

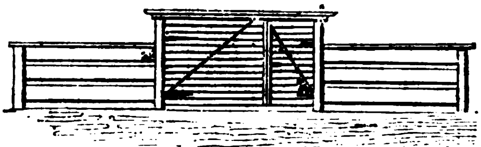
In the inside of the protector are two inclined planes meeting within 1½ inches at the bottom, leaving an open space to correspond with the open part of the screen, H. This position of the inclined planes is represented by the dotted lines in the figure. This opening may be wholly or partially closed by the screen board, or the board may be entirely withdrawn, so that the dead bees, &c. may fall out. As soon, however, as the season for the moth arrives, and till he disappears in the fall, the screen should be used as a barrier to prevent her entrance. A strong swarm will keep the entrance in front so guarded that the moth will seldom gain admittance there, and if she does enter, every part of the hive being planed smooth, the joints all perfectly closed, and the inside of the protector well whitewashed with lime and salt, she will find no place to deposit her eggs unless there be some exposed comb, which should always be guarded against. The body of the hive, chamber and base, should be dovetailed together, and nailed each way, and the lower edge of the hive should be chamfered off on the inside to half an inch thick.

Boxes of any shape or size may be put in the chamber, having apertures to correspond with those in the chamber floor; or when the hive is filled it may be raised and another set under it, as in the common subtended hive. As the bees enter about 1½ inch below the body of the hive, they pass through a canal 3 or 4 inches long, before they are fairly within the hive. This gives them complete power to defend themselves against robbers, as well as the moth. Ants may be kept from the hive by strewing a little pearlash around the feet, or they may stand in shallow vessels containing the pearlash.

The above plan furnishes as complete protection to the bees against all their enemies as could be desired, at the same time it furnishes as complete facilities for removing honey, &c. as any other hive. Objection will probably be made that it is too expensive. It is true, that a *good* hive cannot be made for much less than $2; but as it will last an age, and as a good swarm in a single year will commonly make surplus honey to pay for the hive, it will be cheap in the end. P.

Bowling Green, Wood Co., O., 1843.

N. B. In my drawing I have set the feet on the front and rear of the base; they should be on the ends, so as not to interfere with the screen, which should slide in from the backside.



A GATE.—(Fig. 21.)

Messrs. Gaylord & Tucker—Having noticed in the Cultivator several models for gates, it occured to me whether the gate I have just finished at the entrance of my grounds near my house, might not furnish some new hints for you. I have given a very awkward sketch of it below, from which perhaps you may understand that the large gate, when shut, so rests upon the posts at each end, as to render it impossible for it ever to sag. So when open, it rests upon a short post in the ground.

The small gate, you perceive, hangs upon the high post, and shuts against the upright edge of the large gate, and swings in such a manner that the top piece of the large gate will swing over it. It will be found that the two gates will interfere least with each other, if they should be made to swing different ways. The gate should be finished whole, and then sawed off; the right hand post on one side horizontal half through, and on the other side on a slant, so that the gate will easily rise and rest on the post, by slightly lifting it as it is shut.

Springfield, Mass., 1843. J. Willard.

POUDRETTE.

The expediency of using any of the compositions which are sold for manure, depends on circumstances which the farmer should always consider. Mr. Breck, of the N. E. Farmer, says he has used within the last two years, 75 to 100 barrels of poudrette. He says that where good stable dung can be had at three dollars per cord, it is no object to buy poudrette at present prices. He does not hesitate to say that it is excellent for corn, *provided* about half the usual quantity of green manure is plowed in in the spring, and the corn planted on the poudrette. The corn takes a vigorous start, and before the virtue of the poudrette is exhausted, the decomposition of the green manure begins to take place, and affords nourishment for the numerous roots which are greatly multiplied by the action of the poudrette. If the ground is not in good heart, Mr. B. says the action of the poudrette alone is not sufficient to mature a good crop, although it may give a very flattering appearance in the *first* part of the season.

HEREFORDS AS MILKERS.

MESSRS. GAYLORD & TUCKER—Probably you will say I am too frequently addressing you on the subject of Herefords; but you are aware of the prejudice I have had to contend with against a combination of some Short Horn breeders, to a solitary individual breeder of Herefords. My stock heretofore have not been in a situation for criticism, but I think they are now just what cattle should be. I state this with "*feeling pride*" and *without vanity*. I am highly gratified with the breed, and have not the slightest wish to exchange for any other.

Much has been said against their milking properties *without the least foundation*. I do not desire better cows for the pail than the eight just calved; one does not vary a quart more than another. The following is a statement of the butter made, and I am feeding their calves on the *skim milk*.

I do not know a better mode of bringing these facts before the public in the most satisfactory manner, than in requesting their strongest opponents to see and judge for themselves, and give them, *impartially, their just due*. Therefore I beg to say through your paper, that I shall be most happy to invite Messrs. Randall and Hepburn to stay a week with me, or as much longer as their convenience will allow—my cows and dairy shall be open to their inspection. If the Hon. Henry Clay will accompany them, or any other breeder, not forgetting my cotemporary Mr. Thos. Thompson, Prospect Farm, Pa., I will endeavor to entertain them, with farmer's fare, a *pitcher* of "home brewed;" and assure you with a hearty welcome.

I have been very much *amused*, (some would say annoyed, but to me it did not amount to the latter,) ever since I brought this breed of cattle into the country. I have had *letters without number, inquiring* the *price* of a bull, or a pair, &c. and without *paying the postage*; to which I replied, and there ended the correspondence. Six calves out of the eight abovementioned, were bulls, and six better bred ones could not be produced; I have kept my determination and made steers of them. I have now two two year old bulls and two yearlings for sale; the price will vary from $150 to $250. and if I cannot obtain that amount, I will make "*stags*" of them, therefore your readers know as much about the *price* as if they wrote me *twenty letters*. It is not my object to accumulate a fortune out of this business. I care as little for wealth as any man; but I feel assured my stock will in due time cancel the obligations I am under to my friends and supporters, which is my greatest care and anxiety. More than that, it has kept my *mind active*, and my *hands employed*, two of the greatest blessings; and I am happy to see my stock in such a situation to suit my purpose. The *butcher* and the butter market will do all I want.

I have just commenced feeding *Eliza*, my only half bred cow, (half Short Horn and half Hereford,) and I will show her at the next Fair, but not for a premium, so that the public may be able to judge what the half breed will do for the stall. She was an excellent milker, probably as good as any cow in the herd. I shall milk this season, twenty-three full blood cows and heifers, and I have now on hand just sixty of all ages, bulls, cows, steers, heifers and calves, and shall have fifteen more calves before the 1st of May, if all goes well.

I am feeding my cows on the fodder of Indian corn, from a crop sown broadcast, cut fine with a machine, with one feeding of hay at night, and half a bushel of brewer's grains (cost 6 cts. per bushel,) to each cow per day. I submit a statement of the amount of butter made from the 5th to the 11th of Jan. We had the milk of

Lucy, 4 yrs. old, calved Nov. 28, ...	7 days.
Martha, 8 yrs. old, calved Dec. 28, ...	7
Catharine, 4 yrs. old, calved Jan. 2, ...	7
Victoria, 4 yrs. old, calved Jan. 4, ...	5
Spot, 4 yrs. old, calved Jan. 4, ...	5
Perfection, 4 yrs. old, calved Jan. 4, ..	5
Matilda, 3 yrs. old, calved Jan. 7, ...	2

Equal to the milk of one cow 38 days, and we had 48½ pounds of butter, *weighed in separate pounds*. Had it been weighed at once, the aggregate would have been some greater; but this gives as an average, a fraction *over eight pounds per week for each cow*. The statement is a literal transcript from Mrs. Sheldrick's *dairy book*, and can be duly attested. I send you a roll of the butter as a specimen of its quality.*

It is proper to say that when I bought this stock in England, I *never asked a question* about their milking properties. WM. H. SOTHAM.

Hereford Hall, near Albany, Jan. 10, 1844.

SHEEP HUSBANDRY.

MESSRS. EDITORS—I noticed in your December no. that my views heretofore expressed about the feasibility of cultivating sheep on the western prairies, has waked up, among others, our friend ROBINSON of Illinois. I am glad to see him in the field again, and hope he may have all the success he anticipates in growing wool. Our Vermonters yet remain firm, and cannot be persuaded to give up the ship yet awhile to western competition. We remain of the opinion that no country is better adapted than ours for sheep. If there is a falling off, it must be in the price of our farms; all things considered we can grow wool as cheap as our western brethren.

I also noticed in the Jan. no. a communication from H. S. Randall, Esq. on Paular Merinoes, that he had introduced my flock to the public. It will be proper to state that "Fortune" was bred by Tyler Stickney. He was got by a Jarvis buck, but his qualities partook more of the superior ewe from which he was dropped, a pure descendant of the Col. Humphrey importation in 1810. She died at the age of about sixteen years; her fleeces, when in her prime, averaged over seven and a half lbs. of cleansed wool; very prolific and hardy, which is one qualification of this breed, and may be shown by her raising a lamb this last season. By her wool, and form also, every mark of the Paular family was fully developed. The price I paid Mr. Wilson for the buck, is correct; I also purchased all of Fortune's stock that could be had at any reasonable price. These, with what I have raised from his getting, I have been able to supply many orders to the satisfaction of those who now have them.

I have seen an article in one of our papers, ridiculing the idea advanced by the Cultivator, "that the age of sheep may be known by the horns." That statement in the Cultivator is correct. The ring on the horns will tell the true age much better than it can be known by the teeth. S. W. JEWETT.

Weybridge, Vt., Jan. 8, 1844.

WHEAT vs. CHESS.

MESSRS. EDITORS—While I rejoice at every advance in the practice or the science of agriculture, I experience a proportionate regret at every retrograde movement, or inculcation of error, especially if made in an imposing form, or coming from a source from which farmers have a right to expect better things. Without intending to open anew the chess controversy, which can only be permanently settled by the farmer adopting the same course with that weed which he pursues with other pests, viz: sowing no seed of chess, and carefully pulling and eradicating all such as may accidentally appear, I wish permission to express my surprise at finding in R. L. Allen, late one of the editors of the "Agriculturist," and a frequent contributor to that journal, a strenuous advocate of that exploded heresy. In that paper for November, is an article insisting that wheat turns to chess, and presenting what he calls an array of facts to confirm his position. Now there is not one of the "facts" there presented which is not evidently founded on mistake, or which is not capable of an easy solution, on principles that do not involve an absurdity, or a contravention of the well known laws of nature. There is not one of them that has not been conclusively refuted again and again; and any person, who after reading the papers of David Thomas and others, in the old Genesee Farmer, will revive, and endeavor to sustain such a pernicious doctrine in agriculture, cannot, I think, have well considered the downward tendencies of error. It is certainly a most curious "fact," that if the theory of transmutation is correct, not a single instance has yet been adduced, not a single specimen has been exhibited, that would stand the test of a rigid scrutiny. If the doctrine that wheat turns to chess is well founded, it is one of which thousands of illustrations are presented every year, and yet strange to tell, of the multitudes of stories told and facts asserted, not one, no not a solitary one, has passed that ordeal of investigation to which all such matters should be subjected, without having its fallacy and unsoundness so exposed as to put to the blush those who have presented them. How many roots from which both wheat and chess are said to have grown have been shown; how many ears of wheat of which part were wheat and part chess, have been exhibited or reported, yet which thorough examination showed furnished as little support to the theory of transmutation, as any other stuff that dreams are made of. But I do not so much object to this theory on account of its palpable unsoundness, its contravention of the known laws that govern vegetation, and its direct contradiction of inspiration, as on account of the bad effects it must have on the farming of all who embrace it. If I believe that wheat will turn to chess, cockle, or steinkrout, what inducement have I to keep fields free from these pests; what advantage in endeavoring to use none but clean seed? I condemn the doctrine as a premium for slovenly farming; as a theory which if fully carried out, would do more to lessen the prosperity of western New-York, reduce her wheat crops, and destroy their value, than her worst enemy could in any other way devise. I repeat I am sorry that a gentleman so well known and so much respected, as Mr. Allen, should have made such an "advance backward," and been found among the supporters of what I consider an agricultural heresy of the first magnitude.

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* The sample sent is in *appearance* (we have not yet tried it.) fine, the color and consistence being as good as that made in June or September.—EDS.

A Cayuga Farmer.

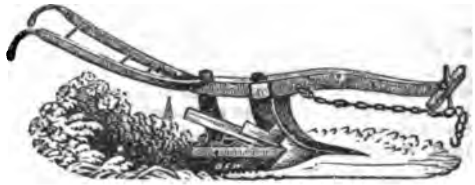
"FIRST YEAR AT FARMING."

From a correspondent who signs "Marion," Ohio, we have received a letter, detailing at some length the experience of his "first year at farming;" from which we give the following extract:

"My farm is a rich vegetable soil of over 2 feet in depth. I spread on about three acres of it 54 loads of stable manure (well filled with timothy seed) last spring, and harrowed it in; but I cannot see that the manure has added to the richness of the soil: a stranger could not point out the three acres. Where I put manure on the woodland it did well. Growth, oak and hickory; stiff soil, and after going 3 to 5 feet in depth underlaid with great thickness of lime stone; (so with the prairie.) Quere—Is not the lime stone too deep to benefit the crops? The strippings of my quarry nearest the rock, when exposed to the air soon falls, lays light, and effervesces when tried with acids. Would this pay expenses of applying it to crops, either on wood land or prairie? I can make lime for 6 cents a bushel, and can get stable manure delivered, at 31 cents a load. Which is cheapest and best? Will fresh lime from the kiln, put on prairie in its natural state, 40 to 50 bushels per acre, kill out the wild grasses and weeds, and bring it into timothy and white clover? I have got up and sold about 1600 perch of limestone this season. The spalls and offal I throw into a kiln, and in 48 hours burn near 400 bushels lime. The village, near by, can furnish 300 to 500 loads manure for the hauling cost of 25 to 31 cents per load; but I do not see that it benefits the prairie at all. I can and will make lime if you think it advisable. I have 250 acres enclosed. The prairie furnishes good pasture, and plenty of stock offers on pasturage."

We have no doubt that one reason, and perhaps the greatest one, why the manure did not operate favorably on the prairie, is, that the land is too wet—and this, we think it probable, accounts for the different effect produced on the timber-land, that being drier and warmer. On very wet and cold lands, manures lie latent or inactive.

As it regards the expediency of using lime, we would say, *make the experiment*—for where lime can be made as low as *six cents* a bushel, not much risk or expense is incurred, surely—and the result may indicate the proper course for the future. After all that has been said about lime, we consider its *modus operandi* not well understood, and we should decidodly prefer being guided by *experience* rather than *theory*. We should, however, be strongly inclined to the opinion, that either lime, or the decomposing lime-stone, would tend to ameliorate the soil described by our correspondent. We dare say his good judgment will soon teach him whether it will be most profitable to use lime or stable manures, or in what proportions he had better use each. The fact that the manure can be had for the *hauling*, and that it will only cost 25 to 31 cents a load when delivered on the ground, is important. There are many other situations in the west, where manure may be had in any quantity, on as low terms as is here mentioned, and in using manures, or making experiments on new ones, this matter should be borne in mind. In conclusion, we presume "Marion" has only to take care to drain off the surplus water from his lands, both by ditching and opening and rendering more loose the sub-soil, and using the means which seem to be readily at hand for improvement, to make himself a farm to his liking.



RUGGLES, NOURSE & MASON'S SUB-SOIL PLOW.

Messrs. Editors—We take the liberty to forward you a cut of the sub-soil plow, as now made by us. This plow is generally used to follow in the furrow of the common plow, breaking and crumbling the sub-soil to any desirable depth, by raising it gradually upon the incline plane, and dropping it again in its place, which allows roots to penetrate deeper, and in very retentive soils, or in wet seasons, the surplus waters will readily pass downwards, and on lands where vegetation is likely to suffer from drouth, by thus loosening the sub-soil admits the natural moisture to ascend and become useful to vegetation.

In ——, at the suggestion of many eminent farmers, we imported from Edinburg in Scotland, one of Smith's Deanston Sub-soil Plows, at an expense of $80—that being the kind most approved and used in England and Scotland. That we believe to be the only plow of the kind ever brought to this country. It was made wholly of iron except the upper end of the handles, and being very long, heavy and complicated in its construction, it was expensive much beyond what the agriculturists of our country would believe necessary, or think they could generally afford. Since that time, we have been testing their operation and utility, through the farmers in different sections of the country, and find their effects to be most beneficial, equal even to the expectations of the most sanguine—and the demand fast increasing. We have so modified and simplified its construction, yet retaining all the principles and adding some important improvements, that we afford a plow for $15, that is capable of doing the same and as good work as the original, and with the improvements, they are better adapted to be used in different soils requiring different depths. They were originally intended only to follow the common plow, but as made by us they have been successfully used in grass lands without first using the common plow, breaking the sub-soil without turning up the sward, and without disturbing it more than was beneficial. (See advertisement.) Ruggles, Nourse & Mason.

Large Fleece.—Mr. Samuel Patterson, of Murfreesboro, Tenn., informs us that he sheared from a two year old Bakewell buck, from the importation of Jas. E. Letton of Kentucky, fifteen and a quarter pounds of wool, free from burs.

CULTURE OF FRUIT.—No. II.

GRAFTING.

ONE of the most important operations in the culture of fruit trees, is the propagation of varieties by *budding* and *grafting*. By means of these we exchange the unpalatable fruit of the wilding for the most delicious productions which art and nature combined have been able to furnish. And there are few gardens or orchards which might not be greatly improved by the introduction of the best varieties, the cultivation and care of which cost no more than that of the most worthless.

Budding and grafting have their respective advantages and disadvantages. Budding requires less skill and care, but needs the subsequent attention of removing the ligatures, and heading down the stocks. Grafting does not need this subsequent care, but more skill is requisite in the operation. The peach and nectarine can rarely if ever be propagated by grafting; and budding cannot be performed on large and unthrifty stocks, which may often be successfully grafted.

Books on gardening describe many different modes of grafting; but the multiplicity of these often more bewilder the learner than instruct him. By understanding the *essential* requisites, the operation is at once simplified, and it may be varied at pleasure without danger of failure. The two chief points are, *that the sap flowing upward through the stock pass freely into the graft, and that it returns without interruption from the inner bark of the stock.* To secure these both the wood and bark in the stock and graft, must be so cut as to admit of being placed in close contact, and when so placed, the line of separation between the bark and wood should, on one side at least, exactly coincide in both.

The most common and useful modes are the *whip* and *cleft grafting*. Whip grafting is adopted where the stock and graft are of nearly equal size. To perform it, the stock and graft are cut off obliquely with an equal degree of slope, so as to leave two smooth straight surfaces which may be brought into close contact. A transverse cleft with the knife is to be made near the middle of each of these surfaces about one-third of an inch deep, so that when they are pressed together, the tongue and slit thus made in each, may mutually and firmly interlock. It is then usual to bind them to their place with bass or corn husk; but it is better to have the jaws of the cleft in each so firmly pressed together as to render this unnecessary. The whole is then to be closely wrapped in a grafting plaster.

Where the stock is more than half an inch an diameter, cleft grafting is preferable. The stock is first cut off horizontally, and a split made in it at the middle of the cut surface an inch or two in depth; in this the graft, cut wedge-like, is inserted. To do it properly, it is requisite that the graft be so cut as to fit the split as nearly as possible, which is to be opened by a wedge on the side opposite from the place for the graft, and that the jaws of the stock be strong enough to press the sides firmly and closely. After this, the plaster is applied.

It is convenient, in grafting, to have two knives, one chiefly for cutting, and the other very sharp, for smoothing the surfaces for contact.

All the branches and buds on the stock, must be carefully removed, that the sap may all go to the nourishment of the graft. Failure is often caused by a want of this care.

In heading down old trees, it is a common practice to graft into the large branches; it would be much better to cut off those branches, and to graft or bud into the young shoots which spring up in their places.

The practice of using clay to cover the wounds, is now nearly superseded by the far neater and better mode of applying plasters of Grafting Wax. These are made the most readily and cheaply by spreading the warmed wax over a sheet of unsized paper with a knife, or with a brush when melted, and afterwards cutting up into plasters of the requisite size. The best and cheapest wax is made by melting together one part of beeswax, two parts of tallow and four of rosin.

As grafting early in spring is generally preferable, (more especially for the *cherry*,) it becomes necessary in cool weather to soften the wax by artificial heat. tle of coals, or a lamp, may be used for this purpo

BUDDING.

Budding is always to be performed when the bark freely, which takes place when the stocks are in a ly growing state. Cherries and plums should alwa budded by the middle of summer; apples and pears continue growing rapidly a month later, and pe may be done even as late as the commencement o tumn.

It is indispensable to successful budding, that the be thrifty, and the shoot in which the bud is inserte more than a year or two old. No skill can succe old or stunted stocks. For the *cambium* or mucilag substance between the bark and wood, which ha into the new wood, and which *cements* the bud t stock, exists only in sufficient quantities for this pu in fast growing branches.

Every bud is an embryo plant, and the object transfer this from one tree to another. To effect th is only necessary that the bud be cut smoothly from shoot with a very small portion of wood with it, an serted under the raised bark of the stock in close co with the cambium. Provided the stock is thrifty growing; the bud smoothly cut off, and closely evenly applied to the stock; the cambium uninjured removing the barks; and the bud be kept to its pla few days by a ligature of moderate pressure; it is of tle consequence how the operation is performed, there can be little danger of failure.

The common way of cutting the bark to remove i to make a transverse cut and longitudinal *slit*, through it, like the letter T. The bud is then slid do wards under the bark, in the middle of the slit. whole operation should be performed with as little d as possible.

Whatever mode is adopted, the bark should alway *lifted* by placing the knife at the edge, and not by ning it *under*, as this always injures the cambium.

After the bud is inserted, the whole should be co ed, except the bud itself, with a ligature of moiste bass, corn-husk, tow, or other soft substance, bo round it with just sufficient force to press the bud clo on the stock.

In about two weeks, or as soon as the ligature beg to cut into the stock, it must be removed. Early following spring, the stock is to be cut off a quarter an inch above the bud, and in a direction sloping tow it, and all the branches and other buds carefully remo that the whole nourishment may go to its growth. So times, (as in the apricot,) it is best to leave two or th inches of the stock above the bud, to tie the young sh to, that it be not broken down by the wind.

Disappointment very often arises in budding the pe and apricot from the buds, though well set, being w ter killed. This may be generally avoided by observ on the tree whence the buds are taken, on what part the shoots the buds have withstood the preceding w ter, and selecting accordingly. These will commo be found to be the earliest formed buds on the thrifti shoots.

Shoots cut for budding should always have the lea removed as soon as they are taken from the tree, abo quarter of an inch above the bud. They may then, needed, be preserved several days in damp moss or clo

Macedon, Wayne co., N. Y. J. J. T.

GREEN PEAS IN WINTER.

THE editor of the "Maine Cultivator" says he saw long since, "green peas as succulent to all appearance they were when plucked from the vine some five or s months before." The mode of preparing them, is pick when of the proper size for eating, shell, and car fully dry on *cloths* in the *shade*. All the care necessar is to prevent their molding; this done they will be fi and sweet. Beans may be preserved in the same wa and with perfect success. If in addition, a stock of gre corn is secured at the proper time, as it may easily b by scalding on the cob when fit for roasting or boilin and then cutting or shelling the corn from the *cob*, an carefully drying in the sun, green peas, or beans, or our favorite *succotash*, may be had the whole year, those who have never tried it, may be assured that a dish of the latter, in January or March, is a luxury.

CULTIVATION OF FRUIT AT THE SOUTH.

Messrs. Gaylord & Tucker—My principal object is to call attention in the "Sunny South," to the raising of fruit—apples and peaches, especially—as I regard them as most valuable to us, and for the reason that they can be so easily raised. In doing so, I must admit that I have but little hope that I shall excite many to practice what I both practice and preach.

It is frequently urged as an objection to apples, that our soil and climate are not adapted to them—that we cannot raise as good fruit here as is grown in the north. This may be true in part, but in the present shape of the proposition, I am unwilling to admit that it is wholly true. That we do not, as a general rule, is undeniable.

A neighbor of mine has succeeded in raising very fine varieties of apples. He selected such varieties as he knew to be good, and planted his trees in the usual manner. He keeps his cattle and horses out of his orchard, and thereby prevents the mutilation of his trees. The consequence is, he has an abundance of delicious fruit from early summer to mid-winter. In an adjoining county, where much more attention has been given to orchards than in this, may be found proofs enough to satisfy the most incredulous, that it is a very easy matter to raise in this latitude, apples of the very best quality. That we shall fail to introduce some of the best varieties from the north, is altogether probable; but this constitutes no objection, inasmuch as we have enough that are already climatised, to give us a great variety if we would propagate them. In a short time I hope to demonstrate this truth by irresistible evidence, if seeing, smelling and tasting, be evidence of that character. At twenty-five feet distance, last February, I dug holes four feet in diameter and from fourteen to sixteen inches in depth. In each of these pits I deposited earth from the corners of the fence, (a rich mold,) sufficient to fill them within six inches of the top. Upon this I placed my trees after taking them from the nursery, without cutting or maiming the roots, in their natural position, giving to each root its full latitude by opening trenches when necessary, and then carefully placed the surface soil among the roots and pressed it down upon them until the pit was filled to a level with the surface. By this operation I have an orchard of three hundred apples, pears and plums, that are coming rapidly to maturity. Indeed, I believe that their growth has been more rapid the present year, than either of the two years they stood in the nursery. Now, I am very certain but for the Cultivator, I should never have grafted these trees, for they and those that I have since grafted, are the first and only ones I have ever seen grafted: and I am very certain that I could not have been so successful in transplanting, without following the general principles laid down in its pages.

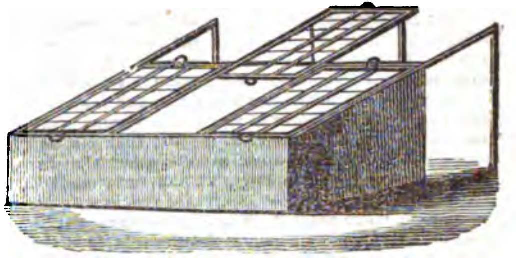
In February, 1842, I transplanted six hundred—in the same month this year, seven hundred peach trees in the same manner, using no manure, and digging the holes only five or six inches deep. I have lost but four trees in sixteen hundred—one peach tree last year from the six hundred, and three this year from the seven hundred, which stood upon land entirely too wet for any plant that requires a dry soil. Now I call this successful operating.

Hancock co., Ga., Dec. 18, 1843. **Georgian.**

RYE IN PEACH ORCHARDS.

A postscript to Mr. **Physick's** communication, published in our Dec. number, was accidentally omitted, which is here given:

"It has often been remarked that rye was destructive to peach trees, and I once saw an orchard of about twenty acres go into decay immediately after a crop of rye. I do not believe that rye is any more injurious than other small grain, but the time of plowing for this crop is early in August; and according to one of my experiments, the plowing of a peach orchard at that season will destroy the trees without the rye."



HOT BEDS.—(Fig. 00.)

Every farmer should have a hot bed, though the size may of course be regulated according to the amount of stuff which is to be grown. If a man only wants vegetables for his own use, he will find the expense of making a small hot bed well repaid, in the advantage derived from getting a supply of cabbages, lettuce, cucumbers, tomatoes, radishes, &c. several weeks sooner than they could be had if grown in the open air. For only growing plants for the use of a small family, any old windows may be used—they will do quite well while they last—but for operating on a larger scale, glasses calculated for the purpose should be used.

Hot beds may either be made entirely on the top of the ground, or partly below the surface: but as they require a great deal of moisture, it is better to make them partly below the top of the ground, because thus made, they do not dry up so quick. In making the bed, mark out the ground the size of your frame, and make an excavation to the depth of a foot, or if the ground is pretty dry, eighteen inches. Put in good horse manure, say two feet deep, and put on the frame and glass. When the heat is sufficiently raised, put on six or eight inches of good mold, that which has been made from clean grass sods which have been piled and become entirely rotted the year before, is best; and when this is warmed to the proper degree, which can easily be told by applying the hand to it, plant the seeds. When the sun shines, care should be taken that there is not too much heat; if there is too much, raise the glass; and while the plants are growing, as much air should be admitted as can be done consistently with keeping up the requisite degree of heat. See that the plants do not suffer for want of water, which should be pretty liberally supplied from a watering pot. If the weather should be so cold as to render it necessary, the bed should be protected by means of mats and straw.

In this climate, it is not thought advisable to attempt doing any thing with hot beds before the middle of March; but farther south they may be commenced earlier, acccording to the degree of latitude.

Those who wish for more particular directions for hot beds, can consult the seventh vol. of the Cultivator, p. 38.

The above cut furnishes a very good illustration of the proper proportions of a hot bed frame and glasses. The glasses are made to slide, and one of them is shown drawn back. It should face the south.

PEACH TREES.

Mr. Lewis Sanders of Grass Hills, Kentucky, in a communication to the *Louisville Journal*, says he has found great benefit in protecting peach trees from the worm by the use of wood ashes. He scoops out the earth from about the root of the tree to the depth of 8 or 9 inches, and 18 to 24 inches from the tree. This is done about the first of September, and is left so till about the first of December, when the cavity is filled with leached ashes. Unleached ashes, we suppose, would answer the same purpose, in less quantity. Mr. Sanders says "by exposing the roots to the sun and air, the propagation of the worm is checked, it gives the birds (a particular kind of wood pecker,) a chance to pick them out."

Domestic Economy.

OLD BUTTER.

THE excellence of *"old cheese"* has passed into an adage, but butter that is good in *old age*, is not so often found. Made and cured as it ought to be, however, it may be kept a long time, and is none the worse for age. Being at Mr. Bement's the other day, and remarking the fine quality of the butter at table, inquiry was made how long it would keep? Mrs. B. replied that she had frequently kept it six or eight months—that she had just sent a jar to a friend in England, that was made in the early part of Sept. last—"but," said she, "we once kept some over *"two years."* The circumstance was this; a roll of butter was by accident *dropped into the well*—after two years, the well was cleaned out, and the butter found. It was perfectly sweet and good—being *solid*, the water had not penetrated into or injured it at all.

PUMPKIN PIES.

A correspondent of the Northampton Courier says that much labor may be saved, and these pies be made better, by *grating* the raw pumpkin, instead of first stewing it, as is commonly done.

CHEESE FROM BUTTERMILK.

MISS NEILSON, gives in the Journal of the Royal Agricultural Society, the process of making cheese from buttermilk, which she says was obtained from a person residing on Long Island in the United States. The contents of the churn were put into a pot and hung over a slow fire—the buttermilk became curdled, and the curd went to the bottom of the pot. The whey was then poured off, and the curd worked as other cheese, giving it salt to the taste, which will be about half the quantity usually given to skim milk curd. Put the curd in a clean coarse linen cloth, and hang it from the ceiling to dry for a few weeks, when it is fit for use. The linen cloth when hung in a net, gives a neatness to the appearance of the cheese. If a little bit of butter be worked into the curd, and the cheese kept for three or four months, it will be very good. Cheese can be made in this way on a very small scale, even from the produce of one cow.

GREASE SPOTS.

A correspondent of the Southwestern Farmer, who signs "J. E. W." gives the following as a good recipe for taking grease spots out of clothing, &c.

"Take the yolk of an egg, entirely free from the white, (be sure not to scald the egg,) and with a soft brush apply the mixture, and rub it on the spot until the grease appears removed or loose. Wash off the egg with moderately warm water, and finally rinse off the whole with clean cold water. Should not all the grease be removed, which may arise from being on a long time, or not sufficiently washed, dry and repeat the operation."

The writer of the above, says that a fine Merino shawl, which had been badly smeared with *tar* and *grease*, (gudgeon grease,) was perfectly cleaned by this process in a few minutes.

Veterinary Department.

MAD ITCH.

THIS is a formidable and fatal disease of cattle, mostly confined to the western states, its cause hitherto considered unknown, and medical treatment almost useless. In the October no. of the Tenn. Agriculturist, we find the following, which is deserving of consideration from the fact that the disease appears, so far as we have learned, only where cattle have been fed on stalks, or where that is almost their only food, as in the west. Cattle fed on cornstalks cut in a straw cutter, do not suffer in this way.

"GENTLEMEN—I know of but one remedy for the mad itch, and that is surgical. Open the second stomach and extract the cornstalks. This fatal disease among cattle is produced by cornstalks. The fibres being indigestible, hang in the *manifold* or *duodenum*, and irritate and inflame until the poor animal is driven to madness. Farmers feed their hogs upon green corn; the cattle follow and pick up the stalk chewed fine by the hogs, which by superior sagacity he spits out, and this ready made ticle does all the mischief, and so it would serve the or horses if they were to swallow it. Separate your tle from your hogs in cornstalk chewing time, and will separate your cattle from the mad itch. An ou of prevention is worth a pound of cure. Farmer, th the remedy. A BELIEVER IN PROPER REMEDIES.

PERIOD OF USEFULNESS IN CATTLE.

IT is surprising how much longer some animals *out*, as the expression is, than others. Some fail and come valueless at eight or ten, and others are good at teen or twenty years. From what we have seen, are inclined to think that the Durhams introduced here Mr. Van Rensselaer, commonly called the *Patroon* st in many instances retain their faculties to a remarka degree in old age. We consider this indicative of str constitution.

While at Mr. Hillhouse's, he showed us the old AJAX, the illustrious sire of a long catalogue of *her* whose successful contentions on many a cattle show fi are chronicled in the premium lists and annals of vari agricultural societies. Among his distinguished offspr are *President*, *Leopard*, *Nero*, *Astoria*, and *Prince*, celebrated prize animals.

Ajax is a large well made bull, now nearly *fifteen* ye old, and like his sire, *Washington*, who died at *nineteen*, retained in a remarkable degree the fine form and vi of the prime of life. But he has lately been seized w a stiffness of the limbs, particularly in the lower joints the hind legs, which for the present renders him nea useless as a sire.

RAMS HORNS.

MESSRS. EDITORS—The *critique* in a late New-Y paper, on some remarks in the August no. of the Cu vator, about the horns of sheep, is incorrect. Ev farmer who has kept horned sheep, may have noti that the annual growth of their horns, for *several* ye —(perhaps not "to the end of their lives")—is sho by a rough ring, or wrinkle. The growth of young tr is marked by a ring or "joint," as some call it, son what similarly. This is, however, not an infallible c terion of the age, for ewes that have been early b from will frequently appear a year older than others the same age, but which did not have a lamb so early a year. But the facetious author of that criticism, made a great mistake; to make his ram *"fifty-one y old,"* he has counted the *ridges* on his horns, instead the annual *rings*. JABAL.

Massachusetts, 1843.

COWS LOSING THEIR MILK.

A correspondent at Columbia, Pa., says he has had veral cows dry up their milk in *one night* so entirely, from having given a good quantity, they gave none any consequence. He conjectures it was occasioned their eating potatoes, which in his neighborhood, are year very unsound.

We hear great complaints of a "disease" in potat in the quarter where our friend lives—some accou state that the death of animals had been occasioned these defective or diseased potatoes—and we think it unlikely that they may have occasioned the trouble w the cows, especially if eaten in large quantities.

CURE FOR FOUNDER.

A friend at Zanesville, Ohio, has sent us the followi recipe: "Bleed freely in the neck, say from one to t gallons, and drench with strong decoction of sassaf tea—one or two quarts. If the horse is not relieved, peat the drench in six hours. Let his drink be we sassafras tea. The above will act like a charm; in ni cases out of ten, a perfect cure will be *effected* in twel hours at farthest."

BLACK LEG IN CALVES.—Our correspondent, W McCOY, Esq. of Pendleton county, Va. will find som cases of the successful treatment of this disease, detail in this paper for last month, p. 23. He will also find the previous vols. several articles on the subject.

PRIZE BULLS AND CALVES.

THE subscriber offers for sale two full blood Devon Bulls, which obtained the First Prizes offered for Devon Bulls, at the Baltimore County Agricultural Fair, held on the 19th and 20th October last, viz: Robert, 2 years old last spring, at $50; Marmion, one year old last June, at $[illegible]. Also: 3 full blood Devon Calves, got by the celebrated bull Waverly. They are large and perfectly formed, and are 6, [illegible] months old at this time. Price—$40 each. They are of a suitable age for shipping to the South. Address

JOHN P. E. STANLEY,
60 S. Calvert, Corner of Lombard st.

Baltimore, Md. Feb. 1, 1844—2t.

WORCESTER EAGLE AND SUB-SOIL PLOWS.

THE subscribers continue to manufacture at Worcester, Mass. their celebrated Eagle, Improved Eagle, and other forms and sizes of Plows, adapted to all the different sections, soils and uses of the country. Also, the Improved Sub-soil Plows, (see notice in Jan. No. of Cultivator, p. 19.)

The prices of Sub-soil Plows are from $8 to $15, according to size and form, and may be seen at our Manufactory at Worcester, and at their Agricultural Warehouse, Quincy Hall, Boston—also at the store of Messrs. Pruyn, Wilson and Vosburgh, State street, Albany.

For sale at the FACTORY, and at their AGRICULTURAL WAREHOUSE AND SEED STORE, Quincy Hall, Boston—where may be found an unequaled assortment of Agricultural and Horticultural implements and seeds.

Very liberal discounts to dealers.

Jan 15—1t. **RUGGLES, NOURSE & MASON.**

LANGDON'S CULTIVATOR.

THE HORSE HOE OR CULTIVATOR PLOW, is an implement constructed and patented in 1842, by Barnabus Langdon of Troy, an old and experienced mechanic. After much labor and practical experiment had been bestowed upon it, it was exhibited for the first time at the State Fair held at Albany, and also at the Rensselaer Co. Fair, of that year, and received a premium at both.

There has been a large number made and sold the past season, and they have been thoroughly tested in various ways by some of the best and most experienced agriculturists in this and the adjoining counties, and in the vicinity of New-York, and all testify to their utility and usefulness, and to their superiority over any implement of the kind in general use. They not only do the work more effectually, but in much less time, and at one half the expense of any other Cultivator now in use, which are three important items, in these times of generally low prices for agricultural productions. This Cultivator was exhibited at the last Fair of the American Institute, and received a premium. Much attention was bestowed upon it by Southern planters, and a number of them were sold by Mr. Langdon to go South, for working in corn, cotton, and tobacco. The Cultivator Plow is an implement made for weeding and loosening the soil between the hills of corn, potatoes, peas, beans and all root crops.

When weeding, half hilling, or splitting down corn hills, the weed cutters are always to be used, as represented in figure No. 1.* This operation cuts up the weeds, loosens and pulverises the soil completely up to the hill, and by cross plowing there will be little left for the hand hoe to do.

When the crop requires more earthing or hilling than the weed cutters can do, they are to be taken off, and the mould boards are to be put on, as represented in figure No. 2.*

Both occupy the same position on the plow, and both are secured to the standard by one bolt. The mould boards throw a beautiful furrow each way, thus doing the work in one half the time of an ordinary corn plow.

For digging potatoes, or root crops, this implement is unrivalled. When used for that purpose, the weed cutters should be on, and the plow should then be drawn by a double team; direct the plow under the middle of the hill, just deep enough to raise the crop to the surface, which it will do in a most expeditious and workmanlike manner. These Cultivators are made of the best materials, fitted up in the best manner, with share, weed cutters, and mould boards ground bright, ready for immediate use. The price of the implem[illegible]t is $8 at retail, and a fair discount made to dealers in agricultural [illegible]ents. Orders addressed to BARNABAS LANGDON, or MOWR[illegible], 127 River st. Troy, (his authorized agents) will receive immed[illegible]espatch. They are also for sale by Ruggles, Nourse & Mason, B[illegible]on; John Mayher & Co. New-York; Pruyn, Wilson & Vosburgh, Albany; J. N. Wooley, Poughkeepsie; and E. Gifford, Hudson.

The testimony of C. N. Bement, Esq:—

Among the new implements exhibited at the State Fair last fall, none seemed to attract the attention more, or appeared to meet the views of the multitude better, than the Horse Hoe or Cultivator Plow, invented by Mr. Barnabus Langdon of Troy.

It affords me great pleasure to have it in my power to speak of the merits of this implement from experience, having used one the past season in my corn. My corn ground was laid off in squares, planted in the corners, leaving the hills three feet apart, which enabled me to run the Horse Hoe both ways. The edges of the share being sharp, cut up the weeds, which, with the soil, passes over the cutters, and leaves the soil very light and loose.

The breadth of the share is sufficient for rows of three feet wide, as it loosens and breaks up the soil beyond the reach of the share, and after passing through the crop both ways, there is little left for the hand hoe to do.

It is a very efficient implement, and I have the testimony of a number of farmers and gardeners who have used it, who all speak in the highest terms of it. I did not try it for digging potatoes as my crop was on a side hill; but those who did try it, say it exceeds any thing of the kind which has been introduced for that purpose. Three Hills Farm, Albany, January, 1843.

Feb 1, 1844. **MOWRY & VAIL, Agents,**
127 River-street, Troy, N. Y.

*These figures are necessarily omitted, owing to the room they would occupy.

BURRALL'S PATENT WHEEL PLOW.

THIS is a new article, having, instead of the common landside, a wheel in its place, which receives nearly the whole weight of the plow and pressure of the furrow, and is found on thorough and repeated trial to save more than 30 per cent. of the draft. It also lightens materially the labor of the plowman, especially among roots and stones, and on rough land. It runs lighter, wears better and keeps in repair longer than the common plow, and is in all respects, a valuable acquisition to the farmer.

PLOWS of various kinds, in best style.

THRASHING and CLOVER MACHINES, &c. &c.

Steam Engines, Water Wheels and Mill Gearings.

THOMAS D. BURRALL,
Feb. 1—1t. Geneva, Ontario Co. N. Y.

FARMS TO RENT ON SHARES,

AND

BOARDING HOUSE TO LET,

IN the immediate vicinity of Saratoga Springs, Saratoga co., N. Y.—The subscriber has three valuable improved Farms, comprising about 450 acres in good cultivation and well watered, with three good farm houses and large and convenient outbuildings attached, which he would rent on shares on favorable terms, to good tenants, who are capable, intelligent and industrious farmers, and possess sufficient capital to carry on the farms to mutual benefit.

The proximity of these farms to the abovenamed village, (being about one mile distant,) in addition to their fine meadows, offer great advantages for conducting a large milk dairy, and the raising of garden vegetables and fruit. The throng of visiters during the summer months, affording a profitable market.

A Boarding House with every convenience attached and well furnished, favorably known to visiters as the 'Mansion House,' and well patronised for several years past, in the immediate vicinity of the celebrated "Union Spring." The house is capable of accommodating from 40 to 60 boarders, and would be connected with one of the farms at a low cash rent, or let separately to one qualified to keep a respectable establishment.

If desired, two of these farms may be united into one, to an enterprising farmer able to conduct both. Further description is deemed unnecessary, as applicants can obtain more information by letter or personal inspection. All communications with particulars as to present location, references, &c. *postage paid*, will receive attention. Address

H. H. LAWRENCE, Ten Springs,
Feb. 1, 1844—c. & m. 1t. Saratoga Springs P. O.

PRINCE'S LINNÆAN BOTANIC GARDEN & NURSERIES,

FLUSHING, LONG-ISLAND, NEAR NEW-YORK.

PRINCE'S New Descriptive CATALOGUES *of the Linnæan Botanic Garden and Nurseries, at* FLUSHING, with very reduced prices, will be sent *gratis* to every *postpaid* applicant, and orders per mail will receive prompt attention. They comprise as follows, and the cost of publication was above $100:

No. 1, Descriptive Catalogue of Fruit Trees, Shrubs, and Plants.
" 2, Hardy Ornamental Trees, Shrubs, and Plants.
" 3. Bulbous Flower Roots and Dahlias.
" 4. Green-House Shrubs and Plants.
" 5. American Indigenous Trees and Plants.
" 6. Garden, Agricultural, and Flower Seeds.
" 7. do do. in French.
" 8. Wholesale Catalogue for Nurseries only.
" 9. Catalogue of Roses, comprising above 600 varieties of every class.

WM. R. PRINCE & CO.
Flushing, Dec. 6, 1843. 2t.

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OF the very best quality for sale. Three barrels for $5, or ten barrels for $15—delivered free of cartage by the New-York Poudrette Company, 23 Chambers street, New-York. ORDERS by mail, with the cash, will be promptly delivered, and with the same care as though the purchaser was present, if addressed as above to D. K. MINOR,
Dec. 1, 1843.—3t. *Agent.*

COFFEE AND SPICE FACTORY.

ELIJAH WITHINGTON'S Coffee and Spice Factory, No. 7 Dutch Street, between John and Fulton street, New-York. E. W. manufactures and has constantly on hand and for sale, the following articles, viz:

Green Coffee, Roasted Coffee, Ground Coffee, Domestic Coffee, Prepared Cocoa, Mustard, Whole Nutmegs, Ground Cloves, Ground Cinnamon, Ground Pepper, Ground Alspice, Ground Ginger, Ground Cayenne, Ground Nutmegs.

☞ Coffee roasted and ground for Grocers. Roasting 50 cts. per hundred. Grinding, 50 cts. per hundred.

The above named goods are sold on the most reasonable terms, and delivered to any part of the city or Brooklyn, free of expense.

N. B. Cash paid for Mustard Seed.

Dec. 1. 1843.—6t.

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A VIRGINIA FARM FOR SALE.

WE have for sale, a farm on the East river, Mathews county, Virginia, near the Chesapeake bay, on salt water, 60 miles from Norfolk. This farm contains 170 acres land; the buildings are good and new, and sufficient to accommodate a large family; fish, oysters, and wild fowl at the door. Packets run regularly to Norfolk and Baltimore. It would suit a northern farmer, and it can be had for about what the improvements cost. If desired, several other farms can be bought in the same neighborhood. Address post paid,

ARMISTEAD, DIGGS & CO.
Mathews Ct. House, Va., Feb. 1, 1844—1t.

A BOOK FOR FARMERS,

MERCHANTS, Mechanics, Statesmen, Politicians, Lawyers, and the general reader. One of the most valuable works that has ever been issued from the American press, viz: *Webster's Speeches*, arguments in Court and Senate, Orations, remarks in Conventions and Senate, Reports, addresses before Agricultural Societies, Lectures, etc., by Daniel Webster—8th edition, 3 vols., 8 vo., cloth, with a portrait; also in Philadelphia Library style of binding, sheep. These volumes contain the ablest productions of Mr. Webster, up to the time of his becoming a member of the Cabinet. His speeches are models of argumentative power and commanding eloquence. They are rich sources of instruction also to the student of letters, of history, of finance, of the theory of government, and to the active politician, and should be owned by men of every station, sect, and political denomination. Published and for sale by TAPPAN & DENNET, 114 Washington st., Boston, and for sale by the principal booksellers throughout the country.

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SILK MACHINERY FOR SALE.

A QUANTITY of machinery for the manufacturing of Silk, is offered for sale at the State Prison, Sing Sing, N. Y., consisting of looms for weaving broad silks and braids, together with engines and reels for making cords, winding floss, sewing silks, and from cocoons; likewise a number of other machines used in the manufacturing of silk.

This machinery is now in practical operation at the Prison, and was constructed under the immediate superintendence of an experienced and skillful manufacturer, who still has the work under his charge, and is offered at private sale between this date and the 15th of Feb. 1844; if not disposed of by that time, will then be sold at public auction in New-York. For further particulars apply at the Prison, to

Dec. 1843—2t. WM. H. PECK, Agent.

FIELD SEED STORE.

THE subscriber continues to keep constantly on hand at his long established Seed Store, a supply of the best quality and kinds of Field Seeds, viz:

Red Clover, of the large and small growth,
Timothy, *Red Top*, or *Herd's Grass*, *Orchard Grass*,
Lucerne, or *French Clover*, *White Clover*,
Trefoil, *Kentucky Blue Grass*, &c. &c.

Also, the different varieties of Wheat, as White Flint, Red Chaff, Mediterranean, and English—for sale in lots to suit purchasers at moderate prices, by ISRAEL RUSSELL,
Feb. 1, 1844. 26 Front-street, New-York.

N. B. The following description of some superior English Wheat sown in the month of October last, the product of which will be for sale at the above Store, is given by a respectable English farmer in the State of New-Jersey, who sowed about eleven bushels, a sample of which can yet be seen. "It is called the Uxbridge White Wheat, and is the most noted Wheat they have in England, it being of fine quality, always commands a high price, as the flour is used by the biscuit bakers in London; it is great for yielding, and puts out a much larger ear than any wheat I have seen in this country. I saw when in England, three years ago, on my brother's farm in one field, 120 acres, that yielded 40 bushels and upwards to the acre. It grows very strong, and is not liable to be laid by heavy rains. I will warrant it free from any soil whatever. I did not see in the eleven bushels, a particle but Wheat; and I have sown it on Clover seed, on purpose that there shall be nothing but Wheat; and I will put nothing in the barn with it, so as to put it beyond the possibility of a doubt of its having any thing in it or getting mixed with other Wheat, which through carelessness is often the case. I have grown a great deal of it myself in England, and know from experience that for yield and quality, there is no Wheat to compete with it. Its general weight is from 64 to 67 lbs. [illegible] bushel. It is smooth chaff, and easy to thrash, which is not always the case with smooth chaff Wheat."

TO FARMERS.

THE subscriber is prepared to furnish farmers with Stone and Shell Lime, [illegible] slaked or unslaked, at a rate which will make it an object for them to use it liberally in the improvement of their lands, for which purpose he has sold large quantities during the past year. He refers to John Townsend, C. N. Bement, and W. H. Sotham, Esqr's. who have used his lime extensively. E. C. WARNER,
Albany, Dec. 1, 1843.—3t.* *Corner Market and Nucella-sts.*

FINE FARMS FOR SALE.

THOSE very superior Farms situated near Galway Corners, in the county of Saratoga, collectively known as the Earl Stimson Farm, will be sold cheap and on terms most accommodating to the purchasers as to credit. The property consists of about 340 acres, is so situated as to be conveniently divided into three or four farms, all having the necessary buildings, and will be sold together or in parcels, to suit purchasers. Each farm is properly divided into pasture, tilled and wood land, and is in the highest state of cultivation, fenced in the best manner and with the most durable materials. The property comprises among other buildings, a large and convenient hotel, which is a favorite resort of families in the summer on account of the superior healthiness and beauty of the country. The farming buildings of all kinds are most extensive and convenient for all the purposes of agriculture and the raising of stock. The premises also include a country store, a most eligible location for a country merchant, having been occupied as such for about forty years. It is within two hours drive of Ballston, Saratoga, and Schenectady. The farm is well known among leading agriculturists, and in the agricultural periodicals, as the Pattern Farm. For terms, &c., apply to J. OAKLEY,
Oct. 1—tf. No. 75 Nassau street, New-York.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

Vol. I. ALBANY, MARCH, 1844. No. 3.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

WILLIS GAYLORD AND LUTHER TUCKER, EDITORS.

ONE DOLLAR A YEAR.

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THE FARMER'S MUSEUM,

(Each no. containing 16 pages,)

is made up of selections from this paper, and published monthly at 50 cents a year—Fourteen copies for $5,00—Thirty copies for $10.

THE CULTIVATOR.

MONTHLY NOTICES.

CIRCULATION OF THE CULTIVATOR.

☞ With the general improvement of the times, we are happy to acknowledge a very handsome increase in the patronage of the Cultivator, over that of last year. The improvement in form, and general appearance of the work, has been received with decided and general approbation; and the establishment of the "Farmer's Museum." (our 50 cent paper,) has not, as was feared by many of our friends, had the effect to reduce the circulation of the Cultivator. On the contrary, the subscription to the Cultivator is now nearly 2000 more than it was at this time last year. For this increase, we are indebted mainly to the liberal and spirited exertions of our friends. There is yet, however, much time and room for exertion, and we should be highly gratified if such of our present subscribers, as have made no exertions to increase our circulation, would do us the favor, so far to act as agents, as to make up a class of seven or fifteen subscribers. The liberal commission allowed, would amply repay any one for the effort necessary to make up such clubs. Many of our friends, who were anxious to see the Cultivator circulated in their neighborhoods, have adopted the plan mentioned in the following letter, from a gentleman in Canandaigua:

"In order to obviate any objection to the price of the subscription, I divided the $10 for fifteen copies, into fifteen parts, and received of each subscriber his proportion of the $10; and in this way I soon obtained the fifteen subscribers, for which I send you herewith $10. If the friends of agricultural improvement generally, would adopt this course, I think your subscription might easily be doubled or trebled, as there are few neighborhoods where a club of seven or fifteen subscribers might not be obtained, with but little trouble, as in this way the paper and postage would cost less than a dollar."

ACKNOWLEDGMENTS.

Communications have been received since our last from R. L. Pell, Henry Watson, C. Sawyer, J. Harland, L. A. Morrell, E. Rich, J. M. Johnson, L. Durand, J. R., S. L. Gouverneur, Peter Ellis, J. R. Speed, K., S. Cassidy, S. W. Jewett, A Subscriber, A Young Farmer, N. Darling, Solon Robinson, J. W. Knevels, H. Weston, S. Whalen, J. J. T., Dutchess County, J. Holbrook, J. F. C., J. D. H., Old Chittenden, K. L., D., G., S. M. Spanggler, Anthony & Morrison, C. N. Bement, A. R. McCord, U. Skinner, C. Rich, Richmond, S. McK., R. T. Underhill.

Our thanks are tendered to Benj. Guild, Esq., Secretary of the Massachusetts Society for the promotion of Agriculture, for copies of Messrs. Dana and Foote's Prize Essays—To J. M. Sherwood, Esq., Auburn, for the Reports on Field Crops, &c. to the Cayuga Agricultural Society, which we have handed over to the State Society, to be published in their Transactions—To Dr. E. Wight, Boston, for the London Pictorial News, containing views of the Queen's Poultry Houses, beautiful groups of the Cochin-China Fowls, (noticed in our last No. p. 43,) Java Bantams, &c.—(we may give these groups hereafter)—To A. W. Dodge, Esq., Sec. of the Essex (Mass.) Agricultural Society, for the Transactions of that Society for 1843—To A. G. Sumner, Esq., Pomaria, for Mr. Ruffin's first Report on the Agricultural Survey of S. Carolina—To H. S. Randall, Esq., for a copy of his Report on the Common Schools of Cortland Co., and Common School Libraries—To the Author, for Observations on Vegetable and Animal Physiology, by W. L. Wight, M. D.—To Hon. W. C. Carr, for his Address before the St. Louis Agricultural Society, at its last Fair—To Henry Watson, Esq., East Windsor, for the Memoirs of the Penn. Agricultural Society, for 1844, and for Hints for American Husbandmen, published by the same Society in 1827.

☞ Several communications intended for this paper, are necessarily laid over till our next. We shall in all cases endeavor to dispose of the favors of correspondents as rapidly as our limits will permit.

☞ It will be impossible for us to publish the Addresses, requested by our friend A. Wiltse. They would occupy the whole of one number.

☞ In answer to an inquiry, we state that Dr. Cloud's address is Lockland, Macon co., Ala.—and that of M. W. Philips, Esq. Amsterdam, Hinds co., Miss.

☞ The Norman horse "*Diligence*," about which Mr. Durand inquires, has gone back to the farm of his owner. E. Harris, Esq., Moorestown, N. J. We should be glad to receive some notice of his stock.

☞ Our friend, G., of Spencertown, N. Y., will perceive that our plan embraces the suggestions he has made. We have given, and shall continue to give such information on gardening, &c., as we trust will be satisfactory to our patrons. At the same time, we would respectfully thank him for his hints.

Burning Lime.—Seth Whalen says he has "been told that lime for manuring purposes may be burned in the field by laying up the stone and covering it somewha like a brick-kiln," and he wishes to know whether this plan of burning lime will answer, or what is the "most simple and expeditious manner of doing it." We have seen lime burned by simply covering the piles of stones with such fuel as it was convenient to use and setting fire to it; but we do not know that this is the best way, not having had experience in the matter.

STATE AGRICULTURAL SOCIETY.

WE have received a copy of the doings of the Executive Committee of this Society, at their meeting on the 15th of February; but from the lateness of the time at which they came to hand, we are unable to give them a place in this number. They contain a variety of interesting matter, which, had it been practicable, would have given us pleasure to have published. The Committee have fitted up handsomely, for the use of the Society, the east room of the Old State Hall—and at this place the Executive Committee will hold their regular meetings, on the *second Thursday* of each month.

THE CULTIVATOR ALMANAC.

WE printed 30,000 copies of this Almanac, which were all disposed of long before New-Years; consequently we have been unable to supply the numerous orders since received. Another year we shall endeavor to print enough to supply the demand.

NATIVE STOCK.

In our Jan. No. we spoke of the extraordinary product in butter, of a cow belonging to Mr. George A. Mason, which received the premium at Rochester last fall, and stated that we had been informed that she was got by an imported bull. We have since received a letter from Mr. Mason, in which he assures us that we were misinformed, and that the pedigree of this cow cannot be traced to any imported stock.

MERINO SHEEP.

"A SUBSCRIBER," wishes some information in relation to the different varieties of the Merino sheep. He asks "which has the heaviest fleece, the Escurial or the Paular? Which is the hardiest, &c.?"

In the work on sheep published in England, under the superintendence of the Society for the Diffusion of Useful Knowledge, it is said that "the *Escurial* breed is supposed to possess the finest wool. The *Guadeloupe* have the most perfect form. The *Paulars* bear much wool of a fine quality, but have a more evident enlargement behind the ears, and a greater degree of *throatiness*," &c. As to the *origin* of these varieties, concerning which, inquiry is made, we are in possession of nothing definite; they are only sub-varieties of the Merino or Spanish sheep, the origin of which is among the mysteries of past ages.

SPRING HARROWING WHEAT.

"I wish to sow clover where I have wheat; the land is low ground or alluvial. I want to know if it will hurt the wheat to harrow in the clover seed; (my neighbors say it will.) My harrow is hinged, with forty teeth. I think I have heard of harrowing wheat at the north in the spring, but have never seen it done here.

C. CHALMERS.

Moore Co. N. C., Jan. 1844."

Where wheat has been partially killed out, or where the surface seems to be packed and close by the snows of winter, harrowing has been resorted to in some instances with success; indeed we have never known wheat injured by this process. At the north, however, we do not spring harrow wheat for the purpose of covering clover seed, as when sown early in the spring, clover rarely fails of germination and growth. Our practice is to sow it on the last light snows, if possible, as the seeds can be distributed more equally this way than in any other we have tried. The moisture furnished by the snow, and the frosts that usually occur, prepare the seed for germination and by their action on the surface, partially or fully cover the most of them, rendering the harrow unnecessary. We think our correspondent need apprehend no danger from its use; still as an experiment is easy, it may be better to test the result in that way.

AGRICULTURAL COLLEGE IN TENNESSEE.

SOME of our readers may be aware that a very pop Agricultural School has been for sometime in opera near Nashville, Tennessee. Encouraged by the lib patronage the school has received, the managers h concluded to enlarge their plan, and accordingly h procured from the Legislature a charter for an *Agric tural College*. For this institution, two teachers are n wanted. Single men, who might live in the institutio and devote their energies to the youth under the charge, would be preferred. "One of the teache should be capable of teaching the English, Latin a Greek languages, and if one could be found who also u derstands French and German, he would be preferred- and the other should be capable of teaching mathemati and if he were a chemist, so much the better." In a dition to these qualifications, it is desired that the teac ers should possess a taste for agriculture and hortic ture, and have "confidence that agricultural education the proper kind for youth." A young man of gentlema ly deportment, who is a practical gardener and nurser man, is also wanted.

Further particulars may be learned, by addressin (post paid,) T. Fanning, Esq., editor of the Tennes Agriculturist, Nashville, Tennessee.

CHARCOAL FOR MANURE.

We see this subject is lately receiving considerable a tention. Mr. F. G. L. Beuhring, makes some inquirie of us in regard to the application of charcoal to whe land—whether it should be reduced to powder, &c. W are unable to refer him to any particular experiment which will give the desired information. We have o ten seen used, the *dust* from 'beds' where charcoal h been made. This dust consists of fine bits of coa mixed with the dirt with which the wood is covere while undergoing the process of charring. It is fre quently used for corn, putting some, (say two or thre quarts,) in each hill at the time of planting. It is als sometimes spread on grass land, and we have generall noticed, that its effects were very favorable. Crops a generelly better, except perhaps for the first year two, on the beds where coal-pits have been, for sever years. We have also noticed the effect of *smoke* fro coal-pits, on the surrounding earth—and have seen gra show increased luxuriance and greenness from that cau —the rankest growth being just where, from the cour of the wind, the most smoke had struck the ground.

Charcoal is recommended as a manure, because it is a absorbent of *ammonia*, and it is supposed that by sprea ing it on the soil it will absorb the ammonia from the a mosphere and transmit it to the growing plants as th require. That it is an absorbent of ammonia, may known from its taking away the effluvia from taint meat or fish. So completely will it do this, that we ha known meat that had considerably taken hurt, made go and free from any disagreeable taste or smell, by bei repacked with charcoal between each layer.

SPRING WHEAT.

THE Kennebec (Me.) Co. Ag. Soc. lately awarded premium to Elias Gove & Son, for having raised last ye 37½ bushels of red chaff spring wheat on an acre land.

Gov. Hill states in the Monthly Visitor, that there we raised last year on an island in Winnipisseogee lak "66½ bushels of fine spring wheat to the acre"—t same land having given the year before, 137 bushels shelled corn.

DR. MITCHELL.

YOUR correspondent "Richmond" notices with ple sure, in the No. for November, 1843, the editorial r marks on the "Transactions of the first New-York Agr cultural Society." He agrees with you that some of members were "in advance of the age." He can gi you some valuable information as to the agency of D MITCHELL in the formation and support of that Socie if agreeable to the editors of the Cultivator. [W should be glad to receive it.—EDTS.]

PAULAR MERINO SHEEP.

We have received a letter from Mr. Merrill Bingham, of Cornwall, Vt., giving an account of his sheep. Not having space for the letter in detail, we give the following abtract, which comprises, we believe, the principal statements:

Mr. B. states, that about eight years ago, he purchased in Massachusetts and Connecticut, 111 full-blooded Paular Merino ewes, and placed them on his farm in Vermont. He also bought 400 sheep which were high crosses of the Merino with the native. The first buck he bought was a full-blooded Paular, from the farm of Mr. Tims, of Flushing, Long Island. For this buck he gave $60. He afterwards purchased a buck from Rhode Island, and one from Mr. Jarvis, and continued to make such crosses as seemed to be expedient. Mr. B. says he has "kept the pedigrees of the 111 ewes which he first purchased, which would satisfy any curious mind." He says, "the one hundred and eleven ewes gave at the first shearing after I purchased them, 3 lbs. and 12 oz. of wool. Last year, from one hundred and one of their progeny, ewes, each with a sucking lamb, I sheared 5 lbs. and 2 oz. on the average, and this as the result of hay and grass feeding, without extra food of any kind. From some lambs (yearlings) I sheared from 6 lbs. 5 oz. to 7 lbs. 12 oz." Mr. B. states he has sold about 60 bucks, annually, for the last five years. Among those referred to as purchasers, is Mr. Wm. Howard, near Auburn, N. Y. In all cases the wool has been well washed on the sheep's back. He gives sheep no grain as a general *rule, believing* that the increase of wool from it, does *not pay the cost.*

Of Mr. Bingham's sheep, a correspondent from Williston, who signs himself "Old Chittenden," says—"It is one of the best flocks of this kind of sheep I saw in Cornwall, for fineness, evenness, length and weight of fleece; and for size, shape, and constitution, I have seen few sheep to equal them in the State."

We have been requested to copy an article from the Northern Galaxy, on the subject of Mr. Jewett's Paular Merinos; but the crowded state of our pages will not admit of our complying with the request.

THRESHING MACHINES.

Mr. Lucius Simpson of Alabama, makes some inquiries about threshing machines, to which we reply, that most of those in use in this section of country are "portable,"—that is, they may be readily moved from place to place. The kind described by Mr. S. as being placed on a wagon, and performing its work in that situation, &c. we have seen, but do not know where any of them are now manufactured. We think they are not as well liked as some others, though there may be better ones than we have seen. John A. Pitts, of Rochester, in this State, manufactures various kinds of threshing machines. He has also a "*separator*," which may be attached to any machine, and will thoroughly clean the grain as fast as it is threshed, without any waste. This contrivance is well recommended by those who have used it. The price for the machines, with the separator is (we think) from $150 to $300.

REARING LAMBS FOR THE BUTCHER.

The Essex (Mass.) Agricultural Society's Transactions for last year, contains a valuable statement from Joseph Marshall, of Ipswich, on the management of sheep for the purpose of rearing lambs for the butcher. His sheep are a quarter Merino, with what is called the native breed of the country. He keeps them in good plight, as he finds they will not otherwise be profitable. In winter they are fed on clover, or 'second crop' hay, bean and pea vines, &c. He is scrupulously attentive to the preservation of their health, by keeping them in dry places. In winter they are kept under an open shed nights, and are never allowed to be out in wet storms, day nor night. He does not even allow their skins to be wet by washing them—preferring to wash the wool after shearing. He has followed this treatment with his sheep for several years, and has never had an unhealthy or dirty-nosed one among them—and they have never had a tick or a louse. At the time of lambing, he gives them each a gill of corn every morning, and feeds plentifully with turneps or carrots. They commence lambing in February; and last season, a part of them being put with the buck in March, again produced lambs in August—and Mr. Marshall has no doubt that had they all been with the buck at that time, they would have 'produced a second crop of lambs.' He intends hereafter to have them produce lambs twice a year. He sells his lambs at between three and four months old, at two dollars each, and finds the business profitable. His sheep average four to five pounds per fleece. Mr. M.'s pastures are high ground, not very rich, nor better adapted to sheep than most farms in the country.

THRIFTY HOGS.

Mr. J. R. Speed gives us an account of two remarkable hogs belonging to Mr. S. D. Thompson, keeper of the Ithaca hotel. They are said to be a cross of the Berkshire and Russian breed, though Mr. Speed thinks it more probable that they are a cross of the Berkshire and Leicester. They are described as having "great length and depth of carcass, with small bone, thin skin and silk like *white* hair."

"They were pigged," says Mr. S., "on the 15th of Sept. 1842, and consequently were 16 months old on the 15th of Jan. 1844, on which day they weighed on the scales, alive, 1,390 lbs., and were said by Mr. Barnes, (their keeper,) to be 'as spry and playful as kittens.' They weighed on the 2d of Jan., 1,347 lbs., showing an increase of 43 lbs. in 13 days—being 21½ lbs. each."

Mr. S. informs us that the hogs were to be killed in about two weeks, when he will send us their dressed weight.

☞ A Berkshire hog was brought to this city on the 27th Jan. which weighed, dressed, 675 lbs. He was raised by Mr. Thornton, on the farm of the Messrs. Knower, near this city. It is of some consequence to record these weights, because some think the Berkshires are too small.

☞ Mr. Levi Durand, of Derby, Conn., slaughtered 6 pigs of one litter, on the 24th of Jan. that were eight months and one day old, whose aggregate weight was 1,175 lbs. The largest weighed 223 lbs., the smallest 180 lbs.

BLACK SEA SPRING WHEAT.

Messrs. Gaylord & Tucker.—Believing it will be beneficial to the public to have this wheat reserved for seed, I make this communication. It is believed, in this quarter, to be superior for seed to any other spring wheat. First, because it requires but about two-thirds the usual quantity to sow an acre—2d, it yields better in a good season. If it lodges, it generally fills well—but its great superiority consists in its hardiness to withstand the rust.

Our thresher, Mr. G. Farnam, of this town, says he threshed in Cornwall, about 500 bushels of this wheat, of 1842 crop, and did not have a rusty bundle; whereas three-fourths of the other wheat was very materially damaged by rust. Of the 1843 crop, he threshed about 3000 bushels of this wheat, and found its yield superior to any other spring wheat; and also that it filled well where it lodged.

I learn that all this wheat raised in Cornwall, came from a peck of seed, procured near Boston in 1839 or '40. Some suppose there are two kinds, and that the red chaff is the best. It is dark colored, hard and heavy. Until our millers learned how to grind it, it was supposed to make inferior flour.

Homer Wright, of this town, got 44 bushels from 1¼ bu. of seed; Mr. Elmore, 26 from 1 bu.; Orval Smith, 29 from 1 bu. of seed; Hiram Foster, of Whitney, 42 from 1½ bu.; B. Simonds, 41 from 1½ bu. of seed.

I am surprised that our farmers should send so much of this wheat to the mill to be ground, considering the estimation in which it is held, and that there is not more of it than ought to be sowed in two counties.

Shoreham, Vt., Feb. 14, 1844. Clark Rich.

RENSSELAER AG. SOCIETY.

AGRICULTURAL SCHOOL AND PATTERN FARM.

THE annual meeting of the Rensselaer Co. Agricultural Society, for choice of officers and the transaction of other business, was holden at Troy, on the 6th of February. The President, WM. P. VAN RENSSELAER, Esq. delivered an excellent address—it was a well written, common sense document. He spoke of the general advantages of agriculture—of the necessity of basing all its operations as far as possible on *system*—of the necessity of understanding the nature of soils and manures, before they can be best adapted to each other—of the advantages of encouraging all branches of home industry, particularly domestic and household manufactures—of the importance of the silk culture, the practicability of which he considered well demonstrated.

After the delivery of the President's address, Gen. VIELE introduced a resolution commendatory of the project for establishing an *Agricultural School and Pattern Farm*, and after some pertinent remarks, introduced Dr. LEE, the Chairman of the Committee on Agriculture in the House of Assembly.

Dr. LEE made some very interesting observations on the necessity of scientific knowledge in connexion with agriculture, designed chiefly to show the advantages which might be derived from such an institution as had been spoken of—an institution, where, as he said, should be taught thoroughly and alike, the *practice*, the *science*, and the *profits* of agriculture and its kindred branches. He showed that in proportion to the *skill* and *intelligence* by which labor is directed, would be the productive earnings. He cited Massachusetts as an example. No where, he said, were the laboring classes as well educated as there. That state contained one twenty-second part of the population of the Union, and produced last year, *one hundred millions of dollars worth of property*, viz: 80 millions of manufactures, 15 millions of agricultural products, and 5 millions from the sea. If the other states, said Dr. Lee, had produced property in the same proportion to the population, the aggregate would have been *twenty-two hundred millions of dollars!*

Dr. Lee was followed by Mr. COOK, one of the professors in the Rensselaer Institute, who followed up the suggestions which had been before made, with some very appropriate and interesting remarks. He spoke of the means of wealth which are lying dormant or wasting uselessly away, from an ignorance of their value. He alluded particularly to manures, and in this connection stated some startling facts. He said he was much surprised the other day, at meeting with an Englishman from London, who had come here for the purpose of purchasing *bones*, and who had succeeded in engaging a large quantity at seven dollars a ton. Mr. C. said there were slaughtered annually in the neighborhood of Troy, thirty thousand head of cattle, the blood and offal from which is nearly all wasted—the bones lie bleaching in the air, or are used to fill up holes, and the blood goes into the Hudson.

Mr. C. alluded to the great waste of other manures. About fifteen thousand bushels of ashes were annually bought in the vicinity of Troy, for which the farmers and others were paid 12½ cents per bushel. After taking out *twenty cents* worth of potash from each bushel of these ashes, they were sold to the Long Island farmers at 12½ cents a bushel—the original cost.

There are, said Mr. C., about 10 thousand bushels of oysters used every year in this neighborhood. It is well known by some, that the shells are an excellent manure; yet very few were saved here—they are mostly used for filling up in grading the streets, &c. and are commonly covered many feet with earth.

Mr. GROVE of Hoosick, next spoke. He was a native of Germany. In that country, the *science* of agriculture is taught in all the schools—the law requires that every teacher should be able to instruct in both the principles and practice. Every college in Germany, said Mr. G., has a professorship of agriculture.

Considerable interest was evidently aroused in relation to the subject of establishing an Agricultural School and Pattern Farm—a subject to which we are happy to see considerable attention is being directed from various sections of the state, and we hope there will be no relaxation of effort till the object is fully and successfully accomplished.

FOOD OF DIFFERENT NATIONS.

WE have been much interested by the examination o a Report made by Mr. Senior of England, on the subjec of provision for the poor. It is the result of an extensiv observation, and wide correspondence. The followin is given as the quality of food used by an agricultural laborer, having a wife and four children.

AMERICA.

New-York.—Tea, coffee, wheat bread, meat twice day.

Massachusetts—Poultry, meat or fish, with rye or Indian bread twice or thrice a day.

Mexico.—Maize prepared either in porridge or thei cakes, and beans, with chile, a hot pepper of which the eat large quantities as seasoning.

Carthagena.—Chiefly animal food.

Venezuela.—Maize, vegetables, and fruit.

Uruguay.—Animal food.

Hayti.—Plantains, sweet potatoes, and other vegetable

EUROPE.

Norway.—Herrings, oat meal porridge, potatoes, o meal bread, bacon, and salt beef perhaps twice a wee Brandy in general use, distilled from grain or potatoes.

Sweden.—In the south potatoes and salt fish; in th north porridge and rye bread.

Russia.—Rye bread, buckwheat, and sour krout; sou seasoned with salt and lard.

Denmark.—Rye bread, inferior coffee, cheese and butter.

Hanseatic Towns.—Rye bread, potatoes, bacon seldom, porridge, cheap fish.

Mecklenberg.—Good sound food, occasionally meat beer.

Wurtemberg.—Pea soup, potatoes, rye bread, meat onc or twice a week.

Holland.—Rye, cheese, potatoes, beans and pork, buttermilk, meal soup, beer.

Belgium.—Bread, potatoes, and milk.

France. (*Havre.*)—Bread, vegetables, cider, rarely meat, coffee and molasses.

France. (*Brittany.*)—Barley bread, potatoes, cabbages, 6 lbs. of pork weekly.

France. (*La Loire.*)—Bread and vegetables, bacon o other meat now and then.

France. (*Bordeaux.*)—Rye bread, Indian corn, sa and butcher's meat rarely.

Piedmont.—No meat, a little wine, bread of maize an wheat flour.

Portugal.—Salt fish, corn bread, vegetable soup wit oil or lard.

Greece.—Corn or wheat bread, olives, pulse, salt fis and meat occasionally.

European Turkey.—Bread, rice, greens, olives an onions, meat about once a week.

Malta.—Millet soup, barley bread, cheese, herbs, whe in employ; out of work, bread and soup only. The sam remarks apply to Sicily and Italy.

Mr. Wallace gives the following as the weekly expenditure of a farm laborer in England, whose famil consisted of himself, wife, and two children, and whos wages were 9s. weekly, or about $2,25.

Two pecks of oat meal, 1s. 6d. Five pecks of potatoes, 2s. 1d. Milk, 1s. Loaf of bread, 6d. Half ounc of tea and half pound of sugar, 5d. 1 lb. of bacon, 6d Fish, 6d. Coal, oil, soap, 1s. ½d. Tobacco, 3d. Rent, 1

The food of the Irish laborer is mostly potatoes; of th Scotch, oat and barley bread, and fish.

The following singular facts are stated in Mr. Chadwick's Report on the operation of the English Poor Laws It shows a most perverted state of things in that country one precisely the reverse of that which should exist and would it not be well to inquire in this country, whether the loafer and the pauper do not fare better tha those who struggle to maintain their independence by honest industry? If so, we are approaching results no widely different from those that are bowing down th population of the old world with taxation and distress

In the form of substantial food, Mr. Chadwick states that in a week

The transported thief	receives, ...	330 oz.
The convicted thief	"	239
The suspected thief	"	181
The soldier	"	168
The able bodied pauper	"	151
The independent laborer	"	122

This is reversing the law of nature and society, with a vengeance; and when a government sanctions such flagrant wrongs, it may expect that men will steal and grow fat, rather than work and starve. The food of the laborer in this country is as well illustrated in the anecdote of the Baltimore apprentice, as by any thing we have met with. An apprentice complained to a magistrate that his master was starving him. "Indeed; what does he give you to eat?" "Why—why," lisped the fellow, "nothing but bread, and potatoes, and beef, and mutton, and such like!" "Well, what would you have?" "Why—why—plum pudding, and cakes, and roast turkey, and such like!"

WATER ON FARMS—CEMENT PIPES.

Those only who are deprived of the advantages of good watering places on their farms, can fully appreciate the privilege they confer, or the amount of suffering they prevent, when the farm stock have no drink except such as is dealt out to them once or twice a day from a well, *or are obliged to be* driven a distance to a pond or a stream. *It is surprising* how little attention is paid to this *subject of water*, when so much is depending upon it, and when *so little* expense would in most cases provide a remedy for the evil. Wells, artificial ponds, &c. may be resorted to, when nothing better can be provided; but experience proves that running water, such as is furnished by springs, or streams, and which can be conducted to the points where it is most wanted, is not only the best for stock, but far the most economical in the end. There are few, very few farms, on which water works of this kind may not be constructed, and the water conveyed in pipes wherever desired; still we have known men bring their water for domestic use, year after year, in barrels or in hogsheads, when nothing but a little energy or skill was required to bring an abundant supply of pure spring water to their doors.

For the purpose of conveying water from a distance, pipes of various kinds have been resorted to, of which the most common are lead, wood and cement. Of these we give a decided preference to cement, unless used in circumstances where a great pressure is unavoidable, when perhaps wood or lead might be substituted. That a cement pipe properly constructed will not resist any ordinary pressure, is effectually disproved by one we have in use for conveying water to our buildings, and on which a perpendicular pressure of forty feet has not the slightest effect. We dislike lead as a conductor of water for domestic purposes, because there are very few springs that do not contain salts of some kind sufficient to have a decided corrosive action on the lead, as such pipes on examination almost invariably show, and lead is too active and dangerous a poison to be trusted in the human system in any form. Wood is free from the objection attached to lead, but its want of durability is a serious obstacle to its use. In passing through orchards, or meadows, roots will insinuate themselves through the minutest crevices, and once entered will spread and ramify, so as to speedily fill the pipe and obstruct the passage of the water. Clover is if possible, more injurious to wood pipes than the roots of trees, and we have known an aqueduct ruined, and taken up, from the obstruction caused by the roots of this plant. Observation and experience both concur in inducing us to prefer a pipe made of cement or water lime and sand, to any other material for conveying water. There are several reasons for this preference. The first is the purity and sweetness of the water so conveyed. If the water is good at the source, it is good at its delivery; no poisonous metal, or disagreeable wood taste, having been added. A well made cement pipe, is in fact, a calcareous sandstone, and preserves water as pure as would a pipe of that stone. In the second place a cement pipe is durable. Lead usually soon fails from corrosion, and wood from decay; a cement pipe does neither. If well bedded, and at such a depth as not to be disturbed from the surface, there seems no reason why they should not last forever. Indeed, the cement aqueducts of Rome and Jerusalem, after the lapse of some two or three thousand of years, furnish pretty good evidence on this point. In the third place cement pipe is the cheapest. It is the cheapest, because the first outlay in most cases is less than that of any other pipe, and because when once done well, it is done for all time, accidents excepted.

We have had some inquiries as to the best materials, and the best methods of making cement, both for cisterns and for water pipes, and all such we propose to answer here. The best material for cement is the water lime of Ulster or Onondaga; but it should be of undoubted quality, fresh, or packed in air tight barrels, or it will be little better than ordinary good quick lime. As few are aware of the extent to which the manufacture of water lime is carried in this state, we will remark here, that the researches connected with the geological survey of New-York, showed that in 1839, six hundred thousand barrels were manufactured in Ulster co., and an immense quantity is annually manufactured in Onondaga and Madison counties. To prepare the cement, two bushels of very coarse sand or even fine gravel, sharp and clean from all dirt or loam, is mixed with one bushel of lime. The cleaner and sharper the sand, the firmer and better the cement; great attention should therefore be paid to this part of the operation, as well as to the quality of the lime. For cisterns, or other purposes where water lime is used, the same precautions will be found essential, and if observed, failures can scarcely occur.

There are several methods of laying down cement pipe, but all so simple and easy, that any one may perform the operation; although practice enables one to work water lime pipe so much more perfectly and readily, that an experienced hand should be obtained when practicable. The first thing is to provide the water to be conducted. If a single spring, or a stream, it may be considered ready for use; if from several springs, they must be conducted to a common reservoir; and if the water is to be derived from wet grounds, deep covered drains centering at some convenient point, will be required. From this point, or reservoir, the water is to be conducted in cement pipes to the places where it is wanted. The ditch for a water pipe should be not less than two feet deep, and if intended to convey water for the use of a family, should be still deeper; as if laid shallow, the heat of the earth when the water flows any distance from the spring, renders it disagreebly warm in summer. The width of the ditch may be eighteen inches or two feet, a deep trench requiring more width than a shallow one. Where intended for the use of stock only, pipes so low as to be beyond the reach of frost, the plow, or pressure from passing bodies, are sufficient for every purpose. The bottom of the trench should be level, free from holes or soft places, as such would permit unequal pressure on the pipe, and endanger its breaking.

We have known two kinds of implements used for laying the pipe. In one of these cases, firm but flexible harness leather was sewed into a tube four or five feet in length, of the diameter it was intended to give the pipe, and then rammed full of bran. A covering of cement an inch thick was placed on the bottom of the trench, this cylinder placed on the middle of that, and a covering of cement well worked over it with a trowel, or by hand, for 20 or 24 inches. The cylinder was then drawn forward, while the cement was held back by the other hand, and thus the pipe was rapidly and perfectly formed. Two narrow boards, served to confine the cement placed on the ground for the bed, to the proper width of four or six inches, according to the bore of the pipe, and thus left the completed aqueduct of a square form on its exterior surface. In the other instance the implement for forming the pipe was a round rod turned perfectly true, some two feet in length, and perforated from end to end to allow the passage of a strong cord. To this cord is attached a piece of wood ten inches long, of the same size as the rod, turned perfectly smooth, and tapering to each end. The cement is laid over the long rod, well worked down by a trowel, and when sufficiently covered is drawn forward, leaving the short rod attached to the cord a short distance in the rear. As the work advances, and the cement sets, which, if good, is very quickly done, the short rod is drawn forward with the effect of rendering the bore of the pipe uniform in its size, perfectly smooth, and free from every thing to interrupt the flow of the water. Either of these methods, with good materials, will produce an aqueduct sound, free, and which in a few weeks will become almost as hard as sandstone. Much, however, is depending on the thoroughness with which the mortar, or cement, is worked around the rods that form the bore. Care must be taken not to allow the rods to remain too long before they are drawn forward, as the cement, when partially set, may in that way be cracked and injured. Should such cracks occur, the work may be made safe by immediately covering the place with fresh cement.

The cement should be used as fast as prepared, or a firm pipe need not be expected. If kept dry during the construction, the work will be the better, for though such cement will in time harden under water, dryness greatly facilitates that process. If necessary, water may be allowed to flow through the pipe as fast as constructed; but it is best to avoid it if possible, and in no event must any pressure be allowed, as that would certainly destroy the work. The pipe should remain from six weeks to two months, before it is filled with water, or pressure permitted to take place. A piece of lead pipe of suitable bore, should be used to connect the cement pipe with the hydrant or pentstock, as without such precaution frost or accidental concussion might fracture the cement. If it be necessary for any part of the pipe to sustain a greater pressure than another, that part should receive a second layer of cement, well worked upon the first.

When the pipe is laid, it should be uncovered a few days to set, and then fine earth should be thrown upon it, with water to dampen it, so as to have it pack close about the pipe. At first the filling of the trench should proceed carefully; but the whole should be packed close, so as to prevent all danger of breaking. As to the expense of cement pipe, we have the authority of a man well acquainted with the business, for saying that of one inch bore aqueduct, he can lay 10 rods per day, and 13 of three-fourths inch per day. Lime of good quality can be procured for 16 cents per bushel at the mills, and allowing 6 cents per bushel for the sand, if the work was charged at $1,50 per day, it would be about 12 cts. per rod, and the expense of the material and laying the pipe, some 37 cts. per rod. The cost of the trench would depend on the size and depth, and of that, each can judge for himself. One dollar a rod for the whole expense would be a liberal estimate. Lead pipe would cost from $1,50 to $1,75, according to size, and wood could not be afforded as low as cement. We think no farmer who wishes to construct an aqueduct, will regret that he has made choice of water lime instead of lead or wood; and every man who has not water convenient on his farm, will do well to see whether he cannot obtain it in this way, at an expense bearing no comparison with the benefits that would accrue.

VIRGINIA FARMING.

THE valley of the Shenandoah, between the Blue Ridge and the North Mountain, contains the finest farming district in Virginia, and is exceeded by few, if any, sections of the United States in beauty and fertility. The soil is generally a strong limestone one, admirably adapted to the production of wheat and corn, and favorable to the perfection of all the fruits cultivated in that latitude. In a late no. of the Farmer's Monthly Visitor, we find an interesting account, furnished by the Rev. O. B. Brown, of the farm of Col. Joseph Tuley, near Winchester, the principal point of trade in the Valley. It is a beautiful domain of about 1,000 acres, of which about 800 acres are under cultivation. The house is a splendid mansion, 75 by 60 feet, built in the best manner, with suitable out houses, green house, house for laborers, &c. The green house has one of the choicest collections of rare and beautiful exotics to be found in the country. "Here are seen the Rose of Sharon and the Lily of the Valley, in their native dress, as imported from Syria; the oran and lemon trees, loaded perpetually with fruit in th various stages, from the opening blossom to the full r orange and lemon. The bulrush of the Nile, such formed the ark of the infant Moses, and the rich flow among which it grew, together with plants from ev quarter of the world, are all flourishing here."

But our principal object in alluding to this paper i notice the course of culture pursued on this farm, C Tuley being considered the best farmer of the nei borhood. Col. T. pursues what is called the five ye shift system, and is as follows: He takes a field t years in clover, and turns over the sod in the month August, or early in September. From the 5th to 15th of Oct. he sows a bushel and a half of wheat to acre, and harrows it in. After the wheat is cut, the fi lies, and becomes covered with a thick and stro growth of rag-weed. In the following spring he tu it up with the plow, and plants to corn before the m dle of April. The corn is planted 4 feet apart ea way, and eight or ten kernels in a hill. The cultivati is principally done with a plow, beginning as soon the corn is fairly up, and plowing it both ways about f times in the season. At the second plowing, the hoe f lows, and the corn is thinned to two stalks in the hi The hoe is seldom used but once, and the corn is hill no more than the plow will do it. When the corn is ripe that it will mature in the stack, it is cut, and t land immediately put into wheat. Sometimes he so on the seed and plows it in; sometimes he first plow and then sows and harrows in the seed; being govern by the state of the ground. After the wheat is sow the field is seeded to clover. After the wheat is harves ed, nothing is permitted to go upon the ground to di turb the young clover. The field then lies two years clover, when wheat again follows. In the spring each year, half a hushel to an acre, of plaster, is sow on the clover, and heavy crops of grass are in this w secured. In this course of farming, he once raised fro two acres of land 80 bushels of wheat; from a field 60 acres, he averaged more than 31 bushels per acre; a from a field of 30 acres 65 bushels of shelled corn the acre. He considers the clover and the plaster as t principal means of improving the soil; yet he is ve careful to allow no manure to be wasted. On the co trary, he makes large quantities of it annually, which applies to the highest parts of his fields, turning it und with the plow, which he prefers to using it as a top dre sing.

Col. Tuley keeps a valuable stock of from 15 to milch cows; from 80 to 100 hogs; and a flock of abo 100 sheep. In his park about 300 yards from the hous he has nine or ten elks of the large Missouri breed, a about 50 beautiful fallow deer. The venison furnish by these, is very superior. The garden contains abo 3 acres; and has beds of fourteen kinds of strawberri besides raspberries, currants, several kinds of grap &c. &c. His orchards are extensive, embracing appl peaches, pears, cherries, damsons, plums, quinces, ap cots of the best varieties, and indeed most other fru the climate is capable of producing. In short, Co Tuley's farm exhibits in all its parts, much that worthy of admiration; and in the dwelling is to be fou that urbanity and hospitality which forms a distinguis ing trait of the Virginia farmer.

"LOWELL OFFERING."

This publication is "*written, edited and published,* FEMALE OPERATIVES, *employed in the mills,*" at Lowel Mass. If other proofs were wanting, we have in th pages of this periodical, abundant evidence that bodi labor is not incompatible with the culture of the min Some of the articles written by these *factory girls*—wh work in the mills twelve hours a day, (which, by th way, we think is rather too much,) will compare favo ably with the written productions of any women in th land!

The work is edited by MISSES CURTIS & FARLEY, an published monthly at $1 a year.

INDIAN CORN.

In actual value to the country, it is probable our Indian corn crop is not exceeded by any other of our agricultural products. Adapted in some of its varieties to every part of the United States; exceeded in nutritive powers by few if any of the cultivated plants; cultivated with great ease, and only requiring one season for its perfection, it is not surprising that corn should be a general favorite, and that more land should be employed in the production of this crop, than any other one. The corn crop of the U. States may safely be estimated at 400,000,000 of bushels; and its value $125,000,000 annually. Immense as is the quantity of corn produced, it must be evident to all, that this quantity might be greatly increased, even were no more land devoted to its culture, by a more skillful husbandry. It is only by this course, indeed, in the older states, that any increase of quantity is to be expected, since no considerable addition of land to that already devoted to this crop, can consistently be made. In the great valley of the Mississippi, it is impossible to set limits to the quantity that might be annually grown, should the demand induce the population to divert their productive energies into that channel.

There are few crops which show the effect of skillful cultivation more strongly than that of corn; and this marked improvement should induce the farmer, instead of adding to his number of acres in corn, to adopt that course which will give him the greatest crops, leaving the surplus acres to other uses. If a man, by good culture, can obtain from ten acres of land the same crop which it now takes from fifteen to twenty to give, then prepare the land so as to obtain the greater amount. That there are thousands of acres that now do not yield more than from 30 to 40 bushels to the acre, that would with thorough culture yield from 70 to 80, none acquainted with our agriculture can doubt. But we have heard it said, "if I employ all my labor and manure on ten acres, the remainder of my fields must suffer." The answer is easy; why cultivate 20, when you can get the same quantity from 10? and will rest from cropping be more injurious to the soil, than the exhausting process of cropping without manuring? Why spread the labor and the manure that applied to ten acres would give 800 bushels of corn, over thirty, and in the end receive but 600 bushels? Let it be remembered too, that a piece of land once thoroughly fitted and manured for corn, is fitted to produce a succession of good crops, which in all probability would more than repay in their extra product, any extra expense incurred for the corn.

As the season for planting corn is approaching, we have collected from various sources, notices of some remarkable corn crops, mode of culture, &c. In the selection of examples, reference has been had more to the details of treatment, than to the amount of the crop, as it is of but little use for a farmer to publish to the world that he has grown an extraordinary crop, unless he also shows how he has done it. For this reason we have omitted some of the heaviest crops of corn on record. And here we would remark, that in awarding the premiums for crops, our agricultural societies have not sufficiently insisted on full details of culture from the applicants. In consequence of this neglect of details, one great object of such associations has been defeated, and the good effected by them proportionably limited. This every one must feel, who turns to the reports of the societies in the different states or counties, with the view of ascertaining the best method of culture in all its parts, of any given crop.

The first instance we shall select is from the report of a crop made by Mr. Stevens of Hoboken. We do this because it is one of the earliest of our great corn crops, and shows the action of street sweepings or manure, very plainly:

"Mr. Stevens gave his ground three plowings before planting, and before the last plowing put on 700 horse cart loads of street manure. He then planted in double rows 3½ feet asunder, dibbling in each grain. To do this with expedition and accuracy, he bored two rows of holes in a piece of board about four feet long, so as to form equilateral triangles, the sides of which were seven inches, as thus,

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Into these holes he drove pegs 3½ inches long. As the corn was dropped into the holes so made, a man followed with a basket of rotten dung with which he filled them up. During the season the corn was suckered three times. The intervals were repeatedly plowed, and the rows kept clean of weeds by hoeing and hand weeding."

This corn was raised on a bet of 50 guineas between Mr. Stevens and a Mr. Ludlow. Mr. L. planted his rows four feet apart, and the corn 8 inches from stalk to stalk in the rows. His ground was manured with 200 loads of street dirt. His crop was 98 bushels and 14 qts. per acre; Mr. Steven's 118 bushels and 2 quarts per acre. Unless the great quantity of street manure used made it necessary, or the condition of the soil was bad, no good reason can be given for so many plowings for a corn crop.

In 1831, B. Butler, Esq. of Chenango co. in this state, raised 140 bushels of corn from one acre. The soil was a stiff loam, nearly covered with small stones, of which 50 loads to the acre were taken off before tillage. It was plowed but once, but this was done in the best manner. Mr. B. adds—"We then drew on 25 cart loads (about 25 bushels to the load,) of sheep manure, and spread it evenly on the furrow. Rolled and harrowed with the furrow, with a light double harrow, containing 40 teeth, until it was a complete garden mold, and the earth well incorporated with the manure. Again picked off the stones, and again rolled and planted on the 22d and 23d of May, on an even surface, with the early small white flint corn steeped in a solution of copperas and saltpetre, and then tarred and rolled in plaster, and planted in double drills 3½ feet from center to center of the middle drill. The plants standing singly from 12 to 13 inches on the main drill. The corn was once plowed, and afterwards kept clean with the hoe, plastered well on the plant, topped at the usual time, was ripe on the 15th of Sept., and was harvested on the 14th and 15th of Oct.

In this case the sheep manure sustained the high reputation it has acquired for the corn crop, both at home and abroad, and with the exception of that produced in the hog pen, our experience would lead us to prefer the manure from the sheep fold, to any other ordinary farm manures. One thorough plowing was here found sufficient, the rest being left to the harrow; and we are convinced that in most cases one plowing well done, will be found better than more. A fine mellow seed bed must in any event be had, and the soil must be moved with either plow or harrow until this is provided.

Another example of a good crop of corn, is that of Mr. Bugbee of Palmer, Mass. who raised from five acres of land 540 bushels, or 108 bushels per acre. The following is the account given by Mr. B. of his mode of culture:—"Last spring I plowed up a piece of green sward, measuring about five acres, and prepared it for corn as well as my means would permit. After plowing, 30 loads of manure to the acre, were spread over the ground, and thoroughly mixed with the earth by means of the harrow, without turning up or breaking the sod. The ground being now prepared, on the 30th of May I planted my corn. A small quantity of ashes, lime, and plaster of paris, mixed together and prepared for the purpose, was used at the time of planting, or put in each hill. Of this mixture, there were 2½ bushels of lime, 2½ bushels of plaster, and 25 bushels of ashes for the 5 acres. The corn was hoed but twice, a third hoeing being unnecessary."

This crop affords another of the many proofs already existing of the excellent effect of such a compost of lime, plaster and ashes, especially on inverted sward, as that prepared by Mr. B. Those farmers who sell off their ashes, and harvest corn crops of only 30 or 40 bushels per acre, would do well to imitate Mr. B. in the use made of his.

In 1823, Leonard Hill received the premium offered by the Plymouth (Mass.) Ag. Society, for the best crop of corn. We condense his statement of the culture, &c. The soil naturally was deep and rich. During the previous winter, while it was greensward, his cattle were foddered upon it. In May, it was plowed very deep into squuares 2 feet 7 inches in width. It was then manured in the hole, 64 cart loads barn manure being used. It was planted early with white and flesh colored corn, varieties having small cobs. The kernels were placed about four inches apart in the hills, not thrown together as usual. In the middle of July, the corn spindled, grew very thick, and so filling the spaces that the rows were scarcely discernible. It was hoed three times, and all the suckers early cleared from it. It was gathered on the first of October. The quantity of shelled corn, ascertained by disinterested men, was 139 bushels, 3 pecks.

This was a great crop, but the account is defective in not stating the number of stalks left in each hill. The varieties of corn must have been of the small kind, or such close planting would have prevented the formation of ears. The quantity of manure was enormous.

Some of the most extraordinary crops of corn ever grown in the United States, were those produced by the Messrs. Pratt of Eaton, Madison co. In 1822, they obtained from 3 acres, 517½ bushels, or 172 bushels per acre, and in 1823, from 4 acres, 680 bushels, or 170 bushels per acre. They prepared their land in the best manner, then with a shovel plow made a trench 20 inches wide into which the manure was placed and covered. On these trenches, so covered, the seed corn was drilled in three rows, thus:

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•   •   •   •   •   •
•   •   •   •   •   •

Two feet nine inches distant, or 3 feet 9 inches from centre to centre of the rows. Another trench was made, filled, covered and drilled in similar manner. Thus the corn stood in single stalks, 6 inches a part every way, and 2 feet 9 inches clear between the rows.

It is evident that planted in this manner, more stalks would be placed on an acre than in almost any other way, but nothing short of the most heavy manuring would carry through such a crop. We have found by experience that in very dry summers, close planted corn suffers far the most, and if too near, is a total failure. We once planted a piece 2¼ feet by 18 inches in the rows, intending 3 stalks to the hill. The corn was manured in the hill. The growth was very rapid and promising until the ears were about setting, when a drouth of some weeks occurred, and the result was not more than half a crop. The years in which Messrs. Pratts' crops were grown, were of the most favorable kind, and the crops, under their course of planting and culture, most astonishing.

In 1835, Mr. Brewster of Oneida co. communicated to Judge Buel an account of a crop of corn and potatoes raised by him in that year. He says, "I had a ten acre lot of stiff strong sward, that had not been plowed for many years; this I intended chiefly for Indian corn. In one corner of this I measured off one acre for corn, and by the side of it another acre for potatoes. I drew on about twenty loads of yard manure to the acre on each, turned it over, followed the plow with the roller, harrowed and furrowed three feet apart from north to south, and put down about the same quantity of manure that was turned under. Commenced planting the 20th of May; seed soaked, rolled in tar and water and plaster, put 4 grains in a hill, one foot apart. The first day planted one-fourth of an acre, which came up well; the other planted on the 22d and 23d, did not come up well, owing, as I thought, to the seed lying too long in the hot sun after being soaked, and we replanted it on the 2d and 3d of, June." From the ¼ acre first planted Mr. B. had 26 bushs. 8 qts. or 105 bushels to the acre; the other ¾ did not do so well, and he only got 94 bushels and 2 quarts of shelled corn from the acre. The potatoes were planted on the 1st and 2d of June, furrows three feet apart, and the seed all whole and large, dropped one foot apart in the rows. One good dressing was given them with the plow and hoe, which was all the attention they received. At gathering, by measure he had 519 ½ bushels, by weight, 560.

Several years since that excellent farmer, Mr. Reybold, of Delaware, on a field of 22 acres, raised 2216 bushels of corn, or 100 ¾ bushels per acre. Seven years previous to the crop, he put on 60 bushels of lime per acre, and planted it to corn; in the following spring he put it in oats; in the fall put on 40 loads of barn yard manure per acre, and sowed it to wheat and timothy seed, and the ensuing spring with clover. It remained in grass some five years, and received one top dressing of 40 loads per acre of manure. It was mowed four or five years and gave from 2½ to 3 tons of hay per acre. In the spring of 1835 he gave it another dressing of 40 loads per acre of long manure, allowed the grass to start through it, and then with a furrow 10 inches deep, turned the whole under. The corn was planted in shallow furrows 3¼ feet each way. The plow was never used in the field after planting, the cultivation being performed by the cultivator and hoe; and no hilling was allowed. Three good stalks were left on each hill. When the corn was glazed it was cut up, and put in shocks. On this statement, Judge Buel remarks: "The management which led to this extraordinary product of corn, should be deeply impressed on the mind of every farmer. 1. The ground should be well dunged with long manure. 2. It was planted on a grass ley with one deep plowing. 3. It was well pulverized on the surface with the harrow. 4. The plow was not used in the after culture, nor the corn hilled. 5. The sod was not disturbed, nor the manure turned to the surface; and 6th, the corn was cut at the ground when it was fit to top."

We had marked several other crops as worthy of note, but have room for only the following which we select as showing what crops of corn may be grown on the very northern verge of its culture, and what the treatment was that produced it.

The soil was gravelly, dry, had been cropped seven years in succession, and manured each year. In the spring of 1838, the hills of the previous year were split, a good dressing of manure put on and plowed in, harrowed, and with a light plow opened into drills 2½ feet apart. On the 19th of May, 1¼ bushels of seed corn was put in a tub, and hot water poured on it, till too hot to stir with the hand. It was steeped two hours, then dried by rolling in plaster, and planted the same day in hills 16 to 18 inches apart, and from 5 to 7 kernels in a hill. On the 5th of June it had come up; on the 11th a small plow was passed between the rows lightly, turning the little mold raised to the middle, and care being taken to stir the whole surface of the ground. It was harrowed and hoed the next week, and again the week after that, th owner believing that the maturity of corn may be hastened some two or three weeks by frequent hoeing while the plants are young. In hoeing, the earth wa left nearly flat. On the first of September the corn wa cut up, and husked out the last of the month. The crop when shelled, fell a few pounds short of 150 bushels o corn per acre. It should be stated, that though plenty of seed was used, only three stalks were allowed to re main in a hill, the best being selected for this purpose.

From the history of corn crops here given, and th mode of culture adopted, we think farmers may deriv some useful inferences. We have omitted the great crop of Kentucky, 190 and 196 bushels to the acre, the large yet grown in any country, as the details of culture wer not at hand; and the same may be said of some of th premium crops in this and other states. We state here few of the most prominent results disclosed:

1. The soil intended for corn must be dry; all experi ence proves that moist soils are unfit for the culture o this grain.

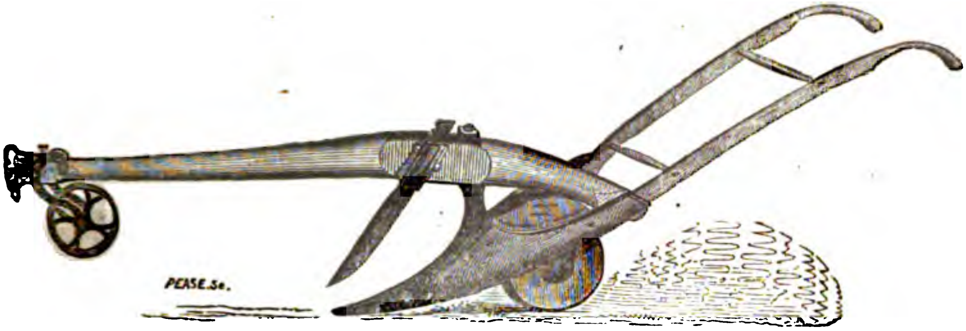
2. It should be made rich, and deep. Corn will bea heavier manuring than any other cultivated plant, an the soil should be deep to permit the roots to descen beyond all danger of drouth.

3. Preparation of the seed is useful; but no seed ove soaked or swelled for planting or sowing should be al lowed to become dry, as that injures its vitality.

4. The use of top dressing, such as mixtures of ashes lime, plaster, &c. is established beyond a doubt. Perhaps there are few ways in which labor is better expend ed, than in placing such composts about corn.

5. The uselessness of hilling corn is demonstrated. No a great crop of corn has been grown for years, in whic this practice has been followed.

6. It is proved that corn too thick will not ear; bu



SHELL-WHEEL PLOW.—(Fig. 26.)

The peculiar construction of this plow, consists in the introduction of a *friction wheel* in place of the land side, which the inventor says "works well in all soils, and saves nearly one-third of the draft." A trial made at the State Fair at Rochester last fall, showed that this plow ran with 99 pounds less draft, than another plow doing the same work, and made exactly like it, with the exception of the friction wheel—one plow requiring 298 and the other 397 pounds draft—furrow 12 inches wide and 6 inches deep. The inventor and manufacturer is Thomas D. Burrell, Geneva, N. Y.

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that in some seasons it will bear to be thicker than others. The failure stated by Mr. Betts, of Newburgh, in the Feb. No. of the current vol. of the Cultivator, may be traced to this cause.

7. The impolicy of throwing all the corn put in a hill, when planted, together, is forcibly shown by the success of planting in drills of a single kernel, as in the case of the Messrs. Stevens and Pratts. We frequently hear men boasting how much they have planted in a day, when by planting the grain together, they lose more than would pay for many days' work.

We do not expect that every man will raise a hundred and fifty bushels of corn to the acre, even should he use every reasonable effort. There are too many concurring circumstances, all of a fortunate kind, required to make such crops common; but that any good soil, skilfully cultivated, may be made to give 70 or 80 as a medium crop, we fully believe. Fewer acres planted, and those better manured and tended, would, we are confident, much increase the corn crop of the country, as well as the profits of the farmer.

SPRING WORK.

There is no season of the year in which energy, activity, and good calculation is more requisite than the present. Animals of all kinds, young and old, and particularly those intended for labor, demand increased care and attention. March is one of the most trying months for animals, as they are, as the saying is, "between hay and grass," and too often the supply of either they can obtain, is barely sufficient to support life. If farmers would consider the much greater quantity of milk a cow will yield in a season that is in good condition in the spring, than one that has "been on lift" through March or April, we are confident there would not be so many skeleton cows on our farms as there now is. If too, they would for one moment reflect that a large part of an animal's power of draft lies in his weight, and that where this is wanting, and the whole is thrown on muscular exertion, the animal must soon give way, they would feel the necessity of having their working stock, horses or cattle, at this season, in good heart, their flesh sound and durable; and we should be spared the mortification of seeing so many poor and miserable teams in the field, at a time when all should be life and activity. To work well, an animal must be kept well; and the work, in nine cases out of ten will be found best done, where the teams are in the best condition. You might as well expect that an Asiatic team, of a jackass and a woman yoked together, would break up the ground to the proper depth, as that a pair of scarecrow horses or oxen can do it. Never undertake to see on how little food your teams can subsist. No better criterion is needed of the nature of a man's cultivation of his grounds, than is afforded by his animals; and he who starves them, will soon find his land will starve him. At this season of the year sheep require much attention, and will well repay it. Sheep are among our most profitable animals, and on the whole, require less care than most others; if the little they demand is given at the proper time. Look out for the lambs and the weak ones of the flock, and do not suffer a drove of hardy weathers to pick over and trample upon the fodder, before the ewes and lambs can get a taste.

It is an important point in commencing work in the spring, that every implement necessary should be at hand, and in first rate condition, when wanted. The good farmer has his house for his farm implements, as well as for himself or his stock, and is careful that all shall be put in their place, as fast as the season throws them out of use. In the winter, all are carefully examined, and the necessary repairs are made. The farmer who permits this work to pass until the implements are wanted in the field, will find he must lose many valuable hours, if not days, at a time when one, if lost, is with difficulty overtaken.

There is a very great fault among farmers, and we feel justified in reprobating it in strong terms, because we have been sometimes guilty of it ourselves; and that is, laying out more work than can be done by the force on the farm, timely and properly; and experience has convinced us that if work cannot be done as it should be, it is better not to meddle with it at all. Never is this fault more observable, or more injurious, than in putting in the crops of the season. There are some cultivated plants, which we may be certain will not mature unless the seeds are in the ground at about such a time—a time, it is true, varying in different latitudes, but generally well understood at any given place; yet we find some farmers so negligent, and what is worse, making an assumed trust in Providence an excuse for their laziness, as to be weeks behind the proper time of getting in the seed. Indian corn may serve as an example of such plants. As a general rule too, spring wheat, barley, or oats, if the sowing of them from any cause, is delayed beyond the proper time, although by chance, a pretty fair crop, so far as regards bushels, may be produced, yet the quality will be found inferior, the grain light, and the danger from blight, or rust, greatly increased.

Do not entertain the idea that your farm work can go on successfully, unless you give it your personal supervision. The merchant, the lawyer, the doctor, must attend to their business personally, or all will go wrong, and it is not less so with the farmer. Poor Richard never drew from his stores of wisdom a better maxim than that "he who by the plow would thrive, himself must either hold or drive." Laborers may be faithful and careful, but they cannot enter fully into all the intentions and plans of the farmer; and he must be the guiding and directing head of the whole, or much ill directed effort will take place. The good farmer will be in the field with his laborers. He never says to them go, but come; and he knows that in the management of a farm, example is far better than precept.

It would be well if every farmer would, in arranging his business for the year, determine every season to make one or more experiments in some branch of husbandry, that would lead to some important result; either in determining the best method of procedure in regard to some crop, or bring new evidence towards settling some controverted point in agriculture. When we recollect how many points there are in husbandry about which good farmers are not agreed, such as relate to the growing of crops, times and methods of seeding, preparation of soil, rearing and fattening of animals, &c. &c., it is not a little surprising that more carefully conducted experiments are not made to throw new light upon them. There is not a farmer, who might not in this way, by well conducted experiment, and the communication of the results to some agricultural journal, do much towards introducing more correct notions, and better methods of farming than now exist.

The introduction and the propagation of good fruit, is one of the many things that must not be overlooked in any estimate of the spring labors. The man who neglects to plant fruit trees, when he has a rod of ground to plant them on, avows his intention of becoming a nuisance to his neighbors; for depend upon it, the man who is too lazy to plant, will not be too proud to beg, or above allowing his children to steal the fruit of his more industrious and careful neighbor. Every man who has cultivated a fruit garden is well aware of this state of things; and has found that the coming into bearing of a new and delicate fruit, instead of adding to his enjoyment, as it should, has only served as a signal of gathering, to these ill omened plunderers. The only remedy is for every farmer to endeavor to make the best fruits abundant; to plant enough for himself, and some to spare.

But whatever may be the nature of the labor to be done, there should be no haphazard work; nothing that has not entered into the plan of the farmer, either as principal or contingent, and been provided for accordingly. Every movement in managing a farm should be the result of reflection, of preconcerted arrangement, and directed to a certain and definite end. Were such always the case, we should see fewer badly cultivated farms, fewer pieces of work unfinished for want of time, and fewer farmers "coming out at the little end of the horn," the result of bad calculations and unthriftiness.

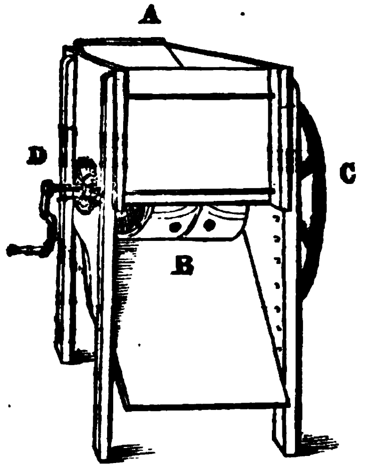
MR. PELL'S ORCHARD.

MESSRS. EDITORS—Your valuable paper is looked on as a farmer's text book in our County, and I always regret seeing typographical errors mar the sense of the communications. They are rare with you; but one appeared in your last number, containing one or two rather singular additions of figures. You say Mr. Pell, on his farm in Ulster county, has 20,000 apple-trees *in full bearing*. The distance of planting trees with us, is 36 to 40 feet apart; this is the distance recommended by Nicoll & Loudon in England, and is 25 or 30 trees per acre; at 40 trees per acre, 20,000 trees would make 500 acres of orchard; you must have added a cypher and intended to write 2,000 trees. Again, 20,000 grafts and not one lost; if you intended to say 200 or 2,000, it would be extraordinary success, but possibly might happen. I have heard of 200 and only 4 lost. Is there not also a cypher extra in the 300 bushels of lime per acre?

Yours, respectfully, DUTCHESS COUNTY.

We gave the statements to which our correspondent refers, just as they appeared in the New-York papers. If there is any mistake, we should be happy to have it corrected by Mr. PELL.—EDS.

IN the article headed "Philosophy of wool," p. 61, line 18, of first paragraph, for "*pulling*," read *fulling*. The word "*not*," should also be omitted in the 3d line of the first paragraph in the 2d col. of same page.



CYLINDRICAL VEGETABLE CUTTER.—(Fig. 27.)

These machines, it is said, cut 800 bushels of beets or turneps in a day, and can be regulated to cut thick or thin pieces at pleasure. Cost, $20. Manufactured and sold by ROBERT SINCLAIR, Jr. & Co., Baltimore.

NORTHAMPTON AGRICULTURAL CLUB.

WE take a pleasure in laying before our readers the following first and second articles of a new society recently organized in the beautiful village of Northampton, for the promotion of Agriculture, Horticulture, &c. We hope to see the time when every village or rural district in our land, where circumstances will admit, will have similar associations; confident as we are, that few things will contribute more to the taste, prosperity and intelligence of the population, than such societies. Let New England take the lead in this, as she is wont to do in most good works, and let us hope that the other states will not long be behind in a course of such obvious utility.

Constitution of the Northampton Agricultural, Horticultural and Floricultural Club.

Article I. This association shall be known as the Northampton Agricultural, Horticultural and Floricultural Club.

Article II. The object of the Club shall be the circulation of general intelligence, and practical intelligence in all the branches of Agriculture, Horticulture, and Floriculture:

1. By the establishment of a permanent library of the best books on these subjects.
2. By the establishment of a correspondence with other bodies seeking the same objects.
3. By procuring the most rare and valuable kinds of seeds, plants, shrubs and trees.
4. By the establishment of Lectures, Discussions, Exhibitions, and other means for the general circulation of knowledge on the subjects embraced by the Club.
5. By planting shade trees in all the avenues and public squares of the town.

The other articles refer to the officers of the society, their duties and the mode of appointment—the meetings of the society, which are to be annual and special, the latter to be notified in the newspapers of the village—the terms of membership, and to alterations of the constitution. Northampton now is one of the most delightful villages of New England; and if the objects of this association, as above defined, are carried out with spirit and effect, it will be a perfect gem in the green valley of the Connecticut. We can only say to other villages in our country, go and do likewise.

BOMMER'S MANURE.

We refer the numerous inquirers on this subject, to the Letter of Mr. ELLSWORTH, published in our Jan. No. (p. 31,) of this year, where they will find all the information we can give them on the subject.

MISSISSIPPI—HER AGRICULTURE, &c.

PRIVATE CORRESPONDENCE.

We have, within the last few days, received an ample package from our friend M. W. Phillips, M. D., the able senior editor of that excellent Journal, the "South Western Farmer," published at Raymond, Miss. It is rarely that we have been more interested than in the perusal of the several papers, and we regret that the strict injunction, "not to print," will prevent our readers sharing with us in the pleasure which the life-like sketches of domestic customs, as well as of men and things in that portion of the South would have given them. A few extracts, however, are permitted, and will be found below, and in our next. It is evident the spirit of improvement is abroad in the South, and the advance within a few years has been truly great. Indeed it could scarcely have been possible it should have been otherwise, when such men as Phillips, Affleck, Cloud, Fanning, and a host of kindred spirits, took upon themselves the labor of enlightening the public mind, and in their own practice, giving an example of what a more skilful method of culture could accomplish. There is much yet respecting the South that is misunderstood. Its capabilities and its productions have been decided upon, more with reference to the sea coast, or that of the gulf, than its vast and fertile interior. A few such men, however, as Dr. P. with his perseverance, taste and intelligence, scattered over that region, will, by the influence of their writings and their examples, correct and expand a vitiated, and limited public sentiment, and *give to agriculture* and horticulture their proper place in the pursuits and aspirations of the planter. Care will take the place of negligence, economy that of improvidence, and comfort, a word that embodies so many associations delightful to the lover of nature, will become more common than it now is. We give the extracts for the truths they contain, and to show what an observing intelligent man, who is willing to devote the rich gifts God has bestowed to the benefit of his fellow men, can accomplish:

"We are too improvident in all the South, to enable us to enjoy the real pleasures of the climate we live in. There are many who have little else than hog and hominy all the year, who are able to afford better living, if property be a test. There are numbers with good estates that have no fruit excepting a few peaches. The majority of my people, I do verily believe, would look upon the Dahlia as a noxious weed; the Cape Jessamine as a worthless shrub; and if it could be that a noble Camelia were standing in a field where a plow could run, even in full bloom, that it would be cut down and cast into the fire with as little compunction of conscience as if it were a sassafras or box elder. They are unable to see any beauty in the noble steed, stately cow, happy hog, farther than they contribute to the making of cotton. Yet with all this there are redeeming spirits enough in the land to make one love his fellows. They are the right sort of material to make good farmers out of; they are beginning to see beauty in all things that a beneficent Providence has given excellence to; and I look for the day when our people will build and plant, rear and nourish, with reference alike to the useful and the ornamental."

"Although I have been in Miss. since 1830, (my native place being Columbia, S. C.,) I have seen comparatively little of the state, as I have found full employment at home, I can then therefore say little as regards fruits, shrubbery, or flowers; yet a residence of two years at Philadelphia, one of the most favored northern locations for fruits, will enable me to speak of the comparative excellence of northern and southern fruit with some confidence. The best peaches, melons and figs I ever saw were in the South; the first and last in Miss., and with a single exception, the best of melons also. The best pear I ever ate was in the house of "Harry of the West;" the best apples were from northern regions. I have found as good summer and fall apples South, as I ever did elsewhere, and excepting that one pear, the Sugar, I have seen no finer than in Carolina; whilst the [illegible] I think could hardly be beaten anywhere, that I ate in S. C. And flowers—here is the land for this beauty of all beauties—a woman and a horse excepted—and they only, because the noble intellect governs. The pride of the forest, the Magnolia, grows here in all its majesty; many flowers that with you require protection, pass out of doors our winters—many that require considerable tact with you to propagate, can be cultivated here by any little urchin. But to return to fruits; there are too few fine varieties of fruits in this region. I know of no gentleman who has any varieties of grafted apples or pears that are in bearing, save one or two. One gentleman near Vicksburg has some fine pears, and Mr. Hatch assured me they are equal in quality to the same variety at the north, but they ripen much earlier. I have now some 25 or 30 varieties of the apple and pear, and shall put out this season at least 50 more. My reason for going so extensively into varieties, is to be certain of some that will do well. I have some ten varieties of the cherry, 5 of the strawberry, 3 of figs, and 3 of raspberries. Of peaches I know not yet what I shall have, as besides budded and northern fruits, I have some 250 seedlings three years old, and 200 more I shall put out this spring."

LETTER FROM THOMAS AFFLECK, ESQ.

We give below some extracts from a most interesting communication received from our friend Mr. Affleck, of Ingleside, Miss. The extracts relate to topics of interest at the north as well as the south, and will aid in throwing light on the productions and modes of culture in that fertile section of the Union. The doubts which have existed as to the capability of the south to produce its necessary provisions, or to grow the principal varieties of northern fruits, doubts which had arisen more from the neglect of the planter than any other cause, will soon be dissipated by the example of a few such men as are now engaged in enlightening that section of the United States as to its capability and true policy.

Mr. Affleck has transmitted to us two specimens of cotton in the seed; one a specimen of good Mexican, and the other a specimen of that shown by Dr. Lovelace, at the Adams co. Fair, Miss., and supposed to be a hybrid between the Mexican and some long stapled cotton. Dr. L. not having completed his experiments, did not disclose the manner of its production, but we can say that a more beautiful specimen of cotton than the improved, has never met our eye, and shows most conclusively, we think, what a field is open for the well informed and scientific cultivator, in the improvement of this national staple.

The following request of our friend, we place here, that it may meet the eye of Dr. Cloud: "Let me beg of you, as I do not know his address, to say to Dr. Cloud, that if he will forward me a bushel, or what he can spare, of his *improved cotton seed*, to the care of Ringgold, Ferridy & Co. New-Orleans, he will confer on me a favor that I will gladly reciprocate." The extracts relating to sheep, pigs, and growing corn for fodder, will, we are sure, arrest the attention of the reader:

"There is but one difficulty as to *pastures*, and that is, that *none are made*. No one attempts to form pastures in any other way than by *turning out* fields after they will *no longer produce cotton or corn*, and being satisfied with the scanty crops of *sedge and Natchez grass*, and of briars which they may yet be able to support. Within the last year or two, however, better things are attempted. I have seen very promising woodland pasture of orchard grass; and winter pastures of Egyptian oats and rye are becoming common on well managed plantations. The cane swamps afford tolerable grazing; at all events, the swamp cattle manage to grow and even fatten on the abundant *browsing* they find there, and make pretty good beef and capital work oxen. These are the *rams-horned*, brick-colored cattle, known as Piney woods, swamp, Opelousas, or Attakapas cattle—descendants of the original Spanish stock, and yet found in those regions, *uninjured and unimproved*. During the winter, we have no lack of abundance of feed for all kinds of stock; and in summer we have only to have recourse to *Bermuda grass*, to keep every thing *seal fat*. This is the most nutritious grass I have ever seen; and where exposed, the most closely grazed. It resembles *Nimblewill*, (Triticum repens?) but is more delicate in its appearance, leaves much more numerous and narrower, stems small and solid, growth rapid; and when in meadow, it does not attain a height of over 12 or 14 inches. Yet I have seen this delicate looking grass afford, at a second cutting, between 5 and 6 tons to the acre of dried hay. The first and *third* cuttings not so good. It stands so thick on the ground, and its numerous lateral leaves so closely interlocked, that a good hand cannot cut over more than half an acre per day, and has to cast aside the swarth with his foot, at every second or third cut; the scythe blade passing under and cutting the grass, without laying it over. It is a troublesome grass in the cotton field, but can be got under by a crop of corn and pumpkins, or oats followed by peas; it can bear little or no shade. It is invaluable for coating embankments, and is of incalculable benefit on the levees of the Mississippi. It is stated upon good authority, to be "the Doul grass of the middle provinces of Hindostan." Whoever brought it to this country, is as deserving of a monument to his memory, here in the south, as is Parmentier in France.

"Within some three or four years, another creeping grass has made its appearance here, said to be a native of and abundant in Cuba, and is rapidly spreading; that suits their upland, and thrives better there than *Bermuda*, and is green and grows all winter, whilst the other is cut down by the first frost. I am now using it in my garden and grounds for edgings, grass plats, &c. and think it will answer well, as being easily kept within bounds, of a dwarfish growth, forming a close sod, and remaining green summer and winter. From the reports of Dr. Phillips and others, it would appear that in the *Musketo*, a Texian grass, we have another valuable resource, particularly for winter pasture. Dr. P. presented me with a small quantity of seed, which is in the ground."

"You see how I ramble along! I will now return to my forgotten text, *Sheep in the South*. You are right,—"the old notion of the impossibility of growing good wool at the South, *is* giving way to the evidence of facts." The doctrine that all wool-bearing animals except the negro, have their wool, in a very short time, turned into hair in the South, is also exploded. True, the common sheep of the country, bred in and in for generations, and ranging now in miserable burnt up pastures, and again in the cotton fields, where they become excessively fat on the tender *winter grass*; the one season shorn, and the next allowed to surrender their coats to the briars—such sheep have thin, scanty, hairy fleeces. But they form no criterion. Are there no such animals elsewhere, "bred by, and the property of nobody in particular, the United States over?" Why is the coat of the black-faced sheep of the mountains of Scotland, so coarse and hairy, whilst that of the Merino of Spain and of New South Wales, where they scarcely ever see frost, so fine in its staple? I feel satisfied of one thing, that the finer and more spiral the staple, and the closer and heavier the coat of wool, *and the greater the abundance of yolk*, the better will the wool on the sheep's back resist the injurious effects of the sun. Sheep are kept by the planter, in almost every instance, for the mutton alone; some few manufacture the scanty crop of wool. The mutton is *very* fine, *almost equal* to that of the mountain heather-fed sheep of my native country—and that you know, is a great deal for a Scotchman to say! The native sheep of which I speak, are remarkably full and broad in the loin, and the saddle is of course proportionably good. Sheep seem to me always to be in good health here—one never hears of the half of a large flock dying off within a few days, as is by no means unusual in colder countries, where numbers have to be penned together for a considerable length of time.

"We have thus, you perceive, no scarcity of *beef and mutton*. Many planters in Mississippi are now making their own pork, or are exerting themselves to do so. In the neighboring County of Jefferson, this is more particularly the case. I know of several there, who last season killed and cured from 100 to 200 head; one who killed 350, and another over 700 head, all for their own home consumption. The gentleman last alluded to, assured me that all of his hogs were fattened entirely on peas, which were planted between the corn rows at the last tending, and the hogs turned in on them after the corn is gathered; finer bacon I have never eaten. This gentleman has killed his own pork ever since the second year of his farming, some thirty years; tans his own leather, makes his own shoes, harness, &c., wagons and farming utensils; manufactures much of his winter clothing, and this without allowing himself to be influenced by the high or low prices of cotton; though of course, when cotton brought from 15 to 25 cents, he was to all appearances, sinking money in employing his hands anywhere else but in the cotton field. However, the best proof that his system was the true one, is that he is one of the wealthiest men in the country, living in the greatest comfort, his family settled round him, and his negroes comfortable and happy.

"A word more on hogs. I find that the pigs brought here from the north, grow none after warm weather sets in; and grown animals suffer much during the first summer; whilst their produce, bred here, grow and thrive well. I have imported *Newberry* here, and a fine lot of thorough bred sows, from which I am raising my plantation stock—will they do?

"You speak of being 'anxious that some of your southern friends would try the experiment of sowing corn broadcast, as an article of food for animals, to be used for soiling during the summer, and cured and fed, after being cut, to them in the winter; and ascertain what the practicability and expense of keeping animals in this way would be.' Corn leaves, you are aware, are now used extensively; but would not the stalk cured and *cut into chaff*, add much to the ability of the planter to feed stock, without materially adding to his expense? It would; and in my own case, *does do so*. At 'Ingleside,' I feed nothing else. My farm here, only consists of 40 acres of an old field, which the small force I keep here, enables me to improve very slowly; the more, as to it is added five acres of garden, &c., requiring much manure. As I keep five head of horses, two mules, two yoke of cattle, from two to six cows and their calves, and some twenty to thirty head of hogs, I was forced to try some such means of making fodder, or have *blades* to haul from one of the plantations. In 1842 I sowed some corn broadcast, but the dryness of the season and the poverty of the land, prevented it doing much. I did not cut it; but the stock when turned into the field, grazed on that patch of corn as long as there was a stump of it left. That winter I fed principally on *crab grass* hay, and corn cut and shocked, Kentucky fashion—which does not do well. This last season I *drilled* several different patches of corn at different times during the spring and summer; drills from 2½ to 3 feet apart, and the stalks almost touching in the drill. It all did well; so well that though I had not more than an acre and half in all, I fed my stock on it during the whole summer, passing the green corn through the cutting box, with a proportion of about one-third or one-fourth of dry fodder; cutting down and curing what was left of each patch, when the next sown became ripe enough to feed out. I have thus sufficient fodder to do me, I think, or nearly so, until oats are ripe, and my drilled corn comes in again. It must be in tassel, or tasseling, before cattle and horses at all relish it; and hogs, though they eat it greedily, *fall off* on it; for the reason, I think, that they reject all but the juice, and hang round the fence all day, waiting for more. I have tried Egyptian millett and Guinea corn, but prefer the maize.

"Pulling corn blades to make fodder, I consider the most unhealthy and unprofitable work done on the plantation."

AGRICULTURAL SOCIETY IN OHIO.—Our friend Mr. G. HEZLEP, of Trumbull county, informs us that an Agricultural Society has been lately organized in that neighborhood. We rejoice to see that the spirited exertions of Mr. H. and others, for the improvement of agriculture, are producing their proper effect. Mr. Hezlep is corresponding secretary to the society.

☞ At page 176 of our last vol., "*A Young Farmer*" will see a description and engraving of a windlass for raising water from wells, which will probably answer his purpose.

Foreign Intelligence.

LETTER FROM F. ROTCH, Esq.

No. 8 Sidmouth st., Regent Square, London, Jan. 1, 1843.

Editors of the Cultivator—Having felt in common with some others who are interested in the advancement of agriculture, that medals might possibly be substituted with advantage in lieu of money for premiums, I took the occasion when passing through Birmingham, on my way here from Liverpool, to call on Mr. ——, the medalist, a very rising man in the art, and one whose talents have during many years given celebrity to other names than his own; for till very lately he was an operative doing the work of some of the first houses in this place, and was, I understand, discharged from their employ for venturing to put his own name in the minutest lettering and in the most unobtrusive manner, on a die of considerable merit and value which he had just completed! Fortunately at this moment of *indiscreet presumption*, a more liberal and less mercenary capitalist crossed his path, and advised the discarded artist to commence business on his own account and in his own name. This he has done, and I was glad to find this excellent medalist doing a fair amount of work, and living in a most comfortable and neat, though small house, with a large brass plate on the door *daringly* announcing both his name and occupation. Thus may it ever be with *merit*, when an attempt is made to withhold from it its *meed of praise* and reward.

But to return; having been shown into a very pretty little parlor, whose ornaments gave evidence of taste and virtue in its owner, the *artist* himself came in, and I entered on the object of my business, when I was shown a variety of medals from dies of his own workmanship; all of which were minute and excellent in their parts, bold in their relief, and showing admirable skill in their general arrangement and execution. After describing to him what I considered the requisites of an agricultural medal for premiums, I found a well executed die of any single animal, (whether a portrait or not,) would cost from $35 to $40, including the reverse die for stamping the other side of the medal, with the necessary lettering descriptive of the medal and the Society; the names of the parties (gaining it,) to be put in, necessarily, by the graving tool. The impressions from such a die may be struck in Queen's metal at 25c. each, in copper at 60c. each, in silver at $2,50, in very heavy gilt at $3,00, and in gold according to weight. By the electro process, however, a copper medal may be gilt to a thickness which would amount to but little short of a gold one; being in fact a plate of gold supported by copper, which latter serves only to afford thickness of material for the parts that stand out in such *bold* relief from the surface, as would otherwise consume a much more expensive amount of the precious metals. Of course the die becomes the property of the parties paying for it, and the medals may be struck from it whenever they may think best.

Should, however, the first cost of the die be considered a larger appropriation for such a purpose than the funds of a County Society might seem to warrant, it must be remembered that by having *reverse* dies, the face die, supposing it to be adapted to bulls, might be made to answer for all three classes; or by a suitable arrangement of the reverse die be made to answer for as many different societies. The reverse die is not expensive, costing something like four or five dollars only.

I do not pretend to know what may be the prevailing opinion on the subject of *money* premiums; but there are some, at least, who think with me, that any and every substitution for money, would be an advantage, in as much as it would better aid the intent of the agricultural societies themselves, and better meet the prouder and nobler feelings of the competitors.

The difference it seems to me between premiums awarded in *dollars*, and those presented in books, plate, or medals, is, that in one case the event, so creditable to the exhibitor, is recorded by an abiding evidence of the society's approbation and award, which will remain a pride and stimulus to all connected with the successful candidate. In the other case, as there is nothing distinctive in the dollar, there is nothing to be carried back as a trophy to call forth the warm sympathies of the home circle, nothing cognizable to gladden even the youth who perhaps, with many a hope and fear, faithfully attended and looked after this firstling of his father's flock. No—with the undistinguishable dollar in the pocket, nothing remains to tell the story, to realize the success—there is nothing to look at, to admire, to mark the event with those who were not present.

I need only add that if any of our agricultural societies should wish to avail themselves of my services in this, or any other way, it will afford me pleasure to render them—and with your permission, I will, in the course of the next month, have some medals left at the office of the Cultivator, for the inspection of those who may feel interested to see them. I am with respect, yours, &c.

Francis Rotch.

Mr. Colman in England.—From the Mark-Lane Express, we learn that at a meeting of the Council of the Royal Agricultural Society, in London, on the 6th of Dec., Mr. Colman called the attention of the Council to the great inconvenience found at present to arise in all comparative trials in agricultural inquiries, from the want of an uniformity of the weights and measures employed in ascertaining the resulting produce. In traveling through England, he had himself found it difficult to draw accurate conclusions from the results communicated to him; in some districts, the load being said to contain three, and in others, five bushels; the bushel being on one occasion estimated at thirty-eight quarts. In weight, on the other hand, he had found the pound to be made up of sixteen, eighteen and twenty ounces, according to the custom of the particular districts; while in Cambridge, butter was sold by the *yard*, and in Nottingham by the *pint*.

Leicesters and South Downs.—At the meeting of the Smithfield Club in London, in December last, Mr. Hillyard, a noted farmer and stock-breeder, made some interesting remarks about sheep. He said the Leicester breed, founded by Bakewell, had been the means of improving every other long-wooled breed in the kingdom. He was an extensive breeder of this sort of sheep, and the only fault with them was, they had too much fat meat in proportion to the lean. On this account they had not latterly sold as well in Smithfield market, as the "black-faced sheep," (the Scotch breeds, South Downs, &c.) For this reason he had last season crossed many of his Leicester ewes with a South Down buck, by which he hoped to get more lean meat in proportion to the fat. He said "the world could not produce sheep of such beautiful symmetry as the pure Leicesters," and that it was certain they had "one great recommendation over the South downs, for a greater weight of meat per acre, could be produced with the Leicesters." We observe that several farmers in England are crossing the Leicesters with the South Downs; but in general they do not breed from the cross—they keep both breeds pure, and kill the cross-bred stock. The object is to suit the quality of the meat to the market.

Cheviot Sheep.—Count de Gourcey saw a splendid flock of these sheep, on a poor and rough mountain pasture in Sutherland. He was much surprised to see these "horrible mountains and miserable pastures, stocked with such fine animals, yielding on an average 5 lbs. of long beautiful wool—wethers at three and a half years old, without having eaten any other thing but what is to be found in these wilds, weighing alive 200 lbs." "What I have seen in this journey, makes me more convinced than ever that the Cheviot breed is one of the highest merit, since they live and fatten on such land, and that, too, without adding any other food besides what these wilds produce."

Sub-soil Plowing.—At a late meeting of the Cornwall Agricultural Association, Mr. Tilley stated that he had practiced sub-soil plowing for four years, and that all his crops had been greatly benefited. His carrots had doubled in quantity, his turneps had greatly increased, his mangold wurtzel was nearly doubled.

DEATH OF VAN MONS.

By the late arrivals from Europe, we learn that this distinguished chemist, able physician, profound experimental and scientific horticulturist, and celebrated linguist is no more. From various sketches of his life and writings, we condense the following brief statement, believing that it would be acceptable to our readers.

Dr. Van Mons was an entirely self-educated man; the vast acquisitions he had made in most branches of knowledge, were the result of patient perseverance, under serious disadvantages. His extensive knowledge of chemistry and languages, was the most of it gained while acting as a humble apothecary; and his taste for fruits and farming was the result of his botanical researches, and his observations of the state of agriculture around him. In 1817 he was appointed to the chair of chemistry and agriculture in the University of Louvain. Several years before he had commenced his great nurseries in the vicinity of Brussels, and at this time had in them some 80,000 trees, a large portion of them seedling pears. His appointment did not interfere with his care of his nursery, or interrupt his experiments in the production of new varieties of fruits; but in 1819, the city of Brussels conceived the idea that the ground occupied by Van Mons nurseries was wanted for new streets and squares, and he was notified that he must remove them in two months, or the whole would be cut up and burned. With the most persevering activity, he could save only about one-twentieth part of the whole. The remainder was either sold, given away, or destroyed. Unfortunately his new nursery was established on lands belonging to the town, and the authorities were the first to abandon them to pillage. They were mostly destroyed by the army during the seige of Anvers in 1831; and when, spite of these misfortunes, he had hired two pieces of ground and re-planted them, the engineers of Louvain decided that the grounds of Van Mons were of all others the most suitable spot for a gas manufactory, and they were so used in 1834.

Among the learned, Van Mons is known by his valuable papers and publications on scientific subjects, principally on agriculture and horticulture and kindred topics, while to the world generally, his name is identified with some of the finest fruits, particularly pears, yet known, produced by him in the course of his horticultural experiments. The finest collection of pears in the U. States, that of Mr. Manning of Salem, was mostly derived from trees sent out by Van Mons, or ordered from him. The theory of the propagation of fruits, known as the theory of Van Mons, ingenious and satisfactory as it is, in most respects, we cannot here touch upon. We can only add, that the history of Van Mons offers another proof of what the man can accomplish, who forms the determination, and perseveres in his efforts to be useful.

DEATH OF J. C. LOUDON.

Few men of the present age have become more extensively known by their agricultural, horticultural and floricultural works, than Mr. Loudon; they may indeed be said to mark an era in the history of agriculture. The death of such a man is a public loss, and the numerous tributes of respect to his memory, prove that his death was so considered abroad. In the publication of his floricultural works, he has been for a number of years assisted by his wife, a beautiful writer, and of fine taste, and much information on such subjects.

In landscape gardening, Mr. Loudon was without a rival in Great Britain; and many of the gardens and grounds of the nobility, are arranged according to his plans, or under his directions. The works that he published on this subject, with the accompanying engravings, furnish a better guide to the state of that art in Europe, than any thing else to be found. He was a most industrious and hard working man; independant in his feelings, modest and unobtrusive in his manners. In the language of the London Sun, "his country owes him much—perhaps more than it does to any other individual who has pursued the same walk through life. His name will be honored and respected, as long as the happiest and most interesting of human pursuits are properly valued."

LOOKING-GLASSES FOR PIGEONS.—In the Queens aviary, at Windsor, the dove-cote is lined with *looking-glasses*, and the pigeons, it is said, "stand for hours at the glass panels bowing and cooing to the reciprocating compliments of their own images, and seem to be vastly pleased with the extreme *polish* of their admirers."

CULTURE OF LUCERNE.

We apprehend that this valuable grass has not received that attention from our farmers that it deserves. The luxuriance and rapidity of its growth, the avidity with which it is eaten by all domestic animals, and the ease with which it is in general cultivated, would seem to point it out as one of the best of grasses, especially where soiling is desirable or practicable. In our last Cultivator, we gave an account furnished by David Thomas, of his success in the culture of this plant; and the following which appeared in the American Traveller, is strong additional testimony in its favor. Mr. Phinney is not the man to waste his money or his land in the culture of valueless plants.

"On a visit to Mr. Phinney's farm in Lexington, Mass., about the middle of June, we saw a piece of lucerne or French clover, as it is often called, which had been cut three times for the purpose of soiling. Soiling is a term applied to the practice of cutting herbage crops green, for feeding live stock; and for this purpose, lucerne is considered admirably adapted. One acre is sufficient for five or six cows, during the soiling season. It is fit for the scythe in congenial soils, about the 10th of May—may be cut every twenty or twenty-five days, and is said to yield from five to eight tons per acre. Mr. Phinney's lucerne was sown in drills, and looked well. A very deep, rich, friable, sandy loam, is the soil in which it grows best. It should be sown early in May, and be subject to frequent and careful culture. Mr. Phinney appeared to be well satisfied with it."

COLD WEATHER.

THE extreme cold weather of the month of January, has elicited much remark in different parts of the country; and as the temperature of the several parts of the year have no little influence on the crops, a record of meteorological facts may be of service in forming our estimate of the future. In most places, Sunday, the 28th of January, was the coldest day, but there were several, in which difference was so small, as to be scarcely observed. We quote from the papers a few of the notices as a matter of record:

North Hadley, Mass.	26	degrees	below	zero.
Northhampton, “	31	“	“	“
Berthier, L. C.	38	“	“	“
Saco, Me.	30	“	“	“
Saratoga, N. Y.	34	“	“	“
Franconia, N. H.	39	“	“	“
Montpelier, Vt.	40	“	“	“

We have seen some notices in which, as at Montpelier, mercury congealed; and there are many places in which it might have been easily rendered solid. Mr. Simpson and his party, on their exploring expedition to the North Sea, made bullets of mercury when the therm. was at 49 degrees, and on the 11th of March, the spirit therm. indicated 66 degrees below 0. Below we give the average temperature of the month of January, for several years, by which it will be seen that it was much the coldest that has occurred in that time, with the exception of 1840.

January,	1838,	29	degrees.
“	1839,	22	“
“	1840,	17	“
“	1841,	26	“
“	1842,	27	“
“	1843,	30	“
“	1844,	18	“

The therm. was lowest at this place on Monday, Jan. 26, when at 6 o'clock, A. M., it stood at 10 deg.; at Albany, the lowest observation was 16 deg. The cold seems to have been extensively felt over the whole U. S., as at Jacksonville, in Florida, on the night of the *26th*, the therm. indicated 44 deg., ice formed, and there was a light fall of snow.

Limerock Farm, Howlet Hill, Onondaga Co., N. Y

EFFECT OF CLOVER HAY ON ANIMALS.

Some late writers have taken the position that clover hay produces a most injurious effect on domestic animals, particularly horses, and that to this cause the great increase of diseased horses is to be attributed. We lately heard a farmer affirm, that he believed the introduction of clover into general cultivation, the greatest curse yet inflicted on the country, and assigned as a reason for this singular opinion, its effect on animals when used as fodder. Late English writers have attributed to this kind of hay, the prevalence of heaves in horses, and the great increase of other diseases that effect the respiratory organs. This is a most important subject, and should receive a full investigation. Clover is too important a plant to be discarded, or condemned, except upon the most satisfactory evidence. Its value as a fertilizer, and a preparative for wheat, to say nothing of its use for pasture or hay, would demand that it should not be condemned unheard. For ourselves, we have very little belief in the injurious properties assigned to clover. We have used it constantly for pasture and for hay, more than thirty years, and never to our knowledge, has an animal suffered from it; certainly no horse has been taken with the heaves while fed on it, or while in our possession. As hay for sheep, we have considered it unrivalled, and should have no fears that any stock would not winter well with a supply of well cured clover hay.

And here lies, we think, the great source of objection to clover hay. It is too often *imperfectly cured*. To save *the leaves and the* heads, which are apt to fall in handling or curing, the hay is put into the barn while the large stems are full of moisture, or the natural juices, and the fermentation which ensues, causes the whole mass to become damp, and if not spoiled wholly, it becomes mouldy, black, and when used raises such a dust, that it is no wonder that horses and cattle are choked or their lungs destroyed. Our experience shows that clover may be perfectly cured without losing any of its valuable parts; cured so that when fed out, no more dust will be flying than from timothy or herds grass, and we shall be slow to believe, that from such hay, any injury to animals ever ensues. If clover is really guilty of what a few have alleged against it; if the difficulty proves to be in the plant itself, and not in the preparation of it; then it may be necessary to find a substitute—a task, we think, by no means easy. Clover is, however, too well established in the good will of the farming community, to be easily put down, and we do not deem it likely at present, to be sneezed or coughed out of favor.

COMPOST.

"Will you be so kind as to inform me how, in making compost of muck and coarse barn yard manure, the lime is to be applied, the quantity requisite, and the time occupied in the process? CONANT SAWYER.

Keeseville, Jan. 1844."

In making composts where lime was used, it was formerly the practice to mix it in the pile merely slaked, but it was sometimes where used in this way found to produce little effect, and Dr. Dana recommends that it be prepared by dissolving one bushel of salt in water, and with this slaking a cask of lime, the mixture to lie some eight or ten days when it is to be incorporated with the muck; the above quantity furnishes the alkali required to convert three cords of peat or muck to a first rate compost. This if shovelled over a few times to allow full action and combination, may be applied at once to the crop or the soil. If barn yard manure is used in making the compost, there should be alternate layers of muck, barn yard manure, ashes or lime, until the requisite quantity is prepared. The time required to fit this for use will depend on the rapidity of the fermentation, temperature of the atmosphere, &c. If convenient compost heaps will be the better for being psepared the year before hand, if they can be kept from the weather.

Our correspondents inquires respecting Bommer's patent for manures will be found answered in our January number of the current vol. For that reason alone have we neglected to comply with the request made us.

AGRICULTURAL SCHOOL AND PATTERN FARM.

We would call attention to the article written by DR. LEE, in another part of this No. It appears to us that an institution of the kind proposed, would be of great importance to the interests of agriculture. If properly managed, it would act beneficially in several ways. First, it might be regarded as a *grand focus* for the collection and dissemination of those particles of light upon rural pursuits, which are now scattered abroad in the world in such an abstract and separate manner, that they produce little good to the citizens of our country. We want some *medium* by which these facts that are now thus scattered about, one being held by one man, and one by another, and so on, may be collected, made plain, and put in possession of every man.

Secondly, such an institution would be a means of *originating*, of developing knowledge. In relation to agriculture, there are many subjects of a *doubtful* nature, such as the relative value of the various manures for the different kinds of soil, and for different plants. The relative value of different breeds of domestic animals, whether for the dairy, the stall, or for other purposes, and the most profitable means of supporting them.

Few individuals are competent to make the experiments necessary to solve these questions. More time, capital and attention are required, than they can bestow. Besides, no one feels that it is his duty to risk his time and money on a doubtful subject, when the results, let them be what they may, will be of as much consequence to the public at large, as to himself. By the aid of such an institution as this, all such questions, and others, may be put at rest—and the *whole country* would enjoy the benefit without any individual sacrifice.

IMPROVING LAND—INQUIRY.

"MY land is a part of it a clay loam, part a gravelly sand, and the greater part a tolerably stiff clay; the subsoil mostly a stiff clay or hardpan. Most of this land has been subjected to the skinning system for a number of years, and is now mostly under the plow, and has been for several years; the previous owner believing his farm too small to seed down oftener than once in 8 or 10 years, and then with 4 quarts of timothy to the acre. I have sowed about 10 acres to rye, sowed it with timothy, and intend to sow it to clover in the spring, at the rate of 8 qts. timothy and 4 qts. clover per acre. This is all I *have* done, and now I should be glad to know what I *should* do, in order to bring the land into a good state of cultivation, with my limited means.

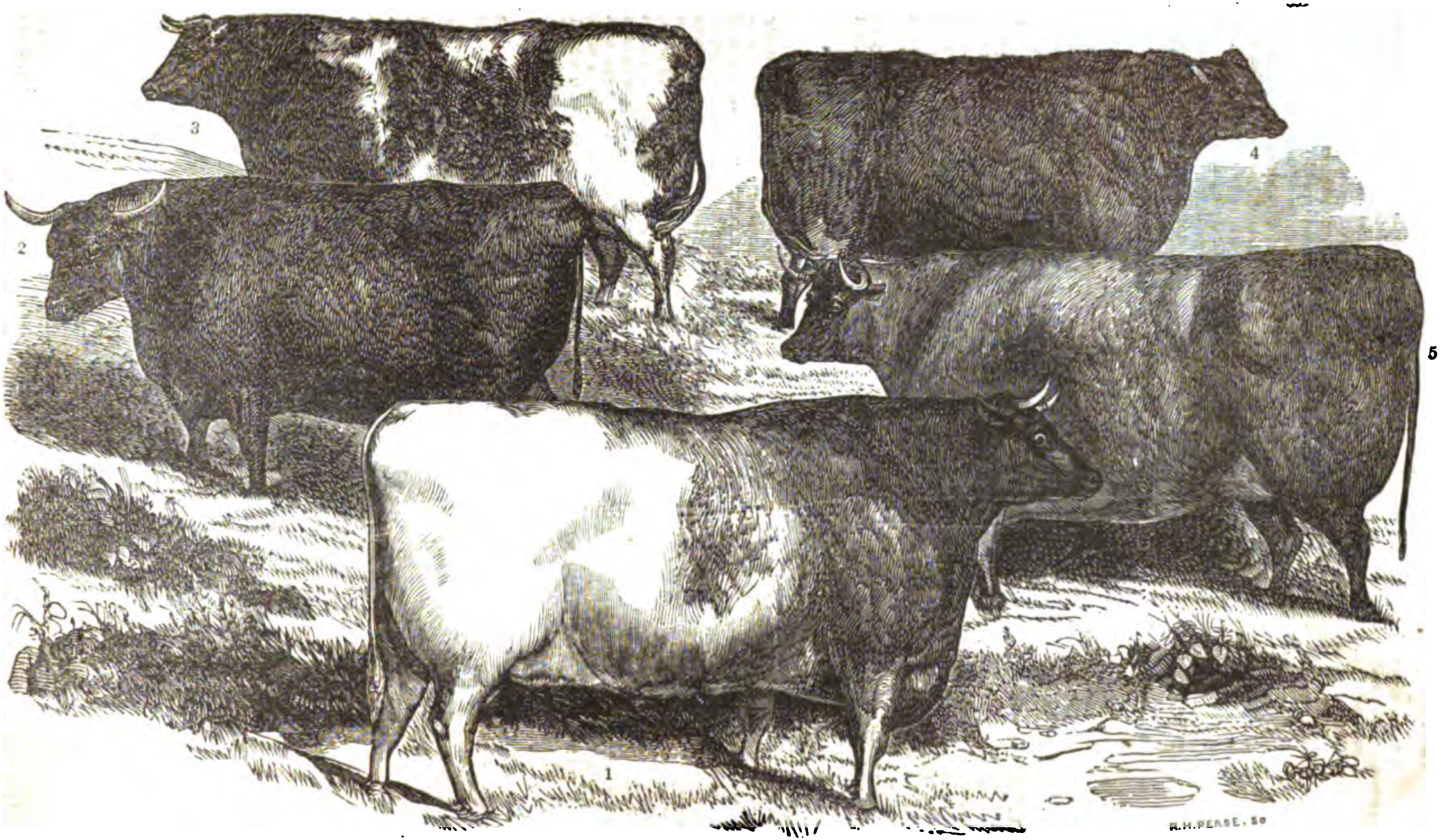
A YOUNG FARMER FROM GREENE CO."

We advise a Young Farmer to get his land seeded down as soon as possible, and for this purpose clover and timothy will be as good as any thing. With the amount of stock owned by him he can make a large quantity of manure annually, if he provides his yards and pens with the wash of roads or even common loam to act as an absorbent. Peat or muck, he says he has none, or there would be no want of materials for manure. Cultivate green crops such as buckwheat, corn, or rye to plow in as a preparation for other crops. Hardpan or stiff clay soils are usually wet; if his is of this class, drain by all means, nothing can be done to advantage on cold wet lands. If the soil is stiff, but dry, the subsoil plow will perform wonders, in deepening and fitting it for crops. If he has 150 acres of land in this condition, he has abundant room for experiment as to the best mode of recruiting; but where manures were not to be had, we have known the best results from plowing in green crops, and on these, clover, plaster, &c. we should rely.

ERRATA.

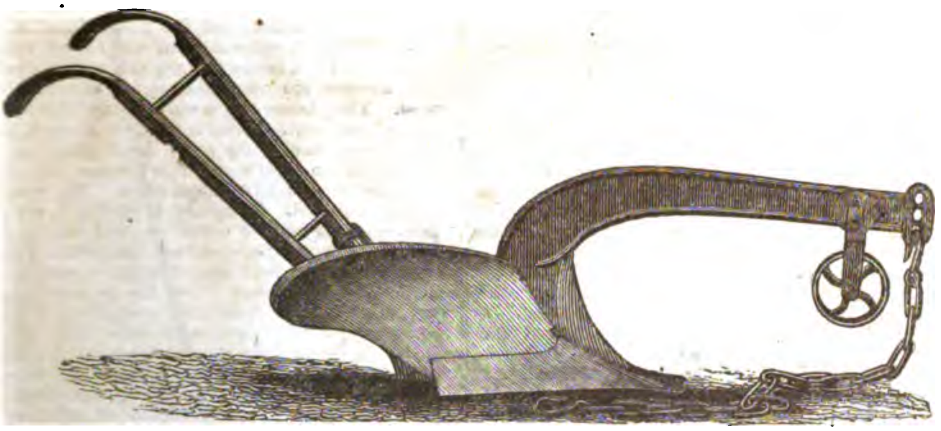
IN my communication to Solon Robinson, Jan. No. 1844, page 33, the red cedar is erroneously named *cupressus thyoides*, which is the name of the white cedar of New-Jersey, Long Island, and the Southern States, and which we here use for rail fences. Red cedar is the *juniperus virginiana*, and grows in dry and upland soil, while the other delights in swamps and low grounds.

RICHMOND.



FAT CATTLE EXHIBITED AT SMITHFIELD SHOW, LONDON, DECEMBER, 1843.—(Fig. 26.)

No. 1.—Short Horned Cow bred by Sir C. Tempest, which received the first prize in the class for best cows and heifers, and the Gold Medal as the best animal exhibited.—No. 2. Devon Steer. 1st prize in class



REUBEN M'MILLEN'S PATENT CAST IRON BEAM PLOW.—(Fig. 29.)

MESSRS. GAYLORD & TUCKER.—Having purchased the exclusive right of making and vending the above plow for the Counties of Albany, Schenectady, Columbia, Rensselaer and Washington, we take the liberty of forwarding you a cut of the same. It consists of four pieces of iron, exclusive of the handles or handle, as the purchaser may choose, which are of wood. It is so put together by grooves and dovetails, that one small wedge of wood holds the whole firmly and permanently together. The beam and land side are cast in one piece, except a small heel piece which is so constructed that it can easily and cheaply be replaced when worn out. The share and coulter are in *one piece*, and when worn out can be replaced with as little trouble and expense as any other. The mold board is *in one piece*, and is not exceeded by that of any plow extant for neatness and smoothness in turning a furrow.

(For further information, see advertisement.) ANTHONY & MORRISON.

Troy, Feb. 14, 1844.

TOBACCO IN CONNECTICUT.

MESSRS. GAYLORD & TUCKER—East Windsor has for a long time been as celebrated for its distilleries and tobacco as Weathersfield for its state prison and onions, and manufactures daily as many bushels of the staff of life into the soul and body destroying poison, gin, as the states prison numbers convicts. We grow in this town annually about three hundred tons of tobacco, and in the Valley of the Connecticut about five hundred tons are grown annually. The yield the last year was less than usual, 1,500 pounds being about the average per acre. The price of tobacco the last season of a fair growth was 7 cts. a pound, and most of the crop was sold before housed and cured. We have two varieties of the weed, the broad leaf and the narrow leaf—the latter is about two weeks the earliest.

It seems our tobacco is of a peculiar species, or our soil and climate are peculiarly adapted for the production of a superior article.

The soil that produces our best tobacco is a light sandy loam. We prepare our beds for the seed as early in April as possible—select the richest or best land in the garden or on the farm, moist but not wet—manure and prepare it as we do for the cultivation of cabbage or any delicate plant for transplanting—pulverize, and make the bed as fine and smooth as possible; then sow the seed broad cast about as thick as we do cabbage seed; then roll or tread down the bed thoroughly, that the seed may be *pressed* into the soil. The bed is kept clean of weeds. In a common season the plants will be large enough for transplanting by the 10th of June. The land for the crop should be well manured and plowed at least twice before the time of transplanting, and harrowed and rolled or bushed, and left as smooth as possible. We mark the rows three feet apart and straight; on the rows we make small hills for the reception of the plants, 2 feet to 2 feet 6 in. apart. We have our land all prepared by the time the plants are large enough for transplanting. If raining at the time, we take the advantage of it and get all our plants out; if not we set and water. After this, the field is examined several times, and where plants are dry or injured by worms others are set in. As soon as they stand well they are carefully hoed and vacant places filled with new plants—after this the cultivator is used between the rows and the crop kept clean with the hoe. The plants are frequently and thoroughly examined for the tobacco worms, and they must be destroyed; if not the crop, is sure to be. When in blossom, and before the formation of seed, it is topped about 32 inches from the ground, leaving from 16 to 20 leaves on each stalk. After this the suckers at each leaf are broken off, and the plants kept clean till cut. When ripe, the time of cutting, the leaf is spotted, thick, and will crack when pressed between thumb and finger. It is cut any time in the day after the dew is off, left in the row till wilted, then turned, and if there is a hot sun it is often turned to prevent burning; after wilted it is put into small heaps of 6 or 8 plants, then carted to the tobacco sheds for hanging. We usually use poles or rails about 12 feet long; hang with twine about 40 plants on each rail—20 each side, by crossing the twine from the plants one side to the plants the other, the rails about 12 inches apart. It hangs from six to ten weeks to get perfectly cured, which is known by the stem of the leaf being thoroughly dried. It is then, in a damp time, when the leaves will not crumble, taken from the poles and placed in large piles by letting the tops of the plants lap each other, leaving the butts of the plants out. It remains in these heaps from 3 to 10 days before it is stripped, depending on the state of the weather, but must not be allowed to heat. When stripped it is made into small hands; the small and broken leaves should be kept by themselves. It is then by the purchaser packed in boxes of about 400 pounds, and marked *seed leaf tobacco*. The most of our last crop has been shipped to Bremen.

I think we can cultivate one acre of tobacco with the same labor and expense that we can two acres of corn that produces 60 bushels to the acre, and the manure required is about the same as for the corn crop, and I do not think it exhausts the land as much as the corn crop, for it is not allowed to seed. HENRY WATSON.

East Windsor, Jan. 22, 1844.

☞ WE have been presented with a scythe from the manufactory of Messrs. TAYLOR, HITCHCOCK & Co., of Wayne, Maine. It is, to appearance, an excellent article, and from the representations of Messrs. Breck & Co. of Boston, and others, by whom the scythes from this establishment have been sold, we have no doubt that they will be found satisfactory to purchasers.

LIME AS A DESTROYER OF SORREL.

Messrs. Gaylord & Tucker—In the 9th volume of the Cultivator, page 123, you published an extract of a letter from G. Billings, Esq. of Carlisle, Mass., in which he inquires, "Why is it that land produces sorrel, the poor as well as the rich? and what is the best method to rid the soil of it." To these inquiries you answered, "The acid of sorrel is the *oxalic*, and sorrel will only grow in soils where this acid is in abundance. To destroy sorrel it is only necessary to neutralize the acid that produces it, and this may be done by any alkali, but the most common and cheapest is lime."

Seeing the same doctrine concerning *sorrel* and *oxalic acid* in the agricultural paper published in this city (New-Haven) I ventured to call in question its correctness. My article was republished in other periodicals, and was made the occasion of an appeal to the distinguished Chemist of Lowel (Dr. Dana) for his opinion upon the subject. This called forth Dr. Dana's letter, republished by you in the August number of the Cultivator, 1843. The positions which I endeavored to maintain were, 1. The organic acids found in plants (the *oxalic* being one) are formed within the plants themselves, and are not extracted from the soil. 2. The *oxalic* acid does not exist in the soil. 3. The application of lime to the soil, with a view to neutralize the *oxalic* acid, is therefore misapplied, and of no use for that purpose. 4. The application of lime to the soil does not prevent the growth of sorrel.

Dr. Dana, upon the appeal made to him, says, "Plants *form* oxalic acid. The soil *seldom* contains *traces* of oxalic acid." In another place he terms sorrel "the *oxalic-forming* plant." The word "traces," used by the chemists, denotes a quantity so small as hardly to be discoverable—so small as not to be weighed in the analysis. Hence, according to Dr. Dana's statement, the oxalic acid can *seldom* be found in the soil, even in the least discoverable quantity. It is *formed in the plants* where we find it. In this, I believe, he agrees with all other chemists. He thus confirms substantially the positions which I maintained, that the *oxalic* acid is formed in the plant itself, and is not found in or extracted from the soil; and justifies my inference that "the application of lime to the soil, with a view to neutralize the *oxalic* acid, is misapplied, and of no use for *that* purpose." Dr. Dana, then, has decided in my favor one point which has been in dispute. I am contented to abide this decision. Therefore, if you please, Messrs. Editors, we will say no more about the use of lime in neutralizing the *oxalic* acid found in sorrel.

Dr. Dana, nevertheless, insists upon the value of lime as a destroyer of sorrel or a preventive of its growth; and explains its operation in this way. The soil contains, he says, weak organic acids. Plants transform these weak organic acids into oxalic acid. By applying sour muck, filled with weak organic acids and their basis, to soil, we supply it with the food of sorrel. If the acid is fully neutralized, sorrel grows not. If you supply the weak organic acids freely, sorrel grows. "The doctrine is, *neutralize* the *free acids*—take the sour out of the soil, and sorrel grows not." These acids may be neutralized by lime. Hence by the application of lime in sufficient quantity the growth of sorrel may be prevented—the plant may be starved. Dr. Dana supposes the oxalic acid to be formed in the plant, not by direct combination of its elements (oxygen, carbon and hydrogen,) but by extracting from the soil some other organic acid containing the same elements in other proportions, and by the vital power of the plant adding to or abstracting from this organic acid a proportion of one or more of these elements. He further supposes that these organic acids are taken up by sorrel *only* when the acid is combined with an alkali in such proportion as to form an *acid salt*; and therefore, if these *acid* salts in the soil are converted into *neutral* salts, by the addition of alkalis to the soil, then the sorrel will no longer find its propef food, and must perish. These, if I understand Dr. Dana correctly, are his doctrines on this subject. They are highly important and deserve much consideration. The state or condition in which the food of plants is taken up by them from the soil, has not been very satisfactorily shown by chemists and physiologists. The elements of that food are easily demonstrated; but the proportions in which they are combined, at the moment when they enter the roots of plants and before the vegetable vital power has begun its operation upon them, is not so easily demonstrated. The process of growth and nutrition is carried on out of our sight. There is an agent at work (life) in that process, controlling every thing, directing every thing, which the chemist cannot see where it is, nor carry into his laboratory for examination. He cannot collect it or confine it. He cannot exhibit it to any of our senses, either in form or operation; and all his reasonings founded upon experiments and analyses in his laboratory, proceed upon the supposition that no such agent exists. In this uncertainty as to the conclusions which chemists are to make from their researches, it is not at all surprising if they are found to differ from each other—if Liebig for instance, should maintain that plants take up the nourishment which they derive from the soil, in the form of carbonic acid; and if Dr. Dana should maintain that they take it up in the form of geine variously combined, without being converted into carbonic acid. Which of these eminent chemists is right, it would be presumptuous in me to undertake to pronounce. It is not perhaps very important, in the present inquiry, which is right. For the present purpose it will be taken for granted that Dr. Dana is right and Liebig wrong; and that plants are nourished by taking up from the soil organic substances, in various states of combination with each other and with inorganic bases; and that this is a general law of vegetable physiology. The question then arises, whether the growth of sorrel is governed by the same law and carried on by the same process as the growth of other plants; or whether nature, as Dr. Dana supposes, has so constituted that plant that it can grow only when its food is presented to it in a peculiar form, such as is not required by other plants—that is to say, whether sorrel can be nourished only by *organic acid salts*, while other plants may be nourished by *organic neutral* salts, and various other combinations of the elements of their food. If Dr. Dana expects us to yield assent to his peculiar (perhaps I should add novel) doctrine on this subject, it would seem reasonable that he should give us the *facts* on which his theory is founded. It would have been gratifying if Dr. Dana had stated what are the *weak organic acids* of which he speaks—what are the *acid salts*, of which he speaks; and if he had described some experiment which he has made, or some fact that he has observed, which prove an *organic acid salt* indispensable to the growth of sorrel. In such cases it is pleasant for us to pass our own judgments, weak or imperfect as they may be, upon the theories which chemists lay before us. We must, I am aware, take many things upon trust—upon authority, and Dr. Dana is good authority for the chemistry of agriculture. But still fact is better than authority. Are there any facts which go to throw light upon this subject? It is believed that there are; and it does appear to me that a fact stated by me in the article published in the New-Haven periodical, and upon which Dr. Dana in his letter made some comments, furnishes good reason to doubt whether his theory is well founded. That the application of the fact may be fully understood, Dr. Dana's theory should be again stated. It is, that sorrel will not grow without the presence in the soil of *organic acid* salts—will not grow if the *acid* in those salts is *neutralized*. The fact alluded to is as follows: "In the neighborhood of New-Haven is a kiln for burning oyster shells, set into the side of a knoll, composed of coarse sand and pebbles [cobble stones] which have been water-worn, and washed clean of all fine matter. Nothing can be more barren than this sand. It has been drawn out of the hill and levelled off around the mouth of the kiln. Here the burnt shells have been spread, slaked, and have remained till carted away for manure. There has been left on the surface of the sand a coat of lime of considerable thickness, which has lain there for a few months past undisturbed, the burning of shells having been suspended. A few weeks ago [that is just before the time of writing the former article] I went to the kiln, and found sorrel growing, with great luxuriance, through the coat of lime—which in one lime was two inches thick about a bunch that was particularly thrifty." To avoid the inference made from this fact, Dr. Dana says, the lime being *on* the soil did not furnish a sufficiency of lime water or uncombined alkali to neutralize the organic acids in the soil below; and further, that the small portion of lime that has entered the soil "has caused the inert vegetable matter to become acid in a greater degree than the lime can saturate. It has formed with it an *acid salt.* In this salt sorrel finds its food." Now I have no means of measuring the quantity of uncombined lime that has been dissolved and carried into the soil below it, around the mouth of this kiln. Large quantities of shells have been hauled out and slaked there. Occasionally, the lime has laid there for days, before it was carted away. It has at no time been wholly taken away. The rains as they fell found more or less of uncombined lime lying on the surface of the ground. Some of the lime must have been washed into the ground by every considerable rain. One would naturally suppose lime enough must have sunk into the soil to saturate a pretty large amount of organic acids. But it may be asked Dr. Dana, what organic acids were there in this soil, to be neutralized? What inert vegetable matter is there, to become acid? The reader is requested to look again at the description above given of the soil where this lime was laid, and where sorrel grew—water-worn cobble stones, and water-washed, coarse [silicious] sand. If vegetable matter is there, it must exist in an exceedingly minute quantity. *If organic acids are there, in any quantity, how came they there?* I have very lately been to the kiln, and will add a further fact. Some young plants of sorrel, evidently from seed the past season, were found growing near the mouth of the kiln. One plant was growing in a body of slaked lime, which appeared to have lain long enough to become a carbonate. Tracing the roots with the utmost care, I could not follow any of them below the lime, which in that particular spot was from 6 to 7 inches deep. In short, here was a plant of sorrel growing in carbonate of lime, without any apparent vegetable matter. But according to Dr. Dana's theory the spot where this plant was growing must have contained organic acids in the form of acid salts. This body of lime, laid there warm from the kiln, in an uncombined state, 6 inches thick, was not sufficient to neutralize the organic acids contained in, and formed from the inert vegetable matters within its own mass. Dr. Dana may explain this; probably he can do so satisfactorily to his own mind, and perhaps to that of others; but it is beyond the skill of most of us unlearned farmers to make the explanation. This is all I have to say upon the *soundness* of Dr. Dana's theory. To render any farther discussion upon this point, by me, profitable to your readers, requires a better acquaintance with agricultural chemistry than I possess.

Let it be admitted that Dr. Dana's theory is correct, and that if lime enough be applied to the soil it will prevent the growth of the sorrel, are there not difficulties in reducing this theory to practice, which farmers may find insuperable? And will the application of lime be what your correspondent Mr. Billings inquired after, the "best method to rid the soil of sorrel?" According to Dr. Dana's prescription the lime must be applied in such a dose as "fully to neutralize" the organic acids in the soil. "If you only *partially* neutralize, says Dr. Dana, you supply the sorrel with its natural food." Here there is one rather serious practical difficulty; that is, to know what quantity of lime to apply. It would be a great disappointment if the farmer, having been to considerable expense to procure lime to *destroy* his sorrel, to find he had only been supplying the weed with additional food—that instead of preventing its growth he had made it grow the better. Soils differ much from each other in the amount of organic matter which they contain; the same soil contains this year more or less than it did the last. In order to apply the lime in the precise quantity proper to cause the destruction instead of the growth of sorrel, it seems necessary to know exactly what amount of organic acids exist in the soil, and also the exact amount of inert vegetable matter that may be operated upon by the lime, and the exact extent to which that operation will go in generating acid salts. All this is far beyond the skill of the generality of farmers.

Here let me state an experiment of my own made some years ago, at a time when I held to your doctrine of neutralizing the oxalic acid for the purpose of destroying sorrel. There was a piece of ground containing about 100 square rods, overrun with sorrel. It was concluded to give one-half of it a thorough liming. Accordingly 60 bushels of oyster shell lime, just burnt and directly from the kiln, were spread over one-half the piece and *plowed in.* The other half received a dressing of leached ashes and stable manure. The whole was planted with corn. *I could see no difference in the growth of sorrel on the two parts.* But the corn crop on the limed half was nearly ruined. Here then, according to Dr. Dana was an under-dose of lime—192 bushels to the acre was an under-dose for sorrel, but, as the event proved an over-dose for corn. Had there been lime enough applied, there can be no doubt the sorrel would have disappeared; but would not every thing else have disappeared also? It may well be questioned whether it is a possible thing to apply lime in such quantity as to destroy sorrel, and at the same time leave the soil in a state, fertile for other crops. It appears to me there is more nicety and precision required, in proportioning properly the lime to the acids, than can be put in practice out of the laboratory, in the coarse manipulations of the field, by men untaught in chemistry. Before Dr. Dana's theory, supposing it to be sound, can be made available for the farmer's benefit, it seems necessary that he or some one should give us some plain and definite rules for the destruction of sorrel by the use of lime—that we may know with some degree of certainty, in what quantity we are to apply it in the very diverse soils found in our country, and in the varied condition of the same soil in successive years. Until these rules are furnished, allow me to give in answer to Mr. Billing's inquiry, "what is the best method to rid the soil of sorrel," the result of my experience in the matter. Sorrel spreads, as you well know, by long stringy roots, running just under the surface of the ground. On these roots, for every inch or half inch, spring out buds which grow up into leaves and stems. The buds are formed principally in the spring and fall months—and *there is a pause in their growth about midsummer.* Plowing the ground and turning over the roots, while the buds are growing or ready to grow, that is in the spring or fall, has no effect to kill them. Hence, putting in a spring crop (not tilled) like oats, or a fall crop, like rye or wheat, tends rather to spread the sorrel than subdue it. But if the ground is thoroughly broke up *about midsummer* the sorrel is pretty apt to die. Hence a crop of buckwheat, which is sown in July is very effectual; but a crop of Ruta Baga, sown in the same month, and kept clean with the hoe or cultivator, is a still better destroyer of sorrel. For the same reason, if the roots of the sorrel are broken, and *the leaves cut off through the month of July,* as may be done in tilling a crop of corn, the sorrel will generally perish. If it comes up from seed, it is as easily killed by hoeing as any weed, *provided the hoeing be done soon after the plant comes up,* and before the horizontal roots have begun to run. If the sorrel, in previous years, has gone to seed upon the land, it will be necessary to keep it under cultivation long enough for the sorrel seeds in the soil to spring up and be destroyed.

NOYES DARLING.

New-Haven, Ct., Feb. 1, 1844.

INQUIRIES ABOUT CLOVER SEED.

A correspondent wishes to know what time it is best to sow clover seed on land that is in wheat. We believe that it succeeds well, sown either on some of the last snows of winter, or soon after the frost is out of the ground in the spring, while the soil is soft.

Another correspondent wishes to know the proper quantity of clover seed to be sown to the acre. We think the quantity varies from 8 to 12 lbs, or from 4 to 6 quarts—but the quantity of this seed should be varied according to the quantity of other seeds sown with it. As to machines for cleaning seed, we refer 'H. D.' to an article in our Jan. no.

LETTER FROM SOLON ROBINSON,

To his friend Richmond of Staten Island.

Much Respected Friend—Your letter in the Cultivator of the present month, has been read with much pleasure by me, and I hope equally so by the thousands of readers of that paper: who I also hope will be pleased to meet their old friends and acquaintances in the new dress that friend Tucker has very properly put on. This method that you have adopted of interchanging facts with one another as individuals, seems to me to be a very familiar and happy way of conveying useful and amusing information to the public. Your letter too is a most complete illustration of my own theory, that if we will it ourselves, we can always find an abundance of material, out of which to work up a letter that is not only entertaining, but conveys much useful instruction. To me it sounds like the conversation of an old acquaintance from the land of my birth:

> The land of rocks, and hills, and gravelly knolls,
> Stone walls, and wells, where "oaken buckets" swing;
> Where rivers rapid run, and where tide water rolls,
> And back on mem'ry's page the scenes of childhood bring.

For among the rocks and hills of Connecticut, I was born. Although you probably thought little of doing so when you wrote, yet your letter conveys much geological and geographical information. It tells me too, that some of the inhabitants of my native state, like many others of all other states, are actually advancing backwards in civilization, when they strike from their vocabulary an ancient historical name, because it is Indian, and sounds barberous in our delicate ears. But we differ in taste. Now to me,

> There's music in the soft sounding name of "Saugatuck,"
> While "Westport" harshly sounds of traffic, trade and truck.

But from your description, I judge that Mr. Ketchum in the improvement of his farm, has advanced the other way; and I doubt not that it would be useful for some western farmers, who do not now even do as much as Mr. K. used to do, make the value of a new pair of boots a year, to visit his farm and learn a lesson of improvement. But far as your country is in improvemens behind what it may and will profitably be brought to, it will be many, many years before ours will be what yours now is. The west is so vast in extent and fertility, and we are so prone to run over a great deal, instead of cultivating a little land, that I despair of a life long enough to see real improvement begin, much more be brought to that successful issue which you have so pleasingly described upon the farm of Mr. Ketchum.

Over a vast extent, in the region of country where I live, stone walls will never be built for fencing; for there are no stones except scattering boulders, principally granite, which have been wafted here upon their ice boats, from a far distant, and to me unknown locality, and lie scattered wherever their frail conveyance melted beneath the rays of a warming sun. These stones as they lay upon or near the surface, are a little detriment to the plow, but are easily removed, and will always be valuable to the owner of the land, and well worth his care in collecting and laying up till time of need. And in some large districts, even this small supply of such a useful material, is entirely lacking. Even where most plenty, they are of such a rough uneven shape, and exceeding hard quality, that I would defy the superior accomplishments of the celebrated Yankee stone wall builder, whom you mention, to lay them into a decent looking stone wall, fire place or well; so they are seldom used except for underpinning. In the first settlement of the country, when brick cannot be obtained, a very good fire place and hearth is made by pounding clay a little damp, into a compact mass, the shape that is required for the fire place, while the chimney is built of sticks and clay, which if well done, costs but little labor and lasts for years. But that is more than I can say of the wooden walls of wells, for at first they give our "hard water" a very ancient and bilge water like smell, and by the time that is well over with, the wood begins to decay, and which I have no doubt is one of the many removable causes of sickness which is wrongly charged to the unhealthiness of the climate. Also the sinful carelessness in which a great portion of the inhabitants permit themselves to live in cold, open, damp, uncomfortable houses, is the cause o many a day of suffering from fever and ague. Your profession, as well as long experience, has taught you wha all had ought to learn, that we are less liable to take col and contract disease when "camping out" in the ope air, than we are while living in what we are pleased t call a house, through the walls and roof of which, th old cat and all her kittens can go without let or hindrance And in such houses, a vast majority of the inhabitants o the west *stay*, and not only for a season, but year afte year, using water from such wells, or what is more common, from some hole in the ground that is familiarl called "the spring," (on account I suppose of the frog that spring into it,) and occasionally going without bread because it is too much trouble to go to mill; doing without potatoes, because they were to busy to dig them before they froze up; doing without pork half the year, notwithstanding they had a thousand and one hogs, but they were in the woods, and did'nt come up; and as a substitute, living upon fresh beef, green corn and unripe wild fruits, and ten thousand et ceteras of the fever breeding family, and as a most natural consequence, shaking with the augue so much of the time that they have no time to build stone walls, drain peat swamps, build barns and houses, and of course they have no money to devote to improvement of lands, while there is so much land for sale, every spare dollar is devoted to a further accumulation of acres, to lie like those already owned, idle, untilled and unproductive; or if tilled, quantity and not quality of tillage, seems to be the very height of ambition among western cultivators.

Do not think that this is an over-wrought picture. It is not a week since I visited one of my friends who owns fifty cows, whose good wife had to make an excuse to mine that she had no cream for her coffee. And this arose wholly from the prevailing western epidemic—carelessness. And do not imagine that your friend Solon is a singular exception to this all-pervading disease.

Although my log cabin is rather "aristocraticly comfortable and convenient," and my well is walled with brick, with a pump, &c., and I never was out of pork and potatoes since my first winter here, yet I have sometimes looked in vain for my hogs in the woods, and bought land when I had much better been improving that already owned; yet I keep clear of the fever and ague, and candidly believe that this country is generally as *healthy* as all new countries usually are. The soil is extremely productive, yet it must be acknowledged that few of us at the end of the year are any better able from the profits of farming, "to buy a new pair of boots," than your friend Ketchum used to be, while pursuing the same careless, skinning system of farming. It is true, that manuring our soil produces but little present advantage, but the time will come when the waste of it will be seen. One reason, perhaps the greatest one, why a more stable system of farming is not pursued in this country, is because that not one person in a hundred feels as though he was working for himself and children; such is the universal all-pervading disposition to change. There is no certainty if a man makes improvements this year, that he will enjoy them next; for the *fashion* of "selling out," and making a new location, is so strong, that no one can resist it; so that it may be said that nearly the whole of the western population are afloat, with sails unfurled and anchors tripped, and ready to be off with the first favorable breeze that blows. If then you ever travel through the west, bear this in mind, that it may serve as an explanation why you see so few, such solid and permanent improvements as those you have described upon the banks of the Saugatuck. How seldom will you see a synonym of these good roads that you mention, while traveling over this country. For the same neglect of improvement is painfully visible upon the roads as upon the farms. But you must also bear in mind that we are yet in our infancy, and that every thing is to be created anew. That in buying a farm, you get a perfect naked piece of smooth prairie, covered with a thick strong sod, that requires a strong team of three or four yoke of oxen to break *up to* advantage; and this sod requires several years to rot before it becomes perfectly mellow for tillage. And how much is required beside the breaking up of the *ground* before such a tract of land is justly entitled to the appellation of farm. What a different aspect will this country present when it has been so long settled as that you have described. Vast tracts of the prairie will be cultivated, but without fence, and timber will be grown for fuel and building. The locust that you mention, grows most luxuriantly upon this soil. No doubt that and other timber can be grown to great advantage and profit. Some of the numerous marshes will also be found to afford combustible turf; and through a great part of the Illinois prairies, stone coal can be conveniently obtained. But I must close, for my sheet is full, and the loss of the franking privilege warns me not to tax my friends with a double postage while that upon a single sheet is exorbitantly high. I thank you for your sympathy for my removal from an office that I endeavored to use for the public good. Shall I hear from you again soon? I remain your friend, SOLON ROBINSON.

Lake C. H., Ia., Jan. 20, 1844.

AGRICULTURAL CHEMISTRY.

Lectures on Agricultural Chemistry and Geology, by Jas. F. W. Johnston, M. A. &c. a new and enlarged edition, in 2 vols. 8vo. *pp.* 434 *and* 405. *Wiley & Putnam, New-*York, 1843.

EDITORS OF THE CULTIVATOR—Having called the attention of young farmers to Liebig's Familiar Letters, in a *preceding* communication, your correspondent in noticing the above entitled work, thinks he is doing them a service, provided he can persuade them to read as well as to labor, to refresh the mind as well as the body. In the ordinary state of farming operations we go "from labor to refreshment." But the refreshment is *animal* and not *intellectual;* it nourishes the *body* and not the mind. We want to rear a generation of intelligent farmers who are hereafter to wield the destinies of this great country, and prevent its administration from falling into the hands of intriguing demagogues, or ignorant disorganizers.

Youth is certainly the best period to study and improve in knowledge, but we do not all have the time, the opportunity, or the impulse, so to do in our younger days. Deficiency, however, may be made up by diligent application in after life, when we see and feel the necessity of acquiring information. Adults and farmers may think it childish and effeminate to read and study, but books are not all published for children or females to read. Works on agriculture are as much adapted for our improvement as those on law, divinity, or the arts, are for other professions and employments. As one among cultivators of the soil, I must confess that what I know on this and other subjects, has been acquired by reading, study and inquiry, since I left school. This reminds me of what a teacher once told me, that I did not come to him to be instructed !! It is my duty said he to teach you the elements of knowledge, and to point out the path, the method, and the books by which you may hereafter improve and instruct yourself.

Now then if the young farmer desire to improve himself, let him read Liebig's Familiar Letters, and read and study Johnston's Agricultural Lectures, as designated at the head of this article, and if he do not understand half their contents, I predict he will rise from the perusal, satisfied with the necessary expenditure in the purchase, ($1.25) pleased with his improvement and mental refreshment.

In referring to the first edition published by Wiley & Putnam, in Feb. 1842, we find that the work was not then complete, as our copy contains only eight lectures and a short appendix. The new edition now before us is in two handsome octavo volumes, divided into three parts. The first parts treat, of the organic elements of plants in eight lectures; the second of the organic elements of plants in five lectures; and the third part, of the improvement of the soil by mechanical means and by manures, in five lectures. Added to these is an appendix containing numerous and detailed experiments made in England in 1841 and '42, on various crops with saline substances as manures, or fertilizers with manures, such as common salt, Glauber's salt, soot, sulphate of ammonia, sulphate of magnesia, nitrate of soda, nitrate of potash, caustic lime, carbonate of lime, silicate of potash. These substances, together with many others, were experimented upon singly or in duplicate and triplicate combinations, and the entire appendix contains a mass of information in tabular forms, with remarks, highly valuable to all who seek information as to their application and utility to the crops to which they have been applied.

To the practical farmer the appendix is perhaps the most valuable part of the work, as a test of that which is theoretical; and as the experiments are condensed it is easy to refer to them if we are desirous to repeat them in this country. The writer of this article has within the last two years made experiments on some of these substances, but without the benefit of Professor Johnston's work. With it and the knowledge of what has been done elsewhere, they may be repeated or modified with advantage.

We should like to make some extracts and remarks upon the text of the work under consideration, if they did not take up too much space in the columns of the Cultivator. First then on the subject of Labor.

Labor, bodily labor, health-giving muscular exertion, is too often looked upon as disgraceful even here in the north, but more so as we travel south of Pennsylvania. Instead of looking upon labor as a disgrace or a curse, we esteem it as a *blessing*, as the human frame is not constituted for sloth or idleness. We agree with our author, who says: (Lect. 2d, p. 32, vol. 1,)

"But set man free from the necessity of tilling the earth by the sweat of his brow, and you take from him at the same time the calm and tranquil pleasures of a country life—the innocent enjoyments of the returning season—the cheerful health and happiness that wait upon labor in the free air and beneath the bright sun of heaven. And for what? only to imprison him in manufactories, to condemn him to the fretful and feverish life of crowded cities."

Aye, my young countrymen and fellow laborers in rural employments, the *"fretful and feverish,"* and I may add *the artificial life of large cities*, is destructive of health and calm enjoyment. Let us not be deterred from industrious exertion, from bodily labor, because it is obnoxious to some. Bear in mind, that

"Honor and shame, from no condition rise,
"Act well your part, *there* all the honor lies."

Let us call your attention to another subject. You will find by reading Johnston and other publications relating to agriculture, and the growth of vegetation, that mere theorists have frequently drawn hasty and erroneous conclusions from a few isolated facts. Some for instance have made plants grow and increase in weight in water only, and hence concluded that water was the constituent and necessary ingredient in their nourishment. Others found that all plants increased in growth by withdrawing something from the atmosphere. Others again that they absorbed water and air from the soil by their roots, and so they were nourished and increased in growth. All these looked upon the soil as a mere mechanical mixture only necessary to sustain trees and plants in their position. Later writers have corrected their errors. Let us see what our author says on this subject:

"We have seen reason to conclude that while plants derive much of their sustenance from the air, they are also fed more or less abundantly by the soil in which they grow. From this soil they obtain through their roots the carbonic acid which is continually given off by the decaying vegetable matter it contains." (Vol. 1, p. 201.)

The reader may see more in detail (p. 83) how the vegetable matter increases; and how (pp. 84 and 85) plants are partly supported by the air, and partly by the soil. Hence when we remove a crop from the field, we remove a portion of the soil, and disturb the equilibrium of nature, (Liebig, Familiar Letters,) to restore which we must apply manure.

"Though manures in the soil act immediately thro' the roots, they stimulate the growth of the entire plant; and though the application of a top-dressing may be supposed first to affect the leaf, yet the beneficial result of the experiment depends upon the influence which the dressing may exercise on every part of the vegetable tissue." (Vol. 1, p. 146.)

Again on the subject of manures, practical men as well as writers, have differed as to the quantities, the quality, the time and the manner of applying them to the soil, but more particularly as to the value or utility of the various ingredients now employed singly or in combination with manures. Johnston comes to the following conclusion on some of these points, showing us what is requisite in the soil, and consequently what our manures should contain:

"Thus, (says he) if some ascribe the fertility of the soil to the presence of the alkalis in great abundance, others to that of the phosphates, others to that of lime, others to that of alumina, and others, finally, to that of vegetable matter in a soluble state—all these extreme opinions are reconciled, and their partial truth recognised, in one general principle, that *a soil to be fertile must contain all the substances which the plant we desire to grow can only obtain from the soil, and in such substance as readily to supply all its wants; while at the same time it must contain nothing hurtful to vegetable life.*" (Vol. 1, p. 429.)

This brings us to remark that farmers must stick to the old method of making barn yard manure, which in its animal, vegetable and saline substances contains most of the essential ingredients for the nourishment of plants. We must not rely on any one saline ingredient highly recommended, nor be carried away with the lauding and puffing of some factitious ingredient presented as a substitute for all other manures. We should rather have said the improved method of making barn yard manure, such as is described in Mr. Gaylord's Prize Essay in the Transactions of the State Agricultural Society (vol. 2, p. 65.) To our manure heaps may occasionally be added lime, potash or other fertilizing substances as observation and judgment may direct.

But let us keep within bounds and conclude by saying that on the subject of manures, animal, vegetable, saline, and factitious, Johnston's Lectures contains a mine of wealth for A PRACTICAL FARMER.

Staten Island, Dec. 23d, 1843.

ANIMAL PHYSIOLOGY.

MESSRS. GAYLORD & TUCKER—No department of rural economy is probably less understood, or more deserving of consideration than that of animal physiology. There are in the state of New-York alone not far from six millions of sheep, two millions of cattle, and as many swine kept, except working oxen, for the sole purpose of transforming cultivated plants into mutton, beef, pork, lard, tallow, butter, cheese and wool, in that way, which will yield to the husbandman the largest return for his land and his labor. According to the census returns of 1840, the crop of hay grown in this state the year previous, was worth $30,000,000. And as every farmer knows that there are nearly twice as many acres in pasture as in meadow in New-York, it will be within the truth to estimate the whole grass crop of the state at $[illegible]9,000,000. Will the intelligent reader answer this plain simple question: Do the cultivators of the soil in the Empire State now realize the largest practical return in valuable products, from the entire *raw material* consumed throughout the whole year, by these millions of domestic animals? If they do, then we have already attained to that happy perfection in the science of physiology beyond which improvement can go no further!

It is with pain and mortification that I see so many legislators and men of influence, unwilling to aid in any well directed public effort to open the book of nature, so that every farmer in the state may see, read and understand *how* it happens, and *why* it is, that one sheep can elaborate twice as much muscle, tallow and wool, from a given amount of food, as another? The same causes which have so developed in preceding generations, the woolforming organs of Mr. Corning's 130 Cotswold ewes, that they are now annually elaborating 8 lbs. of good wool per head, would, if judiciously made to operate on the six millions of sheep that clip per head but 2½ lbs. of wool, so improve the action of their capillary organs, as to give their owners twelve million pounds more wool than they now get, and at the same cost of land and labor. A love of truth, and a deep sense of the importance of my subject, compel me to say that our farmers generally manufacture very *poor* and *defective* machines for transforming grass, hay and roots, into mutton, tallow and wool. I can not now command the time to write an elaborate essay upon the anatomy and physiology of sheep; and demonstrate, as I think I can, how it happens that more than 50 per cent of the elements of wool, tallow and muscle, put into the sheep's mouth, are needlessly lost.

Many of our practical agriculturists do a little better in the manufacture of living machines for transforming grass, grain and roots, into beef, butter, cheese, pork and lard. The average loss from the needless waste of the *raw material* in our cattle and swine is, however, at least 30 per cent. Indeed, how can it well be otherwise, when not one farmer in a thousand knows what food is best adapted to the production of muscle and fat, or of butter and cheese? Not one farmer in a thousand knows how to *alter* and *improve* the ceaseless action of any organ in the animal system, so as to make it not only perform more work in a given time, but to do its work, or if you please, to discharge its peculiar function, far better than before.

The arteries that convey the elements of milk to the lacteal gland of the cow can be increased, both in number and size. The gland itself can be made to expand its surface, and multiply all its secreting vessels, which separate milk from the circulating blood. A large portion of milk with its dissolved butter and cheese, are carbon, water and nitrogen. By a serious defect in their organic structure, (which can be removed in the course of a few generations by skilful management, and scientific breeding) some cows expel daily from their lungs 70 ounces of carbon and water in proportion, which come from the food of such animals, while circulating in their blood vessels. Others will get along quite as healthily and give off through their lungs from their circulating nourishment, only 50 ounces of carbon and water to match; retaining the 20 oz. of carbon, and its accompanying ingredients, for the manufacture of good rich milk.

Whatever may be the precise value of the grass, hay, grain and roots, worked up annually into beef, pork, butter, cheese, mutton and wool in the great state of New-York, is it not plain that genuine science can aid the mere muscular toil of *eternal hard work*, so as to achieve a much greater good in a given time? If so, then kind reader do send down to your servants, the Legislature, *one petition* for the establishment of a State Agricultural Institute, where shall be taught 500 young practical farmers, coming equally from all parts of the state, all the natural sciences that will render agricultural labor *more profitable* and *more useful* to the community at large. We annually expend thousands of dollars to teach thousands of young men how to acquire wealth by other means than productive labor—riches called into existence by the hard work of other men—why shall not something be done to teach our sons, not only how to live better by productive labor than they now can; but also how to keep what their labor produces from the "itching palms" of those so well instructed to live by pursuing some branch of unproductive industry? Why create a state of society that now practically compels the great producing classes, to toil on day by day through life, at from 50 cents to one dollar, while those that produce little or nothing, are paid a high bounty as the reward of comparative idleness? When will our people learn that the knowledge of the *few*, no matter how profound, can never compensate for the ignorance of the *many?*

D. LEE.

JAMES GOWAN, Esq., near Philadelphia, lately received from the Phila. Soc. for Promoting Agriculture, premiums for the following crops: Sugar beets, 1078 bushels per acre, at 60 lbs. to the bushel; sugar parsneps, a fourth of an acre, at the rate of 868¼ bushels per acre; field carrots, 687 bushels per acre—both the latter weighing 40 lbs. to the bushel.

PHILOSOPHY OF WOOL.—No. II.

YOLK.

Messrs. Editors—This peculiar substance is so called abroad, from its adhesiveness and color; but with us it is termed gum, an appellation derived from its glutinous properties, quite as appropriate. It is apparent in the fleeces of fine wool sheep, especially the Merino, at all seasons of the year, but very much so in the winter and spring; and although diffused through the whole fleece, yet such is its profusion in the Merino, that it is observable in detached concrete particles, resembling ear wax. According to the chemical analysis of Vanquelin, it consists principally of a soapy matter, with a basis of potash; a small quantity of *carbonate of potash*; a small quantity of *acetate of potash; lime in an unknown state of combination*; and an atom of *muriate of potash*. Its peculiar odor, well known to those familiar with the fleeces of Saxon and Merino, is derived from the infusion of a small quantity of *animal oil*, and is in every respect a true soap, which would permit of the fleece being thoroughly cleansed by the ordinary mode of washing, were it not for the existence of this uncombined fatty or oily matter, which remains attached to the wool, and rendering it glutinous, until subjected to the process of scouring by the manufacturer.

There is a diversity of opinion as to the uses of the yolk or gum; while very many through ignorance, imagine it a detriment to the wool, which, however, is a decided mistake. It is a peculiar secretion from the *glands of the skin*, acting as one of the agents in *promoting the growth* of the wool, and by its adhesiveness, *matting it*, and thereby forming a defence from the inclemency of the weather. From accurate observation, it has been ascertained beyond doubt, that a deficiency of yolk will cause the fibre to be dry, harsh and weak, and the whole fleece becomes thin and hairy; on the contrary, when there is a natural supply, the wool is soft, plentiful and strong. The quantity is depending on equability of temperature, the health of the sheep, and the proportion of nutritive food it receives.

Although it is found in some degree in the fleeces of every variety of sheep, such is its excess in the Merino that it causes dirt to collect on the surface to such a degree as to form an indurated crust, with a hue resembling the thunder cloud. This excess, although as already remarked, no way injurious to the fibre, yet in one sense it is so to the manufacturer, from the uncertainty as to the amount of loss sustained by cleansing. Hence it is that the European manufacturer refuses to purchase the Spanish Merino wools, without being thoroughly washed with soap, which is performed after the fleece is shorn, and even then the wool shrinks by the manufacturer's mode of washing, generally about 10 per cent. It is from this cause too, that the American manufacturer, from increasing competition, has latterly become more cautious in his purchase of home Merino wool, the redundancy of glutinous matter and its unavoidable attendant, dirt, causing so large a proportion of the weight of the fleece.

It has been observed that temperature has an influence in determining the quantity of yolk; hence, the equable and mild climate of Spain is favorable to its production; and although the Escurial Merino is the parent stock of the Saxon, (the Escurial possessing it in a less degree than the Paular and other varieties, yet from the opposite character of the climate of Spain and Saxony, it is found in a diminished quantity in the Saxony wool. This breed, however, when kept in fair condition, has the requisite supply to give additional softness, pliability and strength to the fibre, without subjecting the manufacturer to the same degree of uncertainty as to loss from cleansing, the dirt collecting much less on the surface than with the Merino.

On the authority of Mr. Youatt, the wools of several breeds of sheep in the south part of the kingdom abound in yolk in great abundance, so that a fleece, unwashed on the back, will lose one-half of its weight by thorough scouring. A deficiency of this substance is perceptible as progress is made northward; and in Northumberland and Scotland, it is not uncommon for the farmer to supply its loss by means of *smearing* the sheep, immediately after shearing, with a mixture of *tar and oil or butter*. To confirm the propriety of this, which will also afford additional testimony of the virtues of yolk, I will quote a recorded fact from Mr. Bakewell, the distinguished sheep breeder. "An intelligent manufacturer in my neighborhood, who kept a small flock of good wooled sheep, informed me be had adopted the practice of rubbing the sheep with a mixture of butter and tar. He could speak decidedly to the improvement the wool had received by it, having superintended the whole process of the manufacture. The cloth was superior to what ungreased wool could have made, if equally fine; it was remarkably soft to the touch, and had a "good hand and feel," the appearance of the threads being nearly lost in a firm even texture, covered with a soft full nap."

The additional value, then, the yolk imparts to the wool, affords a useful lesson to the wool grower, to take such care of his sheep as will best supply the needful quantity. Equability of temperature being one requisite, he should protect his flocks during the winter season; and good condition being another, wholesome and nutritious food should not be spared.

FORM OF THE FIBRE.

The fibre of wool is circular, differing materially in diameter in the various breeds, and also in different parts of the same place. It is generally larger towards the point and also near the root, and in some instances very considerably so. Mr. Youatt's description cannot be simplified or improved. "The fibres of white wool, when cleansed from grease, are semi-transparent; their surface in some places is beautifully polished, in others curiously encrusted, and they reflect the rays of light in a very pleasing manner. When viewed by the aid of a powerful achromatic microscope, the central part of the fibre has a singularly glittering appearance. Very irregularly placed minuter filaments are sometimes seen branching from the main trunk like boughs from the principal stem. This exterior polish varies much in different wools, and in wools from the same breed of sheep at different times. When the animal is in good condition and the fleece healthy, the appearance of the fibre is really brilliant, but when the sheep has been half starved, the wool seems to have sympathized with the state of the constitution, and either a wan, pale light, or sometimes scarcely any, is reflected."

His closing paragraph is especially true. The wool of half starved sheep can be detected without any difficulty by the wool stapler and experienced buyer, and its consequent deterioration affects the price. The fibre of such wool is finer, it is true; but the numberless *branches* injure every manufacture for which it is used. This is another illustration of the bad policy of farmers in neglecting to keep their sheep in uniform good condition. Healthy sheep will produce healthy wool, both being always the most valuable, and consequently paying the largest dividends.

Elasticity and special curve of the fibre will be noticed in the next chapter. L. A. Morrell.

Lake Ridge, Tompkins co., N. Y., Jan. 28, 1844.

SPECULATIVE HOBBIES.

Messrs. Editors—In reading an article in the London Farmers' Journal, I was struck with the following expressions, which, though designed for the meridian of England, "will answer," (as old Nath. Low used to say of his almanacs,) for America:

"How careful ought gentlemen to be who canter their speculative 'hobbies' after *pleasurable* pursuits, that they do not instigate others to gallop after phantoms that only allure them into fatal mistakes. Reprehensible too, is the man who ventures to recommend plans for public adoption of which he has not made full proof from oft repeated experiments."

Would it not be well if these principles were a little more attended to in this country? Jonathan.

Large Steer.—Mr. Rufus Lyman, Colbrook, Conn., killed a half Durham two-year-old steer, in January last, that weighed 898 pounds.

REARING CALVES.

MESSRS. EDITORS—I would beg leave to drop a few remarks on the subject of rearing calves, having had considerable experience in that branch of rural economy. When I first commenced farming I had to pay heavy *crow rates* every year (as the term was.) I never could get my calves through the first winter without losing one or more. They would grow poor towards spring—their backs would assume the appearance of an arch—the scouers would set in, and they would die in despite of all my care and attention. Experience and observation have convinced me that *lice* was the primary cause of all the difficulty; and for several years past I have adopted the practice of destroying them in the fall, or forepart of winter, since which time I have not lost a calf. I have tried many remedies, but the best thing I have ever tried is sulphur. I take too parts of lard and one of sulphur, melt the lard, and when nearly cold mix in the sulphur, and rub it thoroughly on the parts most frequented by these troublesome vermin, and they will soon disappear. It sticks close to the hide and hair, and continues to scent until they shed their coat, and prevents any more from getting on them from other animals with which they may chance to come in contact. I keep my calves by themselves, and have a warm shelter for them to go in when they choose, in addition to as much good hay as they can eat. I give them each half a pint of oats or corn meal ground in the ear night and morning, and I never was troubled with having my calves get so fat in winter as to die with the black leg as your correspondent in the January No. of the Cultivator complains of.

Tyre, N. Y. Jan. 1844. JASON SMITH.

POUDRETTE.

The following letter has been sent us by the gentleman to whom it is addressed, with the request that it should appear in the Cultivator:

New-York, 16th Nov. 1843.

ANTHONY DAY, Esq., President of the Lodi Manufacturing Co.—Some twenty year's pretty close attention to the subject of agricultural chemistry, in England, France, Belgium, and other parts of the globe, has rendered me familiar with the nature of manures and amendments generally, as used by various nations.

For the last eighteen months, I have carefully examined your system of preparing poudrette from night soil and other fertilizing compounds, at your establishment on the Hackensack river, in the State of New Jersey, near the city of New-York, and I have no hesitation in stating that I have witnessed very important improvements introduced by you, into the manufacture of poudrette during that period, which render the compounds *far more fertilizing, than anything I have ever before encountered in this country or in Europe.*

I am not, therefore, surprised at the result of your experiment on Indian corn, grown in the vicinity of New-York, and recently exhibited at the Farmer's Club in this city. It seems that it was planted on the 27th June, 1843, during a severe drouth; that it was up two feet in three weeks: was fit for the table, as green corn, in sixty-six days, and was sufficiently glazed to prevent injury from frost in seventy-eight days. All this is easily accounted for, from the fact that your *new combination is calculated to absorb humidity, ammonia, carbonic acid and nitrogen from the atmosphere, as well as to retain these fertilizing substances in the poudrette itself, giving them out only as vegetation requires them for nutrition.* This has been hitherto a desideratum in manure. In a word, the fructifying power of your poudrette is greatly increased, its operation upon vegetable matter quickened; it obviates the effects of a long continuance of dry weather; retains the ammonia and other fertilizing gases in the soil; attracts similar gases and moisture from the atmosphere; of course ripens crops quicker; is much more lasting as a nutritive amendment, and what is of no little importance to the farmer, I see you mean to reduce the price from 40 to 25 cents per bushel. I further undertake to certify, that in your compound there is no raw peat, turf, meadow-mud, nor any other article that is not in itself *highly fertilizing*, and consequently it is adapted to every climate and to all descriptions of soil, whether calcareous, argillaceous, or silicious.

I am respectfully, sir, your ob't serv't,

W. A. KENTISH.

P. S. It may not be amiss to remind agriculturists that the *best soil* is an admixture of chalk or lime, with clay and sand, which are, in reality, the component parts of loam. It is evident, therefore, that a chalky soil requires the addition of clay and sand; a clayey soil needs chalk or lime and sand; and a sandy soil, chalk or lime and clay. Where sand is not obtainable, coal and other ashes answer the purpose fully as well, but sea sand is preferable for lands some little distance from the coast, where it can be procured with facility. W. A. K.

NATIONAL FAIR AT WASHINGTON.

MESSRS. GAYLORD & TUCKER—I observed in the last No. of your paper a writer, J. S. S., who was anxious to have a national exhibition of agriculture and manufactures in the city of Baltimore, during the great political conventions which are to be assembled there during the month of May next. I have made considerable inquiry of the Baltimoreans in relation to this proposed exhibition, and I find they are opposed to having it in that city, but will most willingly unite in a fair to be held in this city, where party politics cannot interrupt and prostrate the real objects of the friends of these great interests. We have every convenience here for such an exhibition, and it would amply repay any visitor thereto to have the facility of seeing the well arranged collections of the exploring expedition, as well as the thousand curiosities arranged in order by the enterprising commissioner of patents. I understand that the Horticultural Society of this city will hold its annual exhibition about the same time, perhaps upon the same day of the Agricultural fair; and combined, they will make as interesting a show as could be made in any other part of this country. I throw out these hints for your consideration, and I do hope you or some of your readers will give us your or their views fully upon this highly important national subject.

Washington City, Feb. 8, 1844. J. F. C.

VERMONT AGRICULTURAL SOCIETIES.

ALMOST every county has formed its County Agricultural Society, in accordance with a law of the late Legislature, which gives to each society formed a sum equal to that raised by itself to be awarded in premiums, to be paid out of the State Treasury. This will give a new stimulus to every branch of agriculture. Can you not send a few more Cultivators into every township in this State, and thus help yourselves and us at the same time?

Williston, Feb. 12, 1844.

O. C.

☞ We should be much pleased to send at least 15 copies to every town in the State. By clubbing together 15 copies may be obtained for $10, making them come at only 67 cents each—cheap enough, surely.—EDS.

FATTENING CATTLE WITH POTATOES.

MESSRS. EDITORS—There is quite a difference of opinion among farmers, with regard to fattening cattle with potatoes. Some contend that when cattle are fed on potatoes they should be kept in the stable, and not allowed any water. They contend that the animals will take on fat faster, and are not so apt to scour, as when allowed to drink. My own opinion is, that cattle, whether fed on potatoes, turneps, or meal, should be turned out of the stable every morning, and suffered to drink as much as they please. Nature, in this respect, is the best teacher. I should be happy to have the experience of others on this subject. L. D——D.

GATES FOR BARNS.—If you have any bars on your premises, substitute gates in their stead. These are both time and labor-saving fixtures, and have the additional merits of being more secure and more convenient. Winter is the time to make your gates.

RICH MILK.

Messrs. Editors—Under the head "Valuable Cow," in the last (Feb.) no. of the Cultivator, we find a summary of a statement made by P. H. Schenck, Esq. of Matteawan, of the extraordinary yield in butter, obtained by him from his cow *Emma*. Mr. Schenck's well known high standing in the community, gives us the fullest confidence in the accuracy of his representation, and a cow yielding at the rate of nearly three lbs. of butter a day, would be feebly characterized as a *valuable* cow; in truth, she might better be termed *invaluable*. Looking to the ordinary yield of butter from milk, which may be calculated at from eight to twelve quarts, according to its richness, we here find an animal giving at the rate of one lb. of butter to nine and one-seventh pints of milk, considerably less than five quarts to a pound. We have frequent instances of that amount of butter from cows yielding extraordinary quantities of milk, say from 32 to 40 quarts per diem, but very few (if any,) of so large a proportion of butter compared to the quantity of milk; in fact, on first reading the statement, I considered it unparalleled and almost incredible. Since then, however, in hunting up instances of extraordinary yields of butter, &c. I have met the following, in which the cow Emma is as much surpassed as she is before others. In Young's Annals of Agriculture, vol. XX, p. 281, it is said, "Lord Egremont has a Chinese cow whose milk is singularly rich; *one pint* of it on experiment, yielded as much butter, *four ounces*, as *seven pints* of the milk of a Sussex cow, neither being *set for cream, but* the milk churned directly from the *cows. I* (Arthur Young,) did not see this Chinese cow, *but it* was described to me as smaller than any Alderney —seems very fat, and as clean in the chap as any deer. This is an extraordinary fact, and seems much to confirm former observations on the quality of the milk of different cows; it is not the quantity but the quality that should be attended to; *eight* gallons of milk in one day from a Suffolk cow, are not uncommon, but the product of butter is never equally extraordinary," &c.

A remarkable Scotch cow is mentioned in the same work, vol. XXXI, p. 33, as giving 20 scotch pints of milk, which being skimmed thirty-six hours after milking, produced fifty-seven ounces and a half of butter, (English weight,) which is about twenty-four pounds a week.

Soon after Mr. Schenck's statement met my notice, I paid a visit to this remarkable creature of his, but was unlucky in not finding her liberal owner at home, and was therefore obliged to rely upon the representations made to me by the person who has her in charge.

In your notice of her, you do not mention the circumstance of her having received an injury in her spine, as appears from Mr. S.'s letter; such is the fact, and I am sorry to say it is likely to prove fatal before her period of gestation has elapsed, and I believe none of her progeny have been reserved. The injury was received, according to my informant, from the bull, and when she is made to stand up she seems to suffer greatly from its effects; when lying down she appears free from pain, and seems to have a good appetite.

She is a large rather raw boned animal, hornless, and to my eye gives no indication of possessing any Durham blood, though the Am. Agriculturist conjectures her to be three quarters of that blood. Would she be hornless were this the case? To me she appears to be of the ordinary polled breed, of which we have many specimens in the district, and generally good milkers The above mentioned Suffolk cows are also a polled breed. One or two circumstances in her history, leads me to suspect that the amount of butter obtained from her milk must be attributed not to her natural habit, but that it has been owing to a stimulated secretion induced by the injury received. One is, as her keeper informed me, that her milk was not only of a creamy consistency, but in place of a rich yellow was actually *red* in color. Again, in 1842, when she gave as much as 18 quarts of milk per diem, her yield of butter was 15 lbs.; more milk and less butter than during the past season, when from 16¼ quarts, 3 lbs. 8 oz. of butter were obtained. True, in the first case her keep was only grass—probably an abundance of that, however; and in the second, besides pasture, she had night and morning, a bushel of cut hay and 8 quarts of shorts. We can hardly attribute the alteration in her lacteal secrétion to this change in her diet; the food was not sufficiently rich to account for the difference in the quality of her milk. I therefore conclude that it was owing to a disease in the animal function. We find afterwards in September, with the same improved allowance, when giving 11 to 12 quarts per day, she yielded but 10 lbs. of butter per week. Yours respectfully,

John W. Knevels.

Fishkill Landing, N. Y., Feb. 7, 1844.

N. B. Will Mr. Minor, or some other manufacturer of the article, state the exact proportion of pure night soil in the poudrette offered by them for sale; until this is known, we cannot judge as to the economy of the application.

SEEDING GRASS LANDS—PROPER TIME FOR CUTTING AND METHOD OF CURING HAY.

Messrs. Gaylord & Tucker—Hay constituting the principal dependence of the agriculturist, as winter provender for horses and cattle, it is absolutely necessary he should know the proper season, and most approved mode of cutting and curing it.

Having been requested to make known the experiments I have tried and fully tested, I now submit them *pro bono publico*, with all due deference to the opinions of my seniors in agriculture.

When preparing a meadow or upland, I usually seed on wheat, sowing in the fall half a bushel of timothy seed to the acre, which is limed at the rate of three hundred bushels; and the following spring, after a moderate fall of snow, one bushel of clover seed, top dressed with charcoal dust, and rolled. From land so treated, I cut last season, three tons of hay to the acre. My practice is to commence cutting when one-third of the blossoms of clover have turned brown, and the timothy just parting with its bloom. The grass thus cut is drawn immediately into the barn, and one bushel of fine salt spread by hand thinly over each alternate layer composing a ton, as stowed away in the mow. The salt prevents mow burning, molding, &c. and the stock are induced to eat it as greedily as they would new mown grass, which it nearly resembles, as its most nutritious juices are preserved, being diffused through the stem of the entire plant at that period of its growth. If left on the ground until the seed ripens, the saccharine juice of the plant is lost.

The principal desire of the farmer should be to preserve the green appearance of his hay, and at the same time make it tender and palatable to his stock. The fermentation which ensues after it is housed, secures that object, and prevents the inevitable injury to his meadows which follows ripening grasses. By early harvesting he obtains a luxuriant growth of aftermath or rowen, almost as nutritious as the first, and as much relished by cattle, but peculiarly adapted to sheep.

It is now supposed by chemists, that the plan of keeping a large stock of horned cattle for the express purpose of manuring a farm, is an erroneous one on this account.

The ash of all grasses, contains by analysis, in greater or less proportion, according to the varieties, *Potash, Soda, Lime, Magnesia, Alumina, Oxide of iron, Oxide of manganese, Silica, Sulphuric acid, Phosphoric acid and Chlorine*, many of which substances are required in the animal economy, to form muscle, blood, horns, hoofs, etc., and are forever lost to the farmer.

If instead therefore of keeping stock for that purpose, he were to convert his straw, chaff, and refuse hay, into manure in a compost heap, by means of lime, lye, charcoal dust, &c. would he not save, without the least loss, every requisite for the ensuing crop?

Yours respectfully, R. L. Pell.

Pelham, Ulster co., Jan. 21, 1844.

☞ Dr. Thomson of Delaware, will please accept our thanks for his friendly suggestion. We like it much, and shall endeavor to carry it into effect, though it will take some considerable time to make the preparations necessary to accomplish the object in a proper manner.

THE POTATO.

A very pleasant and obliging friend, an eminent physician, once said to me, "Give me plenty of good potatoes, and I will never starve." A gentleman of talents and education, an extensive traveler on both sides of the Atlantic, April, 1836, while sitting at my table and feasting on my large, well-baked and delicious long reds, denominated them "bounties." I once heard a little fellow exclaim, "Good cracked open potatoes in the morning, Oh! how good!" The potatoe is indeed a noble and generous root—a great dietetic blessing,—and like the Indian corn, the boast, as well as the native of America. This valuable plant is said to have been originally wild, unpleasant to the taste, and poisonous; wholly unused by the Aborigines; and to have been brought to its present state of perfection by cultivation.

What I know of its history is as follows:—Near the close of the 16th century, Sir Walter Raleigh, an enterprising British nobleman, made several attempts to plant an English colony in Virginia. Once, after coasting along the fertile Guiana, entered the mouth of the grand and beautiful Oronoko, and, for purposes of discovery, sailed up that river 600 miles. That he found the potato somewhere in America, is acknowledged on all hands; but *where*, we are not informed;—probably up the Oronoko. I have of late heard of it in a wild state, somewhere on the south-west coast of South America. It is a matter of history, that said Sir Walter, about the time just named, introduced the potato into Ireland. After trying it in his garden, from the seed balls I conclude, and observing no occular demonstration of good promise, he ordered his gardener to extirpate it, as "a useless weed." On doing this he found unexpectedly, at the roots, a bushel of fine potatoes. After this, it was cultivated as an esculent root in Ireland about a hundred years, when it was, with some improvement, returned to America, and introduced as a curiosity upon the table of the Governor of Massachusetts. When a child, I learned from a very aged woman, who was a cook in said Governor's family, that she first saw potatoes there about the beginning of the 18th century, and that they were small and of disagreeable flavor. Her observation then was, "If great folks like such things as these, because they are novelties, I am sure they are welcome to them for all me." Much prejudice was against the potato, causing a very scanty cultivation of it, even so late as the war of the revolution; which prejudice is not yet entirely eradicated.

The more observable qualities of the potatoe are,

1. It does not too highly excite the human appetite. This is a grand affair in the province of temperance and health. Even the best table varieties are not liable to be eaten to excess.

2. There is probably no kind of food that has a more just and healthful proportion of bulk and nutriment. Its proportion of soluble and nutricious matter is said to be 25 per cent; whereas that of the beet is 14—of barley 83—of wheat 85—of rice and beans about 90—and peas 93. This fact renders it easy of digestion, and unlikely to surcharge the system, and produce dyspepsy; a matter by no means unworthy of sober notice and reflection.

3. The potato, like milk, contains a just proportion of aqueous substance, combined with the nutriment, that it is for man and beast, both food and drink. This is a great convenience, especially for those who labor abroad—for those who wish to fatten cattle with potatoes, while in a state of confinement—and for people at sea, where this root can be preserved.

4. It is very easily grown and cooked; of course a very cheap article of food.

5. It does not exhaust the soil like most other vegetables, *especially* oats and turneps, and leaves it in a good state for some other crop.

6. New varieties, and the best, are easily obtained from the seed-balls; taking however about three or four years to bring them to maturity, when trial and just selection may be made.

7. It is very easily preserved, whether dried like fruits or not; whether reduced to its farina or starch, or kept in its original state. It never rots without great abuse, or exposure, and is never "strong" as it is called, I think, nor, of course, *poisonous*, without too much heat from the sun, or fire, or warmth in the cellar, or being too long in warm or hot water at boiling. If you would have the best potatoes good on your table, *then keep them shaded, moist and cool—cook them just enough, as quickly as possible, and then have them away from water and heat.* I think the potato cut up in a raw state, dried and ground into meal, should help much in any preparation of bread stuff, especially griddles and puddings. *Let it be tried.*

As to the merits of different varieties, the Chenangos or Novascotias, the Leopards, the Long Whites, the Deep Blues, *the Carters above all*, and some others, are all excellent for the table. But, *on the whole*, I prefer the Early Reds, (which I produced from the seed-ball myself,) the Blue Kidneys, and the Blue Pointers, mixed together for early growths—the Long Reds, after being acclimated, for feeding out to cattle—and the Carters for the table, after becoming ripe. These last, well cooked, approach the nearest to good wheat flour.

As to the manner of seeding, I plant about 15 bushels the acre, cutting the large ones to save seed. After trying the planting of large and small, cut and not cut, I never saw any difference in the results.

With regard to methods of cultivation, there exists much prejudice and misconception. I will give my own method, towards which I have been long approaching, *while I have, in agriculture, been endeavoring to diminish the expense and increase the profit*.

Let sward ground be generally used, after becoming well rotted either by being plowed long enough beforehand, or by growing thereon previously a crop of oats. Spread on some 30 loads of manure to the acre; *plow deep and fine*, just before planting; furrow 2½ feet apart very lightly, so that when the potatoes, planted about one foot apart, are properly covered with a hoe, the ground shall be left level: cover lightly, and just as deep as in your judgment will cause the seed to come up, and *no more*; hoe once at proper time, and once only, assisted by a light harrow or cultivator; but leave the ground as level as possible. If weeds appear of considerable size, mow them with the potatoe tops before hard frost, and hay the whole for cattle. All this together makes excellent hay, if well made. The later you dig your potatoes the better, if kept out of the way of frost. Should you desire the greatest present profit from well-managed *corn ground*, plant about 5 bushels of potatoes the acre, and a few pumpkins wih your Indiain corn. Peas and beans, planted in the rows, sometimes do well, without injury to the potatoes.

But do not, I entreat, furrow your ground too deeply for any seed—do not put manure in the "hill," or "hole"—do not press the ground over the seed at planting—do not plow between the rows—do not "hill up;" but leave the ground as level as convenient till harvest; for the old practices are pernicious errors, *causing much hard labor to be useless or worse.*

It is a maxim with me, founded, I think, on the dictates of nature and reason, that *where there is the most manure, there is needed the most water.* How does it seem then, to put the manure in the hole, *and then hill up*, to turn away the water from the very place where you caused it to be most needed?

I have obtained at the rate of 634 2-5 bushels of early Blue Pointers the acre. But my average crop, during 24 years, has not varied far from 200 bushels the acre.

During many years, I have not boiled potatoes for any brute animals, believing it does not "quit cost."

In 1842, I obtained from ⅛ of an acre, 26 bushels of Rohan potatoes, and rising of 6 hundred of excellent hay, by mowing all above ground, as before suggested. This hay was worth quite half as much as the potatoes.

Whoever would grow rich by farming in high cold regions, must turn his attention *much, and properly*, to grass, oats and potatoes.

Respectfully to all concerned,

EZEKIEL RICH.

Troy, New-Hamp. Jan. 20th, 1844.

LIBERALITY to the earth, is the source of its bounty.

The Garden and the Orchard

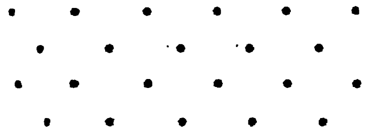
CULTURE OF FRUIT TREES.—No. 3.

THE APPLE.

In raising young apple trees, the stocks should be seedlings, and not suckers, as the latter furnish less perfect roots; and as those varieties which produce suckers most freely are chosen, they are apt to prove troublesome from the abundance which they yield.

Transplanting apple trees is generally performed with far too little care; though their hardiness will enable them to endure bad management, the thriftiness from good treatment far more than compensates all additional labor. The mode of proper transplanting has been described in a former number. Where the quantity of land is small, such care is especially necessary.

It is now satisfactorily determined that apples are a most profitable crop for feeding domestic animals; hence larger orchards are becoming desirable. Those on good land will occupy less if placed in the hexagonal form, or in equilateral triangles, thus:



For several years after young trees are transplanted, the ground should be constantly cultivated. This is easily performed so long as the trees remain small. When they become large, an occasional cultivation, with intervening crops of grass, may be sufficient for extensive orchards.

It is a common practice to neglect not only cultivation but pruning. Irregular and stunted trees, and small and inferior fruit, are the consequence. These may be prevented by moderate, frequent and judicious pruning, if the trees are not already old. The object is to diminish the thick growth, to increase the vigor of the branches, and to admit light and air. The best and most thrifty branches should be left, the distance asunder being as nearly equal as possible, and forming a well shaped top. The branches should be cut closely in pruning, but not so much so as to occasion too broad a wound. If the wounds are an inch or more in diameter, they should be protected by a thick coat of paint, or better by a mixture of brick-dust or whiting with warm tar. This prevents cracking, admission of moisture, and the consequent rotting of the branches. Pruning should never be done in spring when the sap is flowing, but may be performed either in winter or in summer. A sharp saw is the best tool for removing large limbs.

There are many orchards of ungrafted and comparatively worthless fruit, which might be greatly improved by converting the tops to good varieties. This is usually done by grafting into limbs two or three inches in diameter, but it is more difficult to perform, and the young shoots are much more liable to be broken off by wind, than when grafted into small branches. A sufficient number of young and thrifty shoots may be obtained in one season for grafting, by cutting off a few of the most central and larger limbs, when fresh ones will spring up vigorously in their place. As the grafted branches increase in size, the old ones are to be gradually removed.

It would be difficult, even for one extensively acquainted with the varieties of the apple, to give a complete selected list; the difficulty is increased by the great uncertainty of names among cultivators, and the multiplicity of synonyms for the same fruit. Lindley says, with much truth,

"In apples, a greater confusion exists in this respect, than in any other description of fruit. This arises not so much from the great number of varieties grown, as from the number of growers, some of whom seek to profit by their crops alone, regarding but little their nomenclature. Nurserymen, who are more anxious to grow a large stock for sale, than to be careful as to its character, are led into error by taking it for granted that the name of the fruit they propagate is its correct one, and no other; hence arises the frequency of so many fruits being sold under wrong names. Gardeners, who purchase trees, become deceived by this procedure, and do not discover the error, unless they have been imposed upon by the substitution of something *worthless*, and obviously at variance with the character of the fruit sold them. This is a serious evil, to say nothing of the disappointment of the purchaser; for unless the mistake be detected at first the longer the tree grows before it is discovered, the more time will have been lost by its cultivation; and be it remembered, this time is irrecoverable."

It is care alone that can correct this evil; nurserymen should propagate for sale a smaller number of varieties on the one hand, and examine thoroughly a larger number on the other, that they may prevent confusion and mistake by the former, and improve their selection by the latter. Purchasers must be careful to obtain them from those sources most to be depended on; or if they raise their own trees, they should, if possible, obtain their grafts from trees, whose genuineness has been proved by actual bearing.

In giving a short list of apples, it is to be remembered that there are many good varieties, and that some must therefore be omitted; and to some, such a list may seem badly selected, in consequence of the many inferior fruits falsely called by the name of excellent varieties. The following list may assist the cultivator in selection:

SUMMER FRUIT.

Yellow Harvest,
Early Sweet Bough,
Early Red Juneating,
Summer Pearmain,
Sine Qua Non,
Buffington's Early.

AUTUMN FRUIT.

Belle-bonne,
Strawberry Apple,
Summer Queen,
Ramboo,
Autumnal Swaar,
Gravenstein,
Fall Pippin.

WINTER FRUIT.

Bellflower,
Swaar,
Peck's Pleasant,
Esopus Spitzenbergh,
Jonathan,
Ortley,
Baldwin,
Rhode Island Greening,
Ribston Pippin,
Newtown Pippin,
Roxbury Russet,
Tallman Sweeting,
Northern Spy.

All these are in a greater or less degree, suitable for table fruit; and some of them are also peculiarly adapted to culinary purposes. As the day for the manufacture of cider has passed away, and a far more profitable use is made of apples in feeding domestic animals, no varieties expressly for cider are given.

To those who have but small gardens, the following are more particularly recommended:

Yellow Harvest,
Bough,
Sine Qua Non,
Strawberry Apple,*
Gravenstein,
Fall Pippin,
Swaar, Baldwin,
Spitzenbergh,
Jonathan,
Northern Spy.

The uses of apples are becoming yearly better understood, and their value constantly increasing to the farmer. It is now satisfactorily proved that they are not only excellent for fattening hogs, but are equally so for feeding milch cows during winter. Horses may also be advantageously fed on *sweet* apples. For cows and hogs, the difference between sweet and sour apples is found to be far less than generally supposed. A moderate estimate of the expense of one acre of orchard, (remembering that the ground may be cultivated with crops while the orchard is young,) will show the cost at from one to three cents per bushel; their value for feeding hogs has been proved to be much greater than the same quantity of potatoes.

THE DISEASES AND ENEMIES to which the apple tree is subject, are generally not formidable. It has however, sometimes serious ones to contend with. Among the chief are, 1. The Caterpillar. 2. The Borer. 3. The Canker. 4. The American Blight. 5. The Canker Worm.

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* This variety appears to be known only in western New-York, and appears to be greatly superior to any other variety of that name. Nearly the only nursery which has furnished it is that of Thomas & Smith, of Macedon.

1. **The Caterpillar.**—This was formerly the most formidable evil the apple had to contend with in Western New-York, and in fact the only one of any importance. There are several species; but the only one which proves seriously injurious, appears in the spring as soon as the leaf buds begin to open, at which time it is not the tenth of an inch long nor so large as a cambric needle; it increases constantly in size for a few weeks till it is two inches long and a quarter of an inch in diameter. It then spins a cocoon and passes to the pupa state. In the latter part of the summer, it changes to a brown miller, and deposits its eggs in cylindrical rings of several hundred each round the smaller branches. Every ring of eggs destroyed in fall or winter, which may be easily done by cutting off the small shoots which hold the eggs and burning them, will prevent a nest of caterpillars next season. If left till they hatch, they are easily killed when they first appear, by a caustic or poisonous solution, as of lime, ley, or of tobacco, applied to them with a cylindrical brush on a pole. The later the operation is deferred, the more difficult the work becomes. They have much diminished of late years, but need watching to prevent increase.

2. **The Borer.**—This is an insect which enters and perforates the wood of the tree at or a little below the surface of the earth. In Western New-York they rarely prove destructive to the apple tree. They may be taken out by introducing into the hole they have made, a flexible barbed wire, or punched to death in their holes by a flexible twig.

3. **The Canker.**—This is sometimes termed *bitter rot*. It is ascribed to various causes. By some it is considered as arising from neglected culture—poorness or wetness of soil, or exposed situation. But the most probable, or the *immediate* cause, appears to be injudicious pruning and bruises. Decay generally commences at the wounds thus caused, and extends till the tree dies. To prevent it, never prune in spring while the sap is in active motion, and protect all wounds of much size from air and moisture by a coat of paint, or of tar and brick dust. The only way to cure trees already diseased, is to cut away all affected parts and apply a suitable covering to the wound. It rarely proves a serious evil in this country.

4. **The American Blight,** (so called,) is caused by the *Aphis lanata*, a small insect so thickly covered with fine white hair as to appear enveloped in fine cotton. It is furnished with a small bristle-like beak, with which it perforates the bark of the branches. Excrescences rise, the limb grows sickly, and perishes. Branch after branch is assailed in turn, and the whole tree ultimately dies. It is easily destroyed on young trees, and older ones if recently attacked, by brushing over the affected parts a mixture of equal parts of fish oil and rosin melted together and applied warm. The operation should be performed as early in the season as possible, or when the insect is first perceived.* In England, many trees have been greatly injured, and some destroyed by it. Although introduced into nurseries in this country, it has hitherto proved of little injury, and if carefully watched probably be kept from spreading.

5. **The Canker Worm,** where it has appeared, is perhaps the most destructive to apple trees of any insect in America, but it has hitherto been confined in its ravages to certain parts of the country, particularly of New-England. Its habits are thus described by Kenrick:

"The canker worm, after it has finished its work of destruction in spring, descends to the earth, which it enters to the depth of from one to five inches. After the first frosts of October, or from the 15th or 20th, those nearest the surface usually begin to rise, transformed to grubs or millers. They usually rise in the night, and invariably direct their course to the tree, which they ascend, and deposit their eggs on the branches, which are hatched in April or May. They frequently rise during moderate weather in winter, when the ground is not frozen, and in March, and till towards the end of May. When the ground in spring has been bound by a long continuance of frost, and a thaw suddenly takes place they are said sometimes to ascend in incredible numbers."

They destroy all the leaves of the tree and thus eventually cause its death. The only effectual remedy yet devised is to prevent their ascent, which is effected by means of circular lead troughs filled with fish oil, encircling the tree. J. J. T.

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* If applied early, lime white-wash will destroy it effectually.

GARDEN VEGETABLES.

While the attention of the farmer cannot be too strongly urged to the formation of a good vegetable garden, our object here is not so much to remind him of the garden generally, as of the cultivation of some three or four plants, which are very excellent, but which are frequently missing in the farmer's garden. The first of these is the *Rhubarb*, or pie plant. This no garden should be without, as it is easily cultivated, comes into use when fruits or other vegetables are scarce, and its acid, when cooked, is most grateful and healthy. A few shoots cut from the roots, and planted in rich ground, some four feet apart, will in a short time, furnish stems (the part used,) enough for a family. We had a variety of this plant, the stems of which were enormous, but unless cut early, they become fibrous and coarse, compared with the other or common kind grown by us. To use it, take the stem of the leaf, strip it, cut it in thin slices transversely, and bake it in paste as you would apples. It requires more sugar than the apple, but in flavor is far superior.

Another plant too much neglected is the *Lima Bean*. This bean is rather tender for our climate, and if planted too early, sometimes rots in the ground or is killed by the frost. The ground on which these beans are planted should be made rich and deep, the seeds covered about half an inch deep with fine mold, and the poles should be placed at the time of planting. They should be planted as soon as the ground is warm enough to secure germination, which, with us, is usually the middle or last of May. The vines usually grow until arrested by frost; consequently all the beans will not be matured. The Lima bean is far the best of the beans used as food, and is equally good used green or dry. Those who are fond of *succatash*, or green corn and beans, in the winter, will find this far better than any other for this purpose. They should be picked and dried for winter's use, and when wanted, soaked in soft water over night; then put into the water for boiling, cold, and boiled till tender, with the prepared corn, and a piece of salted pork.

The *Horse Radish* is a plant richly deserving a place in the farmer's garden, though too often, through carelessness, it is allowed, when once introduced, to spread where it is not wanted, and in some instances to become a nuisance. There is no need of this, as the radish is as easily confined to its proper allotment in the garden, as the potato or artichoke. It is propagated by sets or by taking the crown of the plant, with a few inches of the root, and burying it in deep rich soil to the depth of eight or ten inches. If the set is split into two or three parts, retaining a part of the crown on each, the plant may be increased more rapidly. Before planting, the ground should be dug and manured to the depth of 18 inches or two feet. The plants may be set in the spring or fall; but perhaps as good a way as any, is to put out the sets at the time of gathering the roots, and if desirable, in the same place. The leaves make one of the earliest and best of greens, and the roots grated and bottled with good vinegar, make, when used in moderation, one of the healthiest and best of condiments, with either boiled or baked meats.

The *Tomato*, though now much more common than formerly, is still not to be found in many farmer's gardens where it should be certainly, if the mandates of imperious fashion are in any degree to be heeded. The tomato, though found in its greatest perfection in southern latitudes, can, with a little attention, be grown in most of our gardens, and furnish for months a wholesome, and to many a most agreeable article of food. Few like the tomato at first, but the taste soon becomes not only reconciled to it, but is much pleased with it. A rich, stiff loam is the best soil for the tomato. A good way is to sow the seed in a hot bed in April, and transplant when danger from frost is passed. The plants should be four feet apart in rich good ground, and the vines should be supported by a frame work of some kind, or brush, as the fruit will be better than if left on the ground. There are several varieties of the tomato, but the large red for the table or preserving, and the cherry tomato for pickling, are perhaps the best. They are used in various ways; eaten in vinegar as cucumbers, made into soups, into toasts, baked in pie, but perhaps the greatest use is in tomato sauce, which is highly esteemed.

There can be no doubt that our farmers might, at a little expense, greatly enlarge their list of valuable garden esculents; and in so doing materially decrease their annual expenses, while they are at the same time adding to their comforts.

APHIS OF THE CHERRY TREE.

MESSRS. GAYLORD & TUCKER—Huber, in his account of the ants of Switzerland, says there are some species which obtain their principal food from the honey-like substance that is excreted by the aphis—that the ants watch, tend and keep the aphis for its honey, as men do cows for their milk. I have not, by any direct observation of my own, been able to verify this fact in reference to our American ants. Mrs. Darling, on one occasion, had the good fortune, on raising a flat stone in the spring, to see the ants pick up and carry off the aphides which had been housed for the winter in the same habitation. I have no doubt therefore but that our ants are, as Huber expresses it, a "pastoral people," as well as those of Switzerland. It is quite probable that the aphis of the cherry tree *in particular* is domiciled with the ants in winter, and in the spring, as soon as the leaves are unfolded, is carried by the ants to the trees where it finds pasture for the summer. It rather confirms the supposition, that when the cherry aphis first makes it appearance in spring, it is on leaves very near the ground. I have had occasion to turn this fact to account, in preserving my young cherry trees from this destructive insect. Summer before the last, I had about a thousand young trees, which, before I was well aware of the evil, were covered with the black aphis. All the usual applications recommended in books, were made without much effect. I was forced to give up the trees to the insects. The trees in consequence were very much stunted in their growth, and what was quite as bad, grew crooked and deformed. The last season I determined to commence the destruction of the aphis at its first appearance. As soon as the leaves started in the spring, I examined the trees carefully, especially near the ground, and killed with the finger the few insects that were to be seen. In this way my trees were wholly preserved from injury, and without any other trouble than looking over them, at first every day, afterwards every 2d, then 3d day, and finally once a week.

Peach trees which have been tarred in the spring for protection against the borer or peach worm, are never infested with the aphis—I suppose because the ants cannot carry the aphides up the trees over the tar.

My plum trees were preserved in a different manner. The trees were suffered to stand unattended to, till I supposed the ants had carried up all the aphides which they intended to put in that pasture. I then cut off every leaf where insects were to be found—and no more made their appearance. I took care however to leave untouched the leaves on which were the eggs of the *chrysope perla*, a green, lace-winged, fetid fly that devours the aphis. These eggs are hung to the underside of a leaf by a small thread about ¼ of an inch long; and should never be disturbed. NOYES DARLING.

CUTTING SCIONS.

THIS is a good month for cutting scions. They should be kept in a cool, moist place, till the sap runs briskly, when they may be set. If they are to be carried any distance, it is well to dip the cut ends in wax, and pack in moss, dampened a little.

ORCHARDS.

MR. HARKNESS, writing on the management of orchards, in the Prairie Farmer, advises to go over the trees in the spring as soon as the leaves begin to start, to clean off the eggs of the caterpillar, and examine the roots to see if the borer has been there. If there are any holes made in the tree by insects, fill them with hard soap. Wash the tree with soft soap, diluted with an equal quantity of water. In a month after, look again for the borer; he can be traced by his "saw-dust;" dig him out. Go through the orchard again in July, and give the wash as above.

GRAFTING GRAPE VINES.

THE following is the mode practiced by the late Mr. Herbemont, of South Carolina. "Take away the earth around the vine, to the depth of four or five inches—saw it off about two or three inches below the surface of the ground. Split it with a knife or chisel, and having tapered the lower end of the scion in the shape of a wedge, insert it in the cleft stock, so as to make the bark of both coincide, (which perhaps is not necessary with the vine;) tie it with any kind of string merely to keep the scion in its place, so as to leave only one bud of the graft above the ground, and the other just below the surface, and it is done."

TO KILL THE PEACH TREE BORER.

Mr. Jas. Camack, of Athens, Ga., in a letter published in the Magazine of Horticulture, recommends fish brine, diluted with an equal quantity of water, and a pint to be turned round each tree in the spring or fall. The trees on which he used this liquid were 2¼ to 3 inches in diameter. To smaller trees he thinks less brine should be applied.

Domestic Economy.

EXPERIMENTS IN MAKING BUTTER.

The following communication, we think valuable because the experiments which are detailed, seem to have been conducted with the care and judgment necessary to establish a fact. We are not disappointed at the results—former experience having led us to believe that where milk is kept at the right temperature, all the cream will rise, and we can get no more than *all* by the scalding process. Either of our correspondent's plans is far better than letting the milk freeze, which should not be permitted.

MESSRS. EDITORS—In the winter of 1841, we instituted some experiments by scalding the milk with a view of ascertaining a better method of obtaining cream and making butter in cold weather than heretofore adopted. Our experiments then were confined to the milk of one cow; it now embraced the milk of five cows, which probably may account for the difference in the amount of milk taken to produce a pound of butter. It is well known that cow's milk is liable to vary considerably, according to the nature of the food and the state of the weather. The quality of the milk of a cow, can easily be decided by a lactometer, or by setting a portion of it for cream, in a wine-glass, and comparing it with others in the same way, and under the same circumstances; or the milk of a particular animal can be placed by itself for a period of time, and the actual produce determined.

There is a great difference in the quality as well as the quantity of milk given by cows of the same appearance and treated in the same manner. Not unfrequently in the same herd, the product of one cow is worth double that of another. The writer has known one cow whose milk would not produce butter, and strange as it may appear, she raised the fattest calves of any cow in the herd. It is presumed that every person who keeps a cow is desirous of having one of superior quality, but it is more the result of good fortune than prudence if he obtains such an one in the ordinary way.

Our object in the present experiment, was made not only with a view to ascertain the comparative advantage, if any, of heating the milk, but in the time employed in converting the cream into butter; the amount obtained from a given quantity of milk; and the quality of the butter, all managed under circumstances as nearly alike as possible. The difficulty of raising cream and making good butter in cold weather is well known to all who have paid any attention to that branch of the farmer's business.

The results of our experiments in 1841 induced the belief that heated or scalded milk produced the greatest quantity of cream and best quality of butter; but the comparative experiments now made, and the results, confound us. The process of scalding milk is troublesome, and the milk after the cream is removed, is poor and of but little use, except for the pigs. Although we are much disappointed in the result, we take great pleasure in making it known. The object is interesting not only to those who make farming their business, but to every family whose situation and circumstances make the keeping of this valuable animal, the cow, practicable; it is important not only because cows supply the market with milk and butter, but because they contribute so much to substantial domestic comfort and convenience.

Experiments correctly made and fairly tested form the data on which improvement should be founded. Exactness is important to one's character and usefulness. There is a satisfaction too, in knowing what we do. For this reason we were very particular to weigh the milk when taken from the cow and strained into the pans, to note the temperature when setting for cream; to weigh the cream before churning; to note the temperature while churning; the time employed in churning; and the weight of the butter after having been thoroughly worked.

Agriculture must be considered as one of the exact sciences, and we shall never know whether our progress in it is forward or retrogade, until we have done with *guessing*. But, methinks I hear you say, "it is troublesome to be exact." We answer, the trouble is not so great where the habit is once formed; and is very much more than compensated by the satisfaction experienced in doing it.

The result of the experiments are as follows: The night's milk of five cows, commencing on the 5th of Jan. and ending on the 9th, was subjected to the following process. As soon as the milk was drawn from the cows it was strained into tin pans, and weighed, and amounted to 70¼ lbs. After standing twelve hours, boiling water was introduced in an under pan, made for the purpose, which is sufficiently deep to hold about the same quantity of water as there was of milk, the top of the under pan fitting closely to the upper part of the other; the under one nearly straight on the sides, the other flaring, by which means sufficient room is left to retain the steam. From the 70¼ lbs. milk, after standing in a room, the temperature of which was from 50 to 55, thirty-six hours, 6¼ lbs. of cream was taken from it. This cream was churned in a temperature of 60 degs. and produced 3¼ lbs. of butter—time of churning 17 minutes.

On the 11th of Jan'y we commenced setting the milk for cream in the usual way, from the same cows in the same room, in a temperature ranging from 48 degs. to 56 degs.; after standing forty-eight hours it was skimmed. It was so managed that the same amount of milk, (70¼ lbs.) was used, which produced 14 lbs. cream, in which unavoidably remained considerable milk. This cream was subjected to the same process and temperature as the former, (60 degs.) and produced the same amount of butter, and occupied 12 minutes in churning.

Now, there may have been some ounces difference in the two parcels, as our steelyards mark nothing less than ¼ pounds, but we were particular in noticing the movement of the beam, and did not discover any material difference.

From the above experiments we have arrived at the following conclusions: That when the milk room is cold, say 30 degs. it is most advantageous to scald the milk, but when the temperature does not fall below 48 degs. little or nothing would be gained by adopting it. There is so little difference in the quality of the butter that it would be difficult for the nicest taster to distinguish which was made the one way or the other. The color too, is so similar that it would be supposed both rolls were made from one churning. C. N. Bement.

Three Hills Farm, Jan. 20, 1844.

☞ Mr. John Thompson, of Farmington, Conn., killed a hog in Jan. last, that weighed 750 lbs.

Veterinary Department.

BARREN COWS.

"I have a beautiful Durham Cow, sired by the impor ed bull Talleyrand, No. 2728 Herd book, vol. 3. S bred one calf, when 3 years old; since that time, now years, she has been regularly in heat, and faithfully a tended, yet with no result. She is strongly predispos to take on flesh, bnt is now as low as I think prudent safe. What shall I do with her.. George Hezlep."

Instances like the above, are not uncommon, and fr quently occur among our most valuable and high br animals. Reducing the flesh sometimes removes the di ficulty, but not always, and in such cases there seems alternative but to fatten. Had we a valuable cow fro which we were particularly anxious to breed, if oth remedies failed we would adopt the one described Mr. Bonner, on the 23d page of the current vol. of t Cult. which succeeded so well with a sow—partial spa ring—and think it probable it might succeed. A would, if well performed, be attended with little or danger; and if it did not produce the effect desire would not injure the animal in the least for feeding, can see no objection to its trial in such cases.

BLIND TEETH.

We have several communications on the subject o "Blind Teeth," or "Wolf Teeth," in horses, signed follows: *Edgar, A Daily Laborer; John M. Harland, Joh M. Johnson, Peter Ellis, Jas. M. Ellis, Peregrinator,* an *Quercus,* (U. C.) With the exception of one or two they all seem to agree that these teeth are injurious an ought to be taken out. This may be done by placing piece of iron (or as some say, hard-wood,) against th teeth, and giving it a blow with a mallet or hammer.

Quercus says he does not believe a word in regard t the injury which it is asserted these teeth occasion; say he had a mare which had "wolf teeth," and was to that she would certainly go blind soon; but he kept h many years, and she had good sight till the time of h death. Mr. Peter Ellis says, he "has extracted many o these teeth, but whether it has been attended with an great benefit, is at a loss to determine." He thinks, how ever, that it is best to take them out. We find there a others who have doubts on the subject, but all agree th it does *no hurt* to take out the "wolf teeth," and it ma do some good. These teeth are not confined to hors of one section of the country, for we have accounts o them from Georgia to Canada. Neither are they, as h been suggested, confined to horses which are fed mostl on Indian corn; we hear of them where the horses neve ate any corn of any consequence.

Since writing the above, we have received two letter on this subject. One from Mr. Samuel M. Spengler, an one from Mr. U. Skinner, both of Virginia. Mr. S. en closed one of the teeth referred to. He says they do n always occasion injury to the eyes; the worst effect i produced when they come out close to the other teeth (that is, the grinders,) and the farther they are from them the less the injury.

MURRAIN.

John Grant, in a communication to the Mark-Lan Express, gives the following as "an almost infallible" cure for Murrain, if applied on the first appearance of the disease:

Sal prunelle,...............	2 oz.
Stiptic powder,...........	2 "
Balsam Copavia,..........	2 "
Nitre,.......................	1 "
Glauber Salts,.............	4 "

Dissolve the whole in half a gallon of table beer, with half a pound of soft sugar added, and give as a drench; the good effects of which may be visible in twenty-four hours—after which, let the sick cattle be put in a field where there is plenty of water, as a desire to drink is one of the first symptoms of convalescence.

Look well to your bees during this month.

ISABELLA GRAPE VINES,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase, will receive such instructions as will enable them to cultivate the grape with entire success, (provided their locality is not too far north.) All communications, post paid, addressed to R. T. UNDERHILL, M. D., 400 Broadway, N. Y., will receive attention. He feels quite confident that he has so far ameliorated the character and habits of the grape vines in his vineyards and nurseries, by improved cultivation, pruning. &c. that they will generally ripen well and produce good fruit, when planted in most of the northern, all the western, middle and southern states.

New-York, Feb. 1844. 1t

AMERICAN FARMER'S ENCYCLOPEDIA AND DICTIONARY OF RURAL AFFAIRS,

WITH 17 beautifully executed plates of Cattle, Agricultural Implements, Destructive Insects, &c., complete in 1 volume, 1150 pages, price $4, bound—embracing all the recent discoveries in Agricultural Chemistry, adapted to the comprehension of unscientific readers, by Cuthbert W. Johnson; enlarged, improved and adapted to the United States, by Governeur Emerson, assisted by numerous scientific gentlemen.

An excellent manual of agriculture—and we venture to say that there is not a farmer in the United States that cannot derive many useful hints and much valuable information from this Encyclopedia—Albany Cultivator.

No farmer or planter who desires to be master of the science of his profession, should be without this work.—American Farmer.

Its merits are far greater than we had before imagined, and we are fully convinced that such an amount of valuable knowledge for farmers can be found in no work in so cheap and convenient a form. In fact, no farmer who pretends to be well informed in his profession should consent to be without it. As a book of reference, it is invaluable—we would not be without it for four times its cost.—New Genesee Farmer.

Should be in the library of every farmer.—American Agriculturist.

We heartily recommend it to our readers, and wish every farmer in North Carolina would take it and study it carefully. Raleigh Star.

A real treasure of practical information wherein the experience of all ages and countries is carefully posted up to the present day, and admirably arranged for convenient reference. —Dr. Darlington.

For the farmer who can have but few books, we know of no one relating to his profession so valuable.—Prairie Farmer.

fe 2t CAREY & HART.

POUDRETTE—A NEW ARTICLE.

IMPROVEMENTS of such a nature have been made in the manufacture of POUDRETTE, by the *Lodi Manufacturing Company*, near the City of New-York, as to warrant the opinion that it is the *cheapest and best Manure* now known and in use. By experiments which have been made, it has been proved that its *fructifying powers have been greatly increased, its operation upon vegetable matter quickened*. It will obviate the effects of *severe drought*, and will retain its fertilizing qualities much longer than any Poudrette heretofore made. It will ripen Corn in 65 days fit for use. The price will be reduced the following season as follows: At the Factory it will be sold in bulk at the rate of 25 cents per bushel. It will be delivered at any wharf or place in the City of New-York, *free of cartage and other expense*, at the rate of $2 for one barrel, which contains 4 bushels; $3,50 for 2 barrels; $5 for 3 barrels, and $10,50 for 7 barrels, and at the rate of $1,50 per barrel for any greater quantity. Persons wishing the article will please give notice in due season, as the orders will be fulfilled in the order of time received. The Company was incorporated in February, 1840, for 50 years by the Legislature of New-Jersey. No liability to stockholders beyond their subscription of $100 per share. A *few shares* of what is called the "*Reserved Stock*," remain to be subscribed for, which the Company guarantee shall pay a dividend of 80 bushels of Poudrette a year on each share, as authorized by the Charter. A pamphlet containing instructions for its use, and all other necessary information, is in preparation, and will be sent *gratis*, to any person applying for it, post-paid. Agents have been or will be appointed in most of the important places in the Northern and Eastern States, to whom persons may give orders. Where there is no agent, please direct to "*The President of the Lodi Manufacturing Company*, No. 63 Liberty-street, New-York," and it shall receive immediate attention. Please refer to the Letter of Mr. Kentish, in the March number of the CULTIVATOR.

New-York, Feb. 15, 1844.

PRIZE BULLS AND CALVES.

THE subscriber offers for sale two full blood Devon Bulls, which obtained the First Prizes offered for Devon Bulls, at the Baltimore County Agricultural Fair, held on the 19th and 20th October last, viz: Richard, 2 years old last spring, at $50; Marmion, one year old last June, at [illegible]. ALSO: 3 full blood Devon Calves, got by the celebrated bull, Waverly. They are large and perfectly formed, and are 6, 8, and 10 months old at this time. Price—$40 each. They are of a suitable age for shipping to the South. Address

JOHN P. E. STANLEY,
[illegible] Calvert, Corner of Lombard st.

Baltimore, Md. Feb. 1, 1844—2t.

FIELD SEED STORE.

THE subscriber continues to keep constantly on hand at his long established Seed Store, a supply of the best quality and kinds of Field Seeds, viz:

Red Clover, of the large and small growth,
Timothy, Red Top, or *Herd's Grass, Orchard Grass.*
Lucerne, or *French Clover, White Clover,*
Trefoil, Kentucky Blue Grass, &c. &c.

Also, the different varieties of Wheat, as White Flint, Red Chaff, Mediterranean, and English—for sale in lots to suit purchasers at moderate prices, by ISRAEL RUSSELL,

Feb. 1, 1844.—mar. oct. 26 Front-street, New-York.

ROB'T SINCLAIR, Jr. & CO.

MANUFACTURERS AND SEEDSMEN, BALTIMORE—Offer for sale:

Corn Mills and Shellers,
Corn and Cob Crushers,
Straw and Fodder Cutters,
Fanning Mills,
Vegetable Cutters,
Fruit and Ornamental Trees and Plants,
25 sorts Plows, including the famous Dolphin Self-Sharpening and Subsoil,
Agricultural and Garden Tools and Seeds, a large and general assortment.

☞See Priced Catalogue, to be had gratis of

Feb. 14, 1844.—1t R. S. Jr. & Co.

CAMBRIDGE NURSERIES,

CAMBRIDGE, MASS., TWO MILES FROM BOSTON.

HOVEY & CO., Proprietors of these extensive Nurseries, would respectfully inform their friends and the public generally, that they have now ready for sale, an unrivalled collection of

Fruit and Ornamental Trees,
Evergreen and Flowering Shrubs,
Grape Vines, Raspberries, &c.
An extensive collection of hardy and tender Roses,
Green-house and hardy Herbaceous Plants,
Dahlias and Bulbous Roots,
Hawthorn and Buckthorn, for Hedges,
Apple, Pear, Plum, Cherry, and other Stocks.

This collection of fruit trees embraces all the best kinds; selections of which were made from the best nurseries in England and France, and scions procured from the well known Pomologist, the late R. Manning, of Salem.

The selection of Chinese, Tea, Noisette and Bourbon Roses, includes upwards of 200 varieties, many of them the rarest and choicest to be procured in England. The collection of Dahlias is most extensive, and comprises all the fine varieties in cultivation.

☞All orders to be accompanied with cash or a draft. Catalogues of fruit trees, roses, Dahlias, vegetable and flower seeds, issued separately, and furnished to all *post-paid* applicants. Trees, plants, seeds, &c. packed so as to be safely transported to any part of the Union.

Address, HOVEY & Co., Seedsmen and Nurserymen,
7, Merchant's Row, Boston, Mass.

BAILEY & RICH'S SMUT MACHINE.

MANUFACTURED and for sale by J. T. E. & C. RICH, Shoreham, Vt. Patented in 1841, much improved in 1843.

These Machines are made wholly of iron and steel, very compact, efficient, simple in construction, and durable. They are so made, that a strong current of air is forced into the centre of the machine, and passing out sideways through cracks in the inner and outer cylinders, expels the dust as fast as created, and prevents it from mingling again with the grain, as it does in other mills, so as to often blacken the kernels.

They will clean from 15 to 25 bushels per hour. Warranted to suit upon 3 months trial.

Shoreham, Feb. 16, 1844.—2t

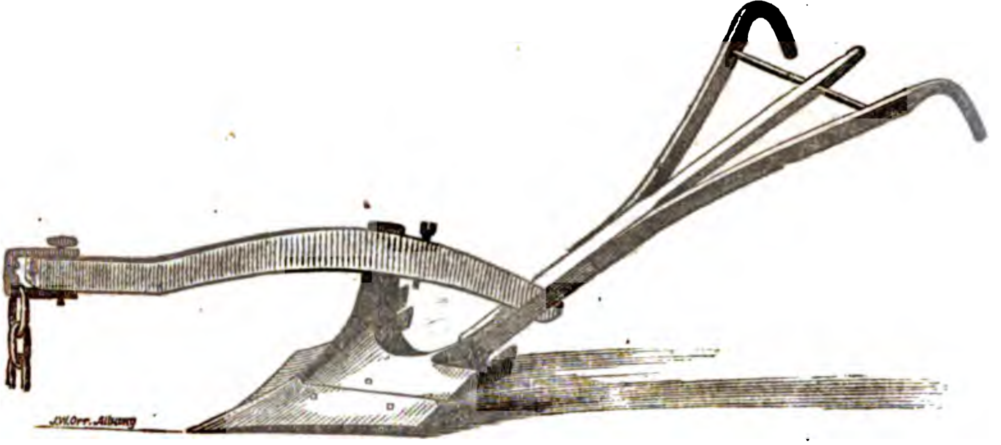
TO FARMERS.

THE subscribers are now engaged in the manufacture of R. McMillen's Patent Cast Iron Plow. This is a new article for this section of country. It has been tested, and works to the entire satisfaction of those who have used it. We invite farmers and others who wish to purchase plows, to call and examine for themselves, as we believe they cannot fail to be suited, and at prices that will correspond with the times.

They are made of the best cold blast iron—are ground, painted—of two sizes, one weighing 80 lbs., the other 100 lbs.

For sale at their store in Troy, at the Rail-road bridge, also at WM. THORBURN'S Agricultural Ware-house, No. 38 Broadway, Albany. ANTHONY & MORRISON.

Troy, Feb. 14, 1844.—1t*



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☞ ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.

NEW-YORK STATE AGRICULTURAL SOCIETY.

State Agricultural Hall, (old State House,)
Albany, Feb. 17, 1814.

The State Agricultural Society now occupy the Hall in the Old State House contemplated by the concurrent resolution of the last Legislature. The Hall is the easterly one on the first story (that formerly occupied by the Comptroller)—the remainder of the edifice being occupied, as this room is yet partially occupied, by the State Geological collection.

Officers and members of County Societies, and friends of Agriculture from other States, as well as this, are invited to visit the Hall when passing through Albany: And Agricultural Committees of the Senate and Assembly, as well as the Committees of the Society itself, will find the Hall ready for their reception at their evening meetings.

The returns which County Societies are required by law to make to the State Society, and other communications touching the farming operations in the several counties, may be left at the Hall in charge of the Recording Secretary:

And all Premiums awarded by the Society, or any other claims upon it, will be paid on presentation there to the Treasurer, Thomas Hillhouse.

By order of the Executive Committee,
JOHN P. BEEKMAN, Pres't.
Henry O'Reilly, Rec. Secretary.

LANGDON'S CULTIVATOR.

THE HORSE HOE OR CULTIVATOR PLOW, is an implement constructed and patented in 1842, by Barnabus Langdon of Troy, an old and experienced mechanic. After much labor and practical experiment had been bestowed upon it, it was exhibited for the first time at the State Fair held at Albany, and also at the Rensselaer Co. Fair, of that year, and received a premium at both.

There has been a large number made and sold the past season, and they have been thoroughly tested in various ways by some of the best and most experienced agriculturists in this and the adjoining counties, and in the vicinity of New-York, and all testify to their utility and usefulness, and to their superiority over any implement of the kind in general use. They not only do the work more effectually, but in much less time, and at one half the expense of any other Cultivator now in use, which are three important items, in these times of general low prices for agricultural productions. This Cultivator was exhibited at the last Fair of the American Institute, and received a premium. Much attention was bestowed upon it by Southern planters, and a number of them were sold by Mr. Langdon to go South, for working in corn, cotton, and tobacco. The Cultivator Plow is an implement made for weeding and loosening the soil between the hills of corn, potatoes, peas, beans and all root crops.

When weeding, half hilling, or splitting down corn hills, the weed cutters are always to be used, as represented in figure No. 1.* This operation cuts up the weeds, loosens and pulverises the soil completely up to the hill, and by cross plowing there will be little left for the hand hoe to do.

When the crop requires more earthing or hilling than the weed cutters can do, they are to be taken off, and the mould boards are to be put on, as represented in figure No. 2.*

Both occupy the same position on the plow, and both are secured to the standard by one bolt. The mould boards throw a beautiful furrow each way, thus doing the work in one half the time of an ordinary corn plow.

For digging potatoes, or root crops, this implement is unrivalled. When used for that purpose, the weed cutters should be on, and the plow should then be drawn by a double team; direct the plow under the middle of the hill, just deep enough to raise the crop to the surface, which it will do in a most expeditious and workmanlike manner. These Cultivators are made of the best materials, fitted up in the best manner, with share, weed cutters, and mould boards ground bright, ready for immediate use. The price of the implement is $8 at retail, and a fair discount made to dealers in agricultural implements. Orders addressed to Barnabas Langdon, or Mowry & Vail, 127 River st. Troy, (his authorized agents), will receive immediate despatch. They are also for sale by Ruggles, Nourse & Mason, Boston; John Mayher & Co. New-York; Pruyn, Wilson & Vosburgh, Albany; J. N. Woolley, Poughkeepsie; and E. Gifford, Hudson.

The testimony of C. N. Bement, Esq :—

Among the new implements exhibited at the State Fair last fall, none seemed to attract the attention more, or appeared to meet the views of the multitude better, than the Horse Hoe or Cultivator Plow, exhibited by Mr. Barnabus Langdon of Troy.

It affords me great pleasure to have it in my power to speak of the merits of this implement from experience, having used one the past season in my corn. My corn ground was laid off in squares, planted in the corners, leaving the hills three feet apart, which enabled me to run the Horse Hoe both ways. The edges of the share being sharp, cut up the weeds, which, with the soil, passes over the cutters, and leaves the soil very light and loose.

The breadth of the share is sufficient for rows of three feet wide, as it loosens and breaks up the soil beyond the reach of the share and after passing through the crop both ways, there is little left for the hand hoe to do.

It is a very efficient implement, and I have the testimony of a number of farmers and gardeners who have used it, who all speak in the highest terms of it. I did not try it for digging potatoes as my crop was on a side hill; but those who did try it, say it exceeds anything of the kind which has been introduced for that purpose. Three Hills Farm, Albany, January, 1843.

MOWRY & VAIL, Agents,
Feb. 1, 1844. 127 River-street, Troy, N. Y.

* These figures are necessarily omitted, owing to the room they would occupy.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. I. ALBANY, APRIL, 1844. No. 4.

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THE FARMER'S MUSEUM,

(Each no. containing 16 pages,)

Is made up of selections from this paper, and published monthly at 50 cents a year—Fourteen copies for $5,00—Thirty copies for $10.

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THE CULTIVATOR.

MONTHLY NOTICES.

COMMUNICATIONS have been received since our last, from Wm. Fuller, W. R. Gilkey, Long Island, A. E. Fish, Prudence Reynolds, Jonathan, L. A. Morrell, Wm. Jarvis, S. Weller, A Subscriber, Arabella Sheldrick, H. P. & G. Allen, John Johnston, D. S. Curtis, H. Meigs, L. D. Gregory, S. W. Jewett, G. Butler, M., G. L. Beckwith, P. H. P., A Wool Grower, C. H. Hall, A. L. Kennedy, G. F. Baltzell, S. Wagner, Frock and Trowsers, J. W. Salter, L. Peterson, A. R. D., R. L. Pell, C. H. Tomlinson, James Wiley, R. M., James Camak, A Subscriber, J. J. T., S. N. Haines.

We are under obligations to P. L. SIMMONDS, Esq., London, for copies of the first and second numbers of his "*Colonial Magazine;*" also for Richardson's "Geology for Beginners," and several pamphlets.

To some unknown friend, for the Transactions of the Westboro (Mass.) Ag. Society for 1843, embracing the Address of the Rev. Mr. Kittridge, Reports of Committees, &c.

To H. L. ELLSWORTH, Esq. Commissioner Patent Office, Washington, for a number of parcels of seeds, among which are the Multicole Rye from France—five varieties of Wheat—three of Indian Corn—three of Melons—two of Peas—one of Beets—two of Cabbages, Calcutta Flax, Egyptian Corn, &c.

To E. P. LANGDON, Esq. for the Annual Report of the Trustees and Visitors of the Common Schools of Cincinnati. The Common Schools of the Queen city, are models worthy of imitation.

SEABROOK'S MEMOIR ON THE ORIGIN, CULTIVATION, AND USES OF COTTON.—This is a pamphlet of 62 pages, by W. B. Seabrook, Esq. President of the State Agricultural Society of South Carolina. From the little attention we have been able to give, we should think this a valuable memoir. Our thanks are due to the author for a copy.

We have received an excellent article on "Wool and Sheep Husbandry, by a member of the New-Castle Co. (Del.) Practical Farmer's Club," from which we should be pleased to give such extracts as the state of our columns will admit, in some future number.

Col. NEISWANGER, of St. Clairsville, Ohio, will accept our thanks for a copy of Dr. RICHARDSON'S Address, delivered before the Agricultural Societies of Brooke and Ohio counties, Virginia.

HON. JAMES BATES, of Norridgewock, will please accept our thanks for a copy of his address delivered before the Somerset (Me.) Agricultural Society. It is a *real* good practical address, and did space permit, we should like to give some extracts from it in the Cultivator.

STATE FAIR FOR 1845.—The New Genesee Farmer, in announcing that the next Fair of the State Ag. Society was to be held at Poughkeepsie, stated that the arrangement, as it was informed, was made "with the understanding that it is to be at Buffalo the year following." To several inquiries as to the correctness of this statement, we answer that nothing was said at the annual meeting in relation to the place of holding the Fair for 1845, nor did we hear of any discussion or any "understanding" on the subject, among the officers or members of the Society.

State Fair at Poughkeepsie.—Great preparations are making in Dutchess and the river counties for this Fair, which it is thought will far exceed any previous one of the Society. A meeting was recently held at Poughkeepsie on the subject, at which the right spirit was manifested, and a committee of fifteen appointed to co-operate with the officers of the State Society, in making the necessary arrangements, raising funds, &c.

Varieties of Wheat.—We would call attention to some samples of wheat at the Agricultural Society's room, (old State Hall,) from Gen. Harmon, of Wheatland, Monroe co., N. Y. The samples embrace twelve or fourteen varieties, which Gen. H. has tested on his own farm. His opinion of their relative value, may be seen by an article from him on the cultivation of wheat, which will appear in the third volume of the Transactions of the N. Y. State Ag. Society, which is now in the course of publication.

S. M.—The 4th part of Johnston's Lectures, has not, we believe, been published.

Bermuda Grass.—Will our friend Mr. Affleck, have the goodness to answer the following inquiries. Would either Bermuda or Musqueto grass suit the climate of Albany? Where could the seed of either of these grasses be had, and at what prices?

Pigeon Weed.—Mr. J. Johnston, says he is much troubled with this weed, or *red root*, as sometimes called, and requests information as to the best mode of extirpating it. Who can tell the best way to do it?

Wire Worm.—"A Subscriber" at Norwich, Mass., inquires for a remedy against the ravages of the *wire worm*. We do not know that any specific has been discovered; their mode of attack is such that it is difficult effectually to guard against them. They destroy the germ of seed grain, and sometimes much injure potatoes by working into them. Soaking grain in a solution of copperas, before sowing or planting. is the best preventive that has yet been used; but it is doubtful whether this is in all cases sufficient.

Transferring Bees.—The Boston Cultivator wishes to learn the mode of transferring bees, which is referred to by Mr. J. Wells, of Ulster, N. Y., in his communication published in the Cultivator, vol. 10, page 178. Mr. W. calls it "Kelsey's mode." He will oblige us by sending a description of it.

Fat Cattle.—Three oxen raised by Jeremiah Brown, Ridgeway, Orleans co. N. Y., one of which took the first premium of the New-York State Ag. Soc. at Rochester, last fall, were lately sold in Boston market. Their dressed weight was 1,960 lbs., 2,500 lbs., 2,630 lbs. A roasting piece of one of them was sent to this city as a sample, and was admitted to exceed any thing of the kind before seen.

Selection of Stock.—"Jo Sykes," a correspondent of the N. Y. Commercial Advertiser, says that while on a visit to Mr. Webster's farm at Marshfield, in Dec. last, Mr. W. made the following remarks: "In the selection of stock, farmers in this country should regard their own climate and their own circumstances, and note wherein they differ from those of the farmers in England. Here we raise oxen for work as well as beef; but there they seldom raise cattle for working."

Soaking corn in muriate of ammonia.—Dr. Samuel Webber gives an account in the N. E. Farmer, of several experiments which he made last season with muriate of ammonia. He dissolved a small piece of the common sal ammoniac of the druggists, estimated at 4 or 5 grains, in about half a coffee-cup of water, and threw into the solution a handful of corn, which, after having remained 4 to 5 hours, was planted. He planted this soaked corn in hills, side by side with that which was not soaked. He made four different experiments, which are reported in considerable detail. In all cases, the soaked seed produced considerably the best yield—generally at least one-third more. The land was light and dry, and for several of the experiments, he purposely took the poorer spots. The corn suffered with drouth; but in all cases, that from the soaked seed manifested a decided superiority; so much indeed, that it was noticed by strangers, who knew of difference in the seed.

Merino Sheep.—We would invite particular attenti to the very interesting letter in this paper, from the Ho Wm. Jarvis of Vermont, giving a history of the intr duction of the Merino into this country, and a descripti of the several varieties. Of the large number broug into the country in 1809, 10 and 11, it is doubtful whet er a single flock, save that of Mr. Jarvis, has been pr served pure to the present time. In a tour through Ve mont the last season, we saw many superior flocks Merinoes, and in every instance we found their supe ority was derived from bucks either obtained or descen ed from Mr. Jarvis' flock. We believe also that it w be found that the sheep so frequently alluded to in Cultivator, as Paulars, derive their excellence from same source. It will be seen from Mr. J.'s statemen that in the year 1816 or 1817, he permitted his five va eties of Merinoes to run together, and consequently th he has bred no pure Paulars for the last 25 years. If, we suppose, the flocks of Messrs. Jewett, Avery, Bin ham and others, owe their excellence to bucks obtain from Mr. Jarvis, within the last 20 years, there wou seem to be a manifest impropriety in denominating the pure Paulars, however superior they may be, as the must have originated in a mixture of different varieties Merinoes. It is possible however, that there may have be other importations of Paulars than those alluded to b Mr. Jarvis; and if so, we shall be glad to learn the fac in the case. There was, we believe, an importation Merinoes into Massachusetts, not alluded to by Mr. Ja vis, made by Mr. Seth Adams, now a resident of Zane ville, Ohio; and as it is desirable that the history of the introduction should be as perfect as possible, we sha take measures to procure from Mr. A. an account of hi importation.

Note.—In publishing Mr. Jarvis' letter, we omitte the paragraph alluding to the "Albany Agricultural pa per," inasmuch as he had informed us that he had ascer tained that the article was not from the Cultivator. Sinc the pages containing it were stereotyped, we have recei ved a letter from Mr. Jarvis, in which he informs u that he has ascertained that the article alluded to was fro the American Agriculturist, and originally appeared i the number of that paper for Sept. last.

Burying Corn to avoid frost.—Mr. S. Ellis stat in the Massachusetts Plowman, an experiment made i 1842, of protecting corn from frost by covering it up wit dirt. Being convinced from the state of the air, th there would be frost, he went into the field with h hands and covered about an acre, by hauling dirt on it with hoes. As the next day was cold, he did not un cover the corn till the second day. On removing th dirt, the corn was found much crippled down, and looke he says, "as if it had lain in bed with its clothes on fo two nights;" but straightened up in the course of the day and made as good a crop as he ever raised. The rest o the field was all killed.

The Plymouth Co. (Mass.) Agricultural Society offe premiums for the best conducted experiments on differ ent subjects. For instance, such as will determine th relative value of the various substances used as manure—as lime, salt, &c. Particular directions are given, whic the claimant for a premium must strictly observe. Fo the experiment with salt, it is directed to take one-fourt part of an acre of dry land. Prepare two compost heap —an equal quantity of manure in each—in one heap mi one bushel of salt, and in the other, the same kind of manure and no salt. Put one heap on one-half the lot, th other heap on the other half. Plant one-half of *eac part* to corn, the other half of each part to potatoes The next year sow grain and grass seed, and on the par on which salt was used the year before, sow half a bushel of salt, and sow the same quantity of salt the *third* year in the spring. Keep the crops separate, and weigh and keep an exact account of the product of each part.

Now something of this kind is what we want to see adopted by the New-York State Ag. Society, and we verily believe that a given sum thus expended, would effect more good than ten times the expense in any other way.

CONDENSED CORRESPONDENCE.

Rotation of Crops.—Mr. Benj. H. Hart of Dutchess county, informs us that he practices the following course with success: first year, corn and roots—the second, oats with clover seed, and to remain two years in clover; the first crop cut for hay, the second, the seed stripped off, leaving the grass to be partly eaten off by wethers, which are procured in October, fattened on clover hay and turnips, and sent to market by the first of March, leaving a moderate stock on hand through the summer.

Remarkable Heifer.—Mr. W. R. Gilkey, of Windsor, Vt., has sent us a statement of the quantity of butter made from a young cow of his. She produced her second calf May 6th, 1843—being three years old on the 4th of March previous. As Mr. G. had but one cow, his family were supplied with milk from this one—they using one and a half quarts per day. On the 26th of May, he churned the cream from eight days milk, which produced *twelve pounds* and *eleven ounces* of butter. The heifer was fed during this time with nothing but grass. She is one-fourth Durham blood, her other blood unknown.

Large crop of Hay.—Mr. M. Y. Tilden, of New Lebanon, N. Y., writes us that he cut the past year, from 132 acres, 285 tons of well cured hay. Mr. T. says, "our sheep ranges being all on the mountain, we are compelled to bring them home early in the fall to pasture on the meadows, and the same cause operates in the spring; so that our mowing grounds are fed both spring and fall." He states that not more than ten acres of the land where the hay grew, was manured at all, excepting from the sheep as they grazed over it. This statement furnishes a fine comment on the notion that has worked into the heads of some men, that "*sheep poison meadow grounds.*"

A Curiosity.—A correspondent at Philadelphia, says: "Among the agricultural curiosities about here, an ox has just passed my house, which is eleven feet long from the shoulder to the tail, and over eighteen hands high! He is of the droop-horn breed from Kentucky, but has for several years been fed at the farm of Isaac W. Roberts, near this city." The ox is probably of the variety of long-horns, known in Kentucky as the Patton breed. They sometimes grow to an immense size.

Machine for cutting corn-stalks.—We have received from Mr. A. L. Fish, of Cedarville, N. Y., a description and drawing of a machine for cutting corn-stalks. We have no doubt the machine is a useful one, but our engagements prohibit an insertion of the drawing in the Cultivator at present. He states that the whole cost of the machine would not be more than two or three dollars. The cutting part is a knife, which he says may be made of an old scythe, fastened to a wheel, which is kept in motion by the foot, in the same manner as turning lathes are sometimes worked.

Remarkable Pig.—Mr. G. B. Green, of Windsor, Vt., killed a pig Jan. 1, 1844, nine months and one week old, that weighed *three hundred and sixty pounds*. Blood, one-quarter Berkshire, three-quarters Grass breed. This pig had been fed on slops and rye meal, till during the last three months—then with Indian meal and two tea cups full of molasses per day. From experiments, Mr. Green believes that a gallon of molasses, given in due proportions with other food, will put on more beef or pork, than two bushels of corn.

Common Schools.—Mr. Geo. L. Beckwith, of West Henrietta, Monroe co., N. Y., informs us that much good has been done in his neighborhood, by weekly meetings, which have been called in the several school districts, at which lectures on various subjects, have been delivered by school teachers and others. The practice is a good one, and might be advantageously adopted by others. Mr. B. also asks—"Why cannot a part of that rich store of minerals which the State has at so much expense collected, be distributed to the different counties, if they will provide a suitable place for them?"

Blind Teeth in Man.—Mr. J. M. Johnson of Missouri, writing to us on the subject of blind teeth in horses, states the following case of similar teeth having made their appearance in a human subject. Mr. J. says, "last winter I had a young man at work for me, whose eyes became weak; so much so, that during cold weather he was sometimes nearly blind. Not suspecting the cause, I used various remedies without success, until it occurred to me that it might be blind teeth. Upon examination, it was found that one had protruded about a fourth of an inch nearly in the roof of the mouth, and another scarcely developed through the skin. They were easily extracted, and the eyes soon became perfectly well."

Clover Hulling Machines.—Mr. Benj. H. Hart informs us that he has two kinds of clover hulling machines. One is on the plan of Mr. L'Hommedieu, described in a former number of the Cultivator, the other is merely a concave and cylinder attached to a one-horse power. Both perform well. The former can be made by any mechanic, and the latter can be had of A. Wheeler & Brothers, Chatham 4 Corners, Columbia co., N. Y. Price, $20. The Messrs. W. have also for sale, threshing and other machines, made in the most approved manner.

Soaking Seed Corn.—A correspondent who signs himself K., of Queens County, N. Y., writes us that seed corn is sometimes injured by being soaked too much. He soaked some corn about 36 hours in a solution of saltpetre, and then gave it a coating of tar; the consequence was, that only one or two grains sprouted in a hill, where five were planted. He supposes the corn had too much swelled before the tar was applied. This may have been the case, but we have known the germ *killed* by remaining too long in the saltpetre. If the sprout protrudes while the grain remains in the solution, it is very likely to be injured, especially if the liquid be strong. Solutions of potash, lime, &c., will operate in the same way.

Mr. Pell's Orchard.—Mr. Meigs, Secretary of the N. Y. Farmes's Club, makes the following corrections of the report of his remarks on this subject, a brief abstract of which was given in our Feb. number, p. 46. Instead of "20,000 apple trees in full bearing," it should have been "in bearing, being 18 years old." "Mr. Pell's trees are planted 19, 20 and 25 feet apart—19 feet apart would allow 121 trees per acre. The object in thus planting, was to obtain fruit 10 or 12 years after they came into bearing—as fruit from young trees is usually found to be of superior quality. When they interfere with each other, the centre tree will be cut out, and they will then be 38, 40 and 50 feet apart." Instead of reading "that he employed a man to graft 10,000 apple trees," &c., it should have been "400 apple trees, being 18 years old, in which trees 10,000 grafts were set, and that not more than 10 per cent failed."

Reaping Machines.—Mr. Obed Hussey of Baltimore, requests us to publish a correspondence between him and Hon. Wm. H. Roane, relative to the comparative merits of Mr. Hussey's and Mr. McCormick's reaping machines. The great press of contributions from our correspondents utterly prevents complying at present, with the request. We will state however, that Mr. Roane had been one of a committee to report on a trial made by the two machines mentioned, and that the committeee delared in favor of McCormick's machine; but that at a more thorough trial afterwards made on Mr. Roane's farm, Mr. R. changed his opinion, and ordered one of Mr. Hussey's machines.

The Weather in Florida.—A letter from G. F. Baltzell, Esq. of Apalachicola, (lat. 29 deg. 51m., long. 85 deg. 06m.,) informs us that the peach was in bloom there, Feb. 20—the Native Plum, Feb. 17—the Yellow Jessamine of the forest, about the 10th Feb.—the Quince, Feb. 22. Ther. Fah. March 3, 72 deg.; March 4, 65 deg.

Indian Corn.—We have read the letter of our friend J. L. Foreman of N. C., with much pleasure. In an article on the culture of Indian Corn, in our last number, p. 79, he will find a detail of the method pursued by several persons who have raised over 100 bushels per acre. It should be remembered, however, that to raise such crops of corn, favorable seasons are as necessary as proper culture. The inquiries about cattle, shall be answered by letter.

TALK ABOUT FARMING.

It is well known that the Massachusetts Legislature is a numerous body of some 400 individuals; that a large proportion of these are practical farmers; and it is much to their credit that they have adopted the practice of holding weekly meetings at which the most important principles of farming are discussed, and mainly with reference to their practical application. In the Boston agricultural papers we find reports of these meetings, and from them, principally from the New-England Farmer and Plowman, we have condensed such of the proceedings as would be of most interest to our readers.

TREATMENT OF CALVES.

Col. Jaques, well known as an excellent breeder and close observer of animals, contended for the practice of letting calves suck the cows the first summer. He finds they are better than when-reared on porridge, or in any other way he has yet tried. "Col. Jaques breeds cattle that have large rumps and small shins, because he finds the rump pieces bring four times as much in the market as the shins."[*] He attributed the degeneracy of our neat stock to feeding calves on slops, and then wintering them as recommended by some, on coarse hay. Sheep and calves require open and large yards. Stables are useless, except in severe weather. Milch cows should be kept warm, as it will increase the milk.

Mr. Graves thought it best to take calves from the cows at once, and let them know nothing about sucking. He gives the calf new milk to drink for three weeks, then meal, rye meal is best, then porridge or skimmed milk.

Mr. Allen loved to follow nature in rearing calves. He preferred having the calf run with the cow and suck at pleasure. In this way it would learn of its mother to eat grass and to drink water early. At three months he would separate the calf from the cow and put it in the pasture with the fat cattle.

SECURING BULLS.

Col. Jaques said many lives have been lost by these animals, and none should be allowed to run at large unless properly secured. Rings should always be put in their noses, as they could then be led or handled without difficulty. Turned to pasture, they should be blinded. "This he had done by tieing on a board two feet long and three inches wide, in front of the horns, and then fastening a leather apron to the board, cutting it three cornered, and bringing it to a point at the nose. Such an apron would be no injury to the animal, and he would never attempt to fight or gore any one with this hood on." (We may hereafter give a figure of this apron, as it appears to us to be well adapted for the end intended.)

DISEASED ANIMALS.

It seemed to be the general impression of the speakers that animals attacked by disease should be attended to at once; separated from the others; and the proper remedies applied. Col. Jaques said he had a cow that gave him 12 quarts of milk per day as late as November, when she suddenly fell off to 2 quarts. Her horns were warm; he split her tail and rubbed turpentine between her horns. He then gave her half a pound of brimstone, mixed with half an ounce of saltpetre, put a piece of garget or poke root in the lower part of the dewlap, gave her a warm mash, and she was soon well. As an illustration of the bad effect of giving cows cold water immediately after calving, he said that Col. Wainright applied to him to know what the matter was with his cow. He at once suspected she had drunk too much water. To be certain, he charged the Irishman who had the care of her, with neglecting to give her drink enough. "Oh yer honor," said the man, "but she dthrinked three buckets at one time."

MILCH COWS.

Col. Jaques said he had seen cows that were ruined for milk, by eating too much Indian meal. One cow w fed with half a peck of meal per day, and in a short tin her great yield of milk was nearly dried up. The cel brated Oaks cow (of whom President Quincy afterwar remarked, "that he was brought up on her milk, a that she was like Melchisedek, without father or mothe so far as he knew,") which made, after the month May in one season, 484 lbs. of butter, fell off in cons quence of eating too much meal, and gave but very lit milk. After she came into Col. Jaques' possession, turned her out to pasture one whole season, witho meal, but he could never bring her back again; she w spoiled for milk.

MORGAN HORSE.

The celebrated breed of horses of this name, Col. attributed to a cross of the Normandy or French hor He thought this the best breed for all work in the cou try. High spirited, yet fit for all farm purposes. training horses, we should be particular to say what mean, and never call out *whoa*, unless we intended t horse should stop; and the same word should be un formly used for the same purpose.

SOILING ANIMALS.

Mr. Newhall said he had experimented in soiling ca tle. Last summer he fed his cows with rye, green fro the field. He had 17 cows, and he fed them 30 days one acre of rye at the first cutting, and 5 days from th rye of the second cutting. He next used clover, begi ning with the early southern, and from that to the lat northern. After the clover, he fed them on corn, sow in drills for this purpose. His barn is 110 feet long an 44 wide, with a cellar under the whole. His corn wa sowed at the rate of 3 bushels per acre; it came up s thick that no ears appeared; and he found on trying on square rod, that he had 32 tons of green fodder per acr He considered rye and corn the best articles he could so for feeding; the rye being early, and lasting until th corn would do to begin on. His cow stable is cleare of manure twice a day, and this is immediately covere with about five times as much peat muck; and he finds load of this compost better than a load of clear manur Mr. Newhall sowed southern corn.

Mr. Dodge preferred northern corn for soiling. H had weighed the green corn on a small piece, and foun he had at the rate of 39 or 40 tons per acre.

Mr. French had raised corn for soiling, but preferr the southern. It would not be tough if sown thick. H thought well of the practice of soiling cattle, and ha long practiced it. By using green fodder in July a August when pastures fail, you increase the quantity milk, you keep your animals in better condition, a greatly increase the manure saved.

President Quincy said he believed he was the first introduce soiling into the country; that he had kept th whole stock of cows, which formerly required 90 acr of pasture when they ran at large, on 15 acres only, whe shut up and fed with green fodder. He thought the soi ing plan would ultimately prevail on all lands suitab for that purpose, near cities. He alluded to the savin of fence in soiling. On the farm, when his grandfath owned it, there was 7 miles of interior fence, now the is none; animals being allowed to run on no part of i Mr. Q. said his father's plan was to grow such a succes ion of crops, that the cows should be supplied with gree food the whole season. His neighbors used to remar that the old gentleman could farm well as long as h could draw on the banks, but doubted as to this being th best mode of farming. Yet the accounts always balance well at the end of the year.

FATTENING CATTLE.

Mr. Monson said he had been in the practice of fatten ing cattle for a long time. He believed that cattle woul fatten better, confined to one lot, than when frequentl removed to new pastures. He had tried the plan to hi satisfaction, and he was convinced that it was not a goo plan to shift cattle from pasture to pasture. He foun that they gained more fat and tallow when kept throug the summer in one pasture, than when shifted.

Mr. Buckminster of the Plowman, said this was agreeable to his experience. That if he could have his lots s divided that his cows could be turned into a new on daily, he would not do it. When they have the whole run, they have a sufficient bite of the new daily growth, which is sweeter than any other.

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[*] If by "large rumps" is to be understood those heavy, cloddy-buttocked animals of the Yorkshire breed sometimes found, we must dissent from the Col's. opinion or practice; if, on the contrary, and as we suspect from the Col's. good judgment, he only means those animals that make heavy hind quarters, or take on flesh where it will be worth the most, as the Short Horns and their crosses, he is right.—Eds. Cult.

MANURES.

At a previous meeting, the subject of manures and manuring, underwent a most animated and full discussion. The point of deep or shallow covering of manures, showed considerable difference of opinion among practical farmers. The opinion of some, derived from experience, was that there was little danger of covering manure too deeply, while others controverted this position strongly. The advocates of deep covering manures, adduced Judge Buel as in favor of that practice; while others stated that they had covered so deep that their crops derived no benefit from its application.

We have tried manures on different soils and at different depths, for many years, and carefully noted the results. Our experience has convinced us that all manures which are unfermented should be covered, but not deeply. The use of the covering of earth is to absorb and retain the matters, gases, &c. thrown off during decomposition, and more than is sufficient for this, is useless if not injurious. Composts, or thoroughly rotted manures, may be covered slightly, but will produce better effects on crops, if only harrowed in on the surface, than if turned under deep with the plow. Much too is depending on the character of the soil, in applying manures. Long coarse manures plowed into compact, heavy soils, render it less dense, and are in this way, as well as in the nutrition afforded to plants, useful. In light sandy soils, the object is to give more compactness to the surface, and hence deep covering of the manure, when applied in its long or unfermented state, is best; and it was on such a soil that Judge Buel's experiments were made. In forming opinions on such matters, attention is usually not sufficiently given to the different circumstances of soil, state of manures, &c., hence such conflicting statements as to practice and results. We proceed with our condensation of reports.

PREPARATION OF MANURES.

Mr. Hardy said every farmer has the materials on his own farm to enrich it. How shall he apply them? How make his compost heaps? I answer, with his yard manure, and his soil mixed with it; and in the room of lime and ashes, give me hog's noses. Writers may talk about their chemical or mineral manures; keep hogs, hogs! Keep them in cellars, and throw in your hassocks; their noses will sooner decompose a hassock, than all the nostrums of the chemists. Hogs will work better than your Irishmen, though it may cost more to keep them. Hogs will work seven days in a week, while you must be pretty lucky to find an Irishman that will work six. If a farmer has a dozen head of cattle, he may make 50 cords, or 300 loads in a year. He must occasionally haul materials from the first of July until December. Others, nigh the city, may buy manure, but I can't afford to haul it to my farm; I can make it for half of what it costs in Boston. Some farmers with 40 head of cattle, make less manure, than others with 7 head. Keep cattle, make your hogs work; no labor is cheaper than that of the hog."

SALT.

The testimony in favor of the use of salt, was very conclusive. Mr. Everett had applied it to corn at the rate of two bushels per acre to keep off worms, and with the desired effect. The corn grew well, and where the salt was strewed most profusely, the crop was most luxuriant. The field had not been plowed for a number of years.

Mr. Merriam said he had used it successfully in destroying worms in his garden. He puts brine in his compost heap, and thinks salt a valuable manure, but too costly for general use. (In the vicinity of our salines in the interior, every advantage for experiments with salt is afforded; and we hope it will be undertaken by many. We think that the refuse of the works, called *bitterns*, would be a capital manure, especially on dry sandy soils. This substance may be obtained in any quantity. It consists of muriate and sulphate of lime, strongly impregnated with chloride of soda. Some who have tried it, speak highly of its efficacy, a result to be inferred from its composition.—Eds. Cult.)

GYPSUM.

Mr. Everett of Princeton, said that he had used plaster in dry ground, successfully; that in a field of potatoes he experimented on four rows through the middle of the field: in two rows he manured in the hill, in the other two, manure was not used. To one of the rows with manure, and one without, he applied about a table spoonful of plaster to each hill. The potatoes had a yellow, sickly appearance, when they were dressed with the plaster, but in a week recovered, and looked well through the season; and the rows with the plaster could be distinguished a mile from the field. When the potatoes were dug, the result was as follows:

1st row with manure alone, it took 28 hills for a bu.
2d " with manure and plaster, 15 "
3d " plaster, without manure, 20 "
4th " neither plaster or manure, 38 "

ASHES AND LIME.

Dr. Jackson said that ashes and lime alone would render a soil fertile. He had analyzed a soil, a blowing sand which had been manured with ashes alone, for 7 or 8 years, at the rate of 200 bushels to the acre, and found there was 3 per cent gain of organic matter after the crop was taken off. Light soils are the most benefited by ashes, while heavy clay soils are but little. The first effects of unleached ashes are the most powerful, but the effect in succeeding years, show that leached ashes are as good. It should be remembered that the lime which is added to leached ashes, more than repays the loss of the alkali.

Mr. Robinson said he had used ashes and lime, mixed, two parts of the first to one of the latter, as a manure for potatoes: half a pint to a hill, at the time of planting, the soil light and loamy. Where the manure was used, 7 hills produced as much as 12 not so manured. The lime had been slacked some time.

We cannot further extend our condensed extracts at this time. The conduct of the Massachusetts Legislature is deserving of commendation and imitation. It is our firm conviction that if a large portion of the time of the legislatures of the several States, that is now occupied in filling our statute books with useless or conflicting legislation, was spent in discussing such subjects as the improvement of stock, the preparation of manures, or the cultivation of crops, the country would be quite as much benefited, and their constituents receive as little detriment as they now do.

FINE MEAT.

The Centre Market in this city presented a rich show on the morning of the 22d of February last. The butchers purchased for that occasion, some of the finest cattle and sheep that could be had. Among the cattle were two very superior cows; one a full blood Durham, purchased of E. P. Prentice, Esq. of this city, and bred in England by the Earl of Derby; the other, also a full blood Durham, bred by Mr. Van Rensselaer, and purchased of Col. Gilchrist. Both were remarkable animals, and though no particular pains had been taken in fattening them, their beef was pronounced of excellent quality. Mr. Prentice's cow had only been fed with a view of killing her, since November last; and previous to that time, she had been kept on extremely poor food—for two winters, having been fed on *nothing but straw*, in the hope of so reducing her flesh, that she might again breed. Mr. Gilchrist's cow had a calf last spring, and was only five years old, yet her beef was of most extraordinary fatness and quality.

The sheep in market were mostly of the Leicester and Cotswold breeds, from the flocks of Messrs. McIntyre, Bullock, Dunn, &c. They were prodigies of fat—the carcases weighing from 130 to 175 pounds each. We noticed an uncommonly fine wether, a cross of the Cotswold and South Down, bred by Mr. McIntyre.

Liberality in good barns and warm shelters is the source of health, strength and comfort to animals; causes them to thrive on less food, and secures from danger all sorts of garnered crops.

DR. LEE'S REPORT.

In the Assembly of this State, on the 7th ult., Dr. Lee, chairman of the committee on agriculture, to whom was referred so much of the Governor's message as relates to agriculture, and also the annual report of the New-York State Agricultural Society, embracing returns from forty-six counties, submitted the following report:

So far as your committee have been able to examine the manuscript essays and official reports made by the State and County Societies, they appear to be drawn up in strict conformity to existing laws, and therefore your committee do not feel at liberty to alter or abridge them in any respect. Taken as a whole, these documents contain a large amount of information of great practical value to the farming interest of the State. The Treatise of Mr. Gaylord on Insects Injurious to Field Crops, &c.; the Essay on the Introduction of New Agricultural Products, and on the Importance of the Geological Survey in its connexion with Practical Husbandry, &c., are worth many times the cost of publishing all the reports. Hitherto it has been customary to print ten times the usual number for the use of members of the Legislature and State Officers, 500 copies for the use of the State Agricultural Society, and 20 copies for each of the county societies. Believing that these documents will compare favorably with any that have preceded them from the same source, and are well calculated to render the agricultural labor of this great State more productive to the community at large, as well as more profitable to the cultivators of the earth, your committee do not hesitate to recommend the printing of the number of copies above named.

In his late message, the Governor says: "The number of acres of land charged with taxes in 1842, was 27,176,934, valued at $504,254,029." According to the State census of 1825, the number of acres under cultivation was 7,160,967. The same authority in 1835, gives the number at 9,656,426. At this time the number of acres under cultivation, probably does not vary much from 11,000,000. According to the U. S. census of 1840, the number of persons actually employed in rural pursuits, was 445,954; while the whole number actually engaged in manufactures, the mechanical arts, trade, internal, coasting and foreign commerce, was 207,172. These brief statistics demonstrate the important truth that agriculture is the great productive interest of the State of New-York.

Your committee deem it not out of place to inquire whether the half million of laboring people, who cultivate eleven millions of acres of fair farming lands, do now realize as large a return for their capital and industry, as is practicable?

In the returns of the census of 1840, the wheat grown in this State, (12,286,418 bushels,) was estimated at $1,20 per bushel; corn (10,972,286 bushels,) at 75 cents; oats (20,675,847 bushels,) at 44 cents; and hay (3,127,047 tons,) at $10 per ton. At these prices, which are now too high by one-third, the aggregate products of all our rural industry were valued at $109,071,416. Reduce this gross sum to $77,000,000, as it ought to be, and divide that by 11,000,000, the number of acres in cultivation, and the average crop was worth only seven dollars per acre.

From considerable experience, much study and reflection, your committee are of the opinion that the 11,000,000 acres of cultivated lands in this State, might be made to yield, without any additional expense, an average of $3 per acre more of the valuable fruits of the earth, than they now do. In other words, the same labor, which is now measurably lost through ignorance of the laws of nature, through inattention to the constituent elements of all cultivated plants, and of the affinities that govern their chemical and organic combinations in practical agriculture, might, by the aid of plain and available science, secure to our farmers ten dollars worth of agricultural products, where they now get but seven dollars worth. For what purpose does the husbandman toil so hard throughout the year? Is it not to transform certain elements of earth, air and water, into cultivated plants; and these again, into domestic animals, beef, pork, mutton, butter, cheese and wool? And what are these elements of earth, air and water, which the well or ill applied labor of t farmer changes into wheat and other grain, into grass a roots? Where is the practical agriculturist to find t raw material of one good ripe wheat plant; and how m the necessary ingredients be combined and applied to t soil, so as to realize the largest crop at the least expen

To say nothing of the gaseous and earthy elements n cessary to make good firm wheat straw, we now ta over 12,000,000 bushels of the raw material of wh bread from our fields every year, and never stop to i quire whether this system of culture will or will not r our wheat lands of all their bread-bearing elements. N one particle in a thousand of the elements of bread, af entering human mouths, ever finds its way back again to the field from whence it was taken. If we are certa that the benevolent Author of our being will create an annually, 12,000,000 bushels of those particular ingred ents which make that amount of wheat, and will ke good all the elements of straw not returned after the ha vest, then perhaps our fields may not suffer by continuo cropping without renovation. But Heaven will not cr ate one particle of matter for our especial benefit, thoug the two and a half millions of people in New-York sha waste the raw material of 50,000,000 bushels of grai every year, until they shall have no more to waste.

To prevent farther loss, and regain all the fertilizin elements taken from our cultivated lands since their fir settlement, are objects of great public importance. Ma is indebted to agricultural science for the invaluable discovery that not far from 97 per cent of all the element of cultivated plants exist in the air in exhaustless quantities. These are carbon, nitrogen, oxygen and hydrogen the two latter forming water. The combustion of woo and coal, the respiration of all animals, fermentation an the decomposition of all organic matter throw into th atmosphere a vast amount of the ingredients necessar for the re-construction of vegetables and animals. T say nothing of water and its elements, which play an important part in all organic structures, *carbon* is the larges and most expensive element in the production of plant and domestic animals. It is the basis of vegetable mol —"the fat of the land"—and combined with the constituents of water, forms veritable fat and butter. It is som consolation to know that there are no less than seven ton of pure carbon diffused through the air over every acr of land, whether barren or fertile, upon the habitabl globe.

The earthy part of the wheat plant forming less than 3 per cent of its solid substance, consists of silica, (flint,) lime, potash, soda, magnesia, alumina, (the basis of clay,) chlorine, sulphur, phosphorus, and a trace of iron. All these minerals are indispensable to the production of one good wheat plant. Hence, if a farmer had an abundance of all the other elements in his field to grow forty bushels of wheat on an acre, and it should be destitute of phosphorus, that defect would be fatal to the crop. There is good reason to believe that if a practical wheat grower will restore to his field every year all the raw material of that bread-bearing plant, a large crop can be harvested from the same soil year after year, as well as to let it lie idle, or to cultivate other grain for three or four years and then grow wheat again. Persons unacquainted with the very compound nature of wheat, are apt to imagine that the application of *one* fertilizing element, lime for instance, ought to suffice to produce a good crop. They are ignorant of the fact that every kernel and stem of wheat has twelve other indispensable ingredients in its composition. Millions of days of hard labor are annually thrown away in New-York alone, in a vain attempt to transmute one mineral into another. Our farmers are searching for some strange philosopher's stone that will change lime into potash, potash into magnesia, magnesia into flint, flint into clay, clay into sulphur, sulphur into iron, iron into phosphorus, phosphorus into nitrogen, nitrogen into carbon and carbon into oxygen. When a man can make the half of a thing equal to the whole, then he may raise a good crop of wheat where his soil lacks one-half of the elements of that grain.

Your committee believe it practicable to increase the annual products of our present rural industry 33⅓ per ent, without the aid of one dollar additional capital; that they believe that full one-third of all agricultural labor is literally thrown away by its misapplication. The uniform laws of nature will not vary nor accommodate the senseless ignorance of man. Hence it follows that man must apply his labor in strict conformity to the unerring laws that govern the changes of matter, or toil on through life giving two days' work for those necessaries and comforts, which an understanding of the laws of nature would have secured to him in exchange for one day's work. The whole doctrine of eternal hard work and penurious living as the best means of acquiring wealth or the comforts of life, your committee deem unsound. The inevitable effect of this popular system is to degrade and brutify, rather than to elevate our race. Mere muscular labor, mere mechanical power, no matter how great its force, without adequate knowledge to guide and direct it, is far more likely to act wrong than right, for the simple reason that there are *five wrong ways* to do almost every thing, where there is *one right way*.

All men have intellectual organs that require development and peculiar nourishment, not less than stomachs which need daily food. Has not the Creator of man manifested his approbation of human efforts to acquire wisdom, even worldly wisdom, by making the *ignorant* in all ages of the world, the *servants of the wise*.

A knowledge of the arts of plowing, sowing and reaping may do for the purpose of wearing out a productive farm, but something more is necessary to enable its owner to give back annually to each of his cultivated fields the precise elements removed by the harvest, and that too at the least possible expense.

Suppose a farmer now cultivates six acres of land in wheat, to harvest 100 bushels, how is he to manage so as to grow 133 bushels at the same expense? If he can raise 33¼ bushels per acre on four acres, that will give him the amount desired and save the whole cost of cultivating two acres of land. This saving may be set down at $8 per acre, which will give $16 surplus to be expended in purchasing the raw material to produce the extra 66 bushels of wheat on the four acres to be cultivated by a new process. As about 94 per cent of ripe wheat plants consist of carbon and water, charcoal must be an important element in fertilizing the soil. Of the other 6 per cent about one-half is nitrogen, and the other moiety is made up of silica, potash, soda, magnesia, alumina, phosphorus, sulpher, chlorine, and a trace of iron. Let the wheat grower take 100 bushels of charcoal, grind it fine in a bark mill or pulverize it well with flails on a threshing floor, and add thereto five bushels of ground plaster. This would not cost in most farming districts in this State over $[illegible], and if the coal and gypsum be placed in a vat or large tub and saturated with the urine of cattle, or partly moistened with the liquid excretions of the human species, and have five bushels of leached ashes mixed with the mass, it will contain all the elements of 133 bushels of good wheat. In case the urine can not be had, the addition of four bushels of salt will give all the soda and chlorine that is needed, while the ashes will furnish all the potash, silica and magnesia required. The plaster will yield the sulphur and lime, and a bushel of bone dust will give the phosphorus. A little copperas will supply the necessary iron, and the charcoal will not only yield carbon but it will also absorb ammonia always found in rain water when it comes from the clouds.

All these constituents of wheat can be best applied to the soil before sowing the seed, but a top dressing of a compound of coal, plaster, ashes and salt, moistened with whatever urine can be collected, may be applied to winter or spring wheat in April or May, with signal benefit to the crop. Deep plowing and thorough draining are important aids in wheat culture, for reasons which your committee will not stop to explain.

The liberal use of freshly burned lime is very beneficial by the way of correcting any acidity of soil; and also by absorbing carbonic acid from the air, to be given up to the roots of plants, and thereby promote their growth. A pint of human urine contains ammonia enough to supply a bushel of wheat with all the nitrogen it needs. And it is worthy of remark that wheat well supplied with nitrogen in ammonia, will contain from ten to twenty per cent more gluten than it would if it lacked that element, while the wheat that abounds in gluten will make from seven to fifteen per cent more good bread than the same quantity of flour composed almost entirely of starch.

In Flanders, farmers pay forty shillings, or nearly ten dollars a year for the urine of a single cow, for that length of time, to be used in the culture of wheat and other crops. Common sense would seem to teach every agriculturist that he should restore to his fields every particle of the liquid and solid excretions of all animals that feed upon his crops.

A little study of the science of animal physiology would convince every practical farmer that not far from one-third of all the grass, hay, roots and grain that enters the mouths of his domestic animals is needlessly lost, owing to some removable defect in their organic structure. Less than one-half of the solid matter taken into their stomachs is voided by the bowels and kidneys. On an average, more than three-fourths of all the carbon that exists in the food of all respiratory animals escapes through the lungs. The action of these important organs, which never ceases night nor day, governs the elaboration of muscle, fat, milk, and wool, in such domestic animals as are kept for their strength, as the horse and ox; their milk, as the cow; their flesh and fat, as the pig; and their wool, as the sheep.

Your committee do not feel at liberty, inviting as is the subject, to extend this report so far as to explain the means and process by which the organic structure of our six millions of sheep, two millions of neat cattle, and as many swine, can be greatly improved. The loss in one winter by the throwing away of animal heat in this State alone, which heat, be it known, is generated not by burning cheap fire-wood or coal, but by the combustion of the carbon in hay, grain and roots, or of fat in the animal, is not less than four millions of dollars. A man that eats half a pound of beef, two pounds of potatoes, and half a pound of bread, will expel with moderate exercise, carbon enough from his lungs in 24 hours to heat 270 pounds of water from 32 deg. up to blood heat. A knowledge of physiology would be of great practical service to our rural population by teaching them how to avoid many of the exciting causes of disease and protracted suffering.

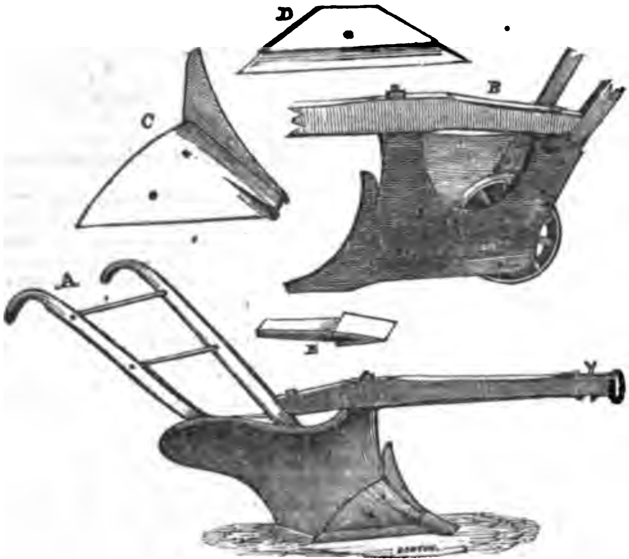
Your committee respectfully suggest that the Legislature might authorize the State Agricultural Society to employ a practical and scientific farmer to give public lectures throughout the State upon practical and scientific husbandry, at no higher compensation to be drawn from the State treasury than the pay of a member of this House, to the great benefit of the agricultural interest of the State. Having visited every rural district and learned the condition of the soil, and in a good degree the precise wants of its cultivators, such person, if otherwise competent, could compile a work admirably adapted to all the peculiar circumstances of our farmers, which might be placed in all our school district libraries, at the expense of the funds of such libraries. A work on practical and scientific husbandry, embracing all the discoveries and improvements recently made in this most important branch of productive industry, and carried home to the fireside of every practical farmer, could not fail of being eminently serviceable to the community at large.

In the opinion of your committee, practical science to be truly useful, should be carried home to the understanding of every mind which controls a pair of laboring hands, that those hands may work at all times to the best advantage. The knowledge of the few, no matter how profound, can never compensate for the ignorance of the many.

There are moral considerations, which might be urged with great propriety in favor of agricultural and mechanical schools, and public lectures upon the natural sciences, inseparably blended with the every day operations of life; but your committee may well leave them to the good sense of the House.

A MOTTO.—The Massachusetts Plowman says—"Farmers cannot afford to keep poor cows, or to keep cows poor."

SINCLAIR & CO.'S PATENT WHEEL SELF-SHARPENING PLOW.



Of this plow, Messrs. Sinclair & Co.
the following description:—"This p
has the advantage of a wheel attache
the land side, *b.* or what may be term
rolling land-side—has a long curved, l
breasted mold-board, *a.* which turns
furrow-slice to admiration; the point
wing are in separate pieces, and are fo
ed so as to be reversed when they bec
dull, thus forming a self-sharpening p
ciple. The point and share are fast
by a plate *c. d.* secured over them by
bolts, which protects them from the
of the front edge of the mold-board.
point is made with either wrought or
iron, and may be used in clean or
roughest lands; the beam of this plow
two bearings on the casting; one on
mold-board and the other on the back
of the land-side, and so attached that it
be thrown to or from the land in a
ment."

Price, with cast point and share, $1
with wrought point and share, $12. M
and for sale by R. Sinclair, Jr. &
Baltimore.

INFORMATION ABOUT SHEEP AND WOOL.

MESSRS. GAYLORD & TUCKER—I received a short time since, the following letter from Samuel Lawrence, Esq., well known as one of New-England's most intelligent and successful manufacturers, which contains information and hints of a useful character to farmers; and therefore permit me to recommend its publication in your widely circulated and useful periodical. A WOOL GROWER.

Lake Ridge, N. Y., March 15, 1844.

Lowell, Feb. 24, 1844.

DEAR SIR—Your esteemed favor of the 8th, covering some questions, was duly received; and I have now great pleasure in handing you replies.

You ask 1st—"What will full blood Paular wool, after washing on the back, waste by the manufacturer's cleansing?"

The American Paular wool will shrink 40 to 45 per cent. I know a flock of Paular and Negretti selected in Spain by George Flower, Esq., and carried by him to the prairies of Illinois, twenty-seven years ago, which yielded 60 lbs. to the 100, two years since. This wool now strongly resembles Saxon; the fleeces weighed 2¾ lbs. This flock had never been crossed with any other blood.

Query 2d.—"What price did Paular command in July last, and what is about the average weight per fleece in general?"

We paid for full blood Montarco[*] wool in July last, 44 cents; the fleeces averaged 3¼ lbs., and lost by scouring, 44 per cent. We bought no full blood Paular wool.

Query 3d.—"Have you any reason to suppose that Saxon sheep are going out of repute?"

I am well acquainted with a great many owners of Saxony flocks, and in no instance do I know that a change is contemplated; on the contrary, every thing is doing to make the wool finer. I believe that by proper care in crossing, the length of staple may be increased without affecting its fineness. This is a desideratum of great importance to breeders, and should receive their serious consideration. A few years ago it was thought by manufacturers that very short stapled wool only would make fine goods. Now the quality of the staple is looked at without regard to its length. I beg you to give this matter your best attention; for if 8 to 10 ounces of wool can be added to every fleece in the country, it will place both growers of wool and manufacturers on such a basis, that no foreign competition could touch them.

The Saxon sheep were carried from Spain and improved in Germany. Why can't the Merinos be brough
to the same height in this country? We have sta
some American wools of great beauty, and finer than
Spanish wools that ever were imported into this coun

The best blood of Saxony sheep is in very high re
in Europe. It is but three years ago that six hun
dollars each were paid in Germany for a large num
to be carried to Russia. I have specimens of the w
Is there any reason why we can not do as well by s
ing with the right blood?

As to encouragement to the wool growers, in
opinion, their prospects were never as good; and am
other reasons, are first: a majority of the people
coming square up to the mark in favor of a "*pro*
ive tariff," and the wool growers have learnt that
kind of tariff, is quite as useful to them with their t
hundred millions in sheep farms, sheep, &c., as it
the woolen manufacturers with their twenty millio
mills, machinery, &c.

Second. There is infinitely more skill employed in
working of wools, and more talent and character in
general management of the woolen business than at
former period.

Third. A number of new branches have lately
undertaken with entire success. The making of *mou*
de laines has been commenced also under the most fa
able auspices; and last, though not least, the hord
"drab gaitered gentry" from Yorkshire,[*] which inf
New-York city for so many years, has been broke
and driven from our shores.

The advance in the prices of all kinds of wool will be
sustained. The article has been depressed below its
lue, all over the world for three years past; but it
now turned, and a considerable advance has taken p
in Europe; the next German fairs will show more
mation in the demand than has been seen for a long t

It is a singular coincidence that when writing yo
this subject, I should this moment hear the report of
death of our mutual friend, H. D. Grove, of Renssel
with whom I have long been on terms of intimacy;
shock to my feelings is very great, for I was since
attached to him. A more reputable and honorable
did not live, and he was truly an honor to his calling.

Your ob't servant, SAMUEL LAWRENC

BOUNTY ON SILK.—The Legislature of Tennessee
passed an act offering ten cents per pound on cocoons,
fifty cents per pound on reeled silk produced within
State.

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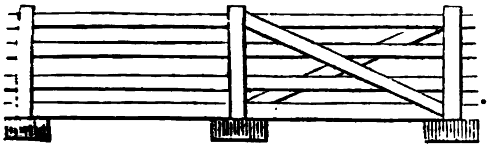
[*] A distinguished variety of Merino.

[*] Smugglers.



FENCES.—(Fig. 31.)

We find in the Maine Farmer a description and figures of a fence as made by Mr. Dennett of Buxton. It strikes us as a good fence, and worthy of adoption where stone for the sills can be had. The regularity of the stones for the sills, can be of no consequence; it is enough that they are of considerable size, and with a flat surface. We copy Mr. Dennett's description in part, and his figures. It has occurred to us, that in many parts of our country where stone is not convenient, blocks of red cedar or locust, of the required length might be substituted for stone, by being bedded in the ground, and the posts secured to them as to the stone.

"I have stone sills from 4 to 6 feet long, 6 inches square, which I lay level on the ground with a flat stone under each end, where the land is wet and soft. On each sill I strap two posts made of 2¼ inch plank; my rails pass between them which are sawn 25 feet long, 6 inches wide, 1¼ inches thick. The plank from which the posts are made should be of the most durable kind of wood, and about 14 inches wide. Saw them into 4 feet lengths. *Set on 2 inches* from each edge at both ends of the plank and saw it in two. See *d.* fig. 32. [At the saw mill, all the posts that a log will make may be cut at once, a great saving of labor.—Eds. Cult.] Now you will have two posts, each 2 inches at one end, and 12 at the other. Fit these two posts to a sill, and mark where to drill the holes for the iron straps, as at *a.* fig. 32." Gains are cut in the inner edge of each post for the rails, 1¼ inch deep, so that when put together, the post appears as in *a.* fig. 32. Before placing together, the posts appear as in *b.* fig. 32. The iron straps for securing the posts to the sills are made 8 inches long, ¾ inches wide, ¼ inches thick. The straps should be let into the sill 2 inches with a dovetail. See *c.* fig. 32. The bottom of the hole in the stone must be the widest, to receive the dovetail of the iron, which is fastened in the stone by a key ¼ inch square, drove by the side of the iron strap. The strap is secured to the posts by large nails or spikes two in number. The first length is broad, as shown in the cut, and the bracing is repeated every 15 or 20 lengths. A pin is put through the bottom rails each side of the posts, and a bolt of three-eights round iron through the posts and top rails as in *a.* fig. 32.

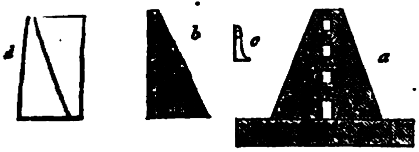


Figure 32.

The cost of this fence is stated by Mr. Dennett to be $1,35 a length of 24 feet, or 92 cents a rod. It appears to us that a cap of 1¼ inch boards nailed on the top of these posts, would give the fence more firmness, a little more height, and the top of the posts more durability.

Another fence of a somewhat similar construction has been described to us, much cheaper at first, but which would be less firm and durable we should imagine, than the one above described. Figure 33 will show at a glance, the construction and appearance of this fence.

In this rough sketch of the fence alluded to, the posts, 3 and 4 inches square, stand on flat stones, level with the surface, and are 3 feet in length. The lower board is 14 inches in width, and the upper 12 inches. The cap piece is 5 inches wide and 2 inches thick. Stakes of durable wood at every post, or at every other one, support a rider made of a rail, or better of a long pole, which will reach several lengths. The distance of the posts will be determined by the length of the boards used; it should not be over 10 or 12 feet. As the bottom of the posts are not secured, we should apprehend that winds or animals would shove them from the stones; but if fastened by an iron, spiked to the post, and let two inches into the stone, the bottom, and indeed the fence itself, would be immoveable, so long as the stakes remained sound. The black dots show where the spikes would pass to secure both the bottom pieces at the posts, and the boards themselves.

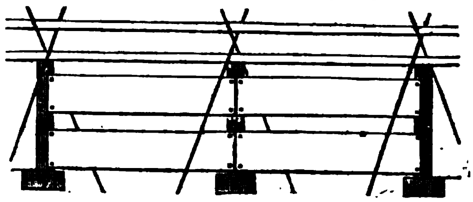


Figure 33.

SHEEP IN VERMONT.

We have received a communication, signed "Old Chittenden," in reference to sheep, their improvement, &c. An unusual press of matter, prevents our giving anything more than a brief notice of its contents. The writer states that he has traveled extensively in 23 States of the Union, and he has nowhere seen sheep that produce as much wool of the same quality, with the same expense of keeping, as some flocks in the State of Vermont. He says there are farmers who have so improved their sheep, as to clip from four to five pounds per head; though when they began, their sheep only averaged two and a half to three pounds. He remarks, that as *profit* should be the main aim of the farmer, he is desirous of learning what methods of breeding and keeping sheep, have been found most successful in this respect, and he wishes practical men would communicate the results of their experience.

"Old Chittenden" speaks of keeping sheep on the western prairies, and on this point, differs from his neighbor, Mr. Jewett. The *dry* prairies, "Old Chittenden" thinks will make the very best sheep pastures. He says he speaks from his own observation—having been much on the prairies. He thinks the prairie farmer will not probably rear as large sheep, or cut as heavy fleeces as the Vermont farmer, but the former will produce them at half the expense.

POINTS OF A HORSE.

It was formerly said that a horse should have three qualities of a woman, three of an ox, three of a mule, three of a deer, three of a wolf, three of a sheep, three of a fox, three of a cat, and three of a snake. Mr. Hooper of the Western Farmer and Gardener, gives the following interpretation of this, from Denton Offutt, the animal manager:

"Three of a woman, deep chest, full bosom, long hair Three of an ox, eye, nostril, joints. Of a mule, hoof, strength, perseverance. Of a deer, head, legs, hair lays well. Of a wolf, breast, loin, lope. Of a sheep, face, patience, mildness. Of a fox, ear, tail, foot. Of a cat, walk, action, leap. Of a snake, sight, memory, and moulting."

Offutt, whose name is mentioned above, we are told, is much distinguished in Kentucky, for his success in taming animals. His rules, (as given in the Farmer and Gardener,) seem to be simple and rational. His first object is to confine the animals in a small space. Then approach them slowly and quietly—induce them to eat salt from the hand—rub them all over with the hands—always moving the hand with the direction of the hair—speak softly and soothingly to them, rubbing them at the same time about the face and head. Feed them only moderately, so that they may be always ready to take food and water. Never strike them a blow.

To prevent a horse from lying down in harness, he says, "tie him down with a rope, so that he cannot get up, and keep him so ten hours. Then let him get up, and work him for an hour. Give him water from your hand, and feed him; this tends to make him like you, removes fear, and restores confidence."

AGRICULTURAL MEETING.

The first agricultural meeting at the hall of the New-York State Ag. Society, took place on Thursday evening the 14th inst.

Mr. RHOADES of the Senate, was chosen chairman; Mr. HUMPHREY, Mayor of Albany, opened the discussion. He said he had a farm a few miles from the city—the soil sandy. A year ago last spring, he carried out about 250 bushels of horn-shavings. He planted about three acres to corn, and put a very small quantity, only what could be held between the thumb and finger, in each hill, and used no other manure. The corn grew surprisingly, so much so, that it attracted the attention of the Shakers as they passed by it; and they wanted him to have the crop particularly measured at harvesting. He did so, and found there was 126 bushels of ears, or 63 bushels of shelled corn to the acre. The corn was the small eight rowed kind—was all sound and very heavy. He thought the land would not have produced over 15 bushels per acre, if he had not used the horn-shavings or other manure. He also used the horn-shavings for potatoes, and they did remarkably well.

Mr. BEMENT said he had used horn-shavings. He usually made them into compost with anthracite coal-ashes, muck, &c. He had applied this mixture to corn, potatoes and turneps, and found it excellent. He had used hog's bristles; got about 60 bushels, one year, and used them with potatoes, putting a handful in a hill, at the time of planting. The season was a moist one. Where the bristles were put, the yield was double what it was in other parts of the field, where he used the common quantity of stable or yard manure, though the soil was quite similar. He had also used the refuse of a glue factory, (hair, bits of skin, &c.) which is a powerful manure. He had used fish, also. A few years ago, he got 6 barrels of damaged fish, which he used as manure. He facetiously remarked that he was fond of fish and potatoes, and he thought he would try the effect of mixing them together at planting time. He therefore put half a fish to a hill, on one-half the lot, and on the other half, he put manure. (We did not understand him to say how much manure he used per acre.) The soil was a stiff loam. Where the fish were put, the tops were best through the season, and the yield of potatoes was double what it was on the manured part. The effect of the fish was shown in the succeeding crops of carrots, oats, &c. for three years.

Prof. EMMONS said he thought horn-shavings were a good manure—probably better than bones. Both contain phosphorus and ammonia, and bones contain lime. Ammonia is an essential ingredient in Indian corn, being found in the grain. Liebig attributes the action of gypsum to its power of fixing the ammonia; that is, he supposes it to absorb the ammonia existing in the atmosphere, which is thus brought within reach of the plant. Prof. E. would account principally for the action of horns, bones, &c., from their containing the food or elements of plants. He thought the action of the fish spoken of, was prolonged by the animal matter being combined with salt. He spoke of other substances as manure. Nitre, he said, has a tendency to produce large stalks, but not so much grain. In regard to the existence of ammonia in the air, and its being brought down by rain and snow, Prof. E. said he had by evaporation, detected it in snow—it was very perceptible by its scent, and affected the olfactories in the same manner as the hartshorn of smelling bottles.

Dr. LEE spoke in reference to the crop of corn raised by Mr. Humphrey. He thought the ammonia of the horn-shavings produced the principal effect; but it was not wholly by supplying the plant with this substance as food—it had a stimulating effect—by which more root and leaf was formed, and the plant enabled to seek and obtain other food, both from the earth and atmosphere. Plants contain 50 per cent of carbon, and they absorb this substance largely by their leaves; hence, by inducing the plant to put out leaves, its means of obtaining carbon are increased. Common sal ammoniac has been found highly beneficial in stimulating the growth of corn—the corn being soaked just before planting, in a solution of this substance. He alluded to charcoal, which he thinks is the valuable substance for absorbing ammonia. It is f ammonia that the gluten of wheat is formed, and w charcoal is applied to the soil, ammonia is given o the growing wheat plant requires. To show the ab ing power of charcoal, he mentioned that Port win ses its color on being run through it. He looked f great increase in the yield of wheat from the use of c coal; he had himself already produced wheat heads inches long, and containing 140 kernels each. He b ved that a yield of 60 bushels to the acre was attain in this country. The English, said he, have now beyond that, and have produced 80 bushels per acre. thought ashes would be a very valuable manure on sandy soils in the neighborhood of Albany. The po would render the flint of these sandy soils, soluble, which material for the straw would be provided, a by adding charcoal and bones or horn-shavings, the a monia, phosphorus, &c. necessary for the grain, wou be supplied. If the charcoal was saturated with urine, would be better, because this would give the elements the grain at once. He would also use some lime on su soils; though where lime is scarce, he would recommen only a moderate quantity, say 10 bushels to the acr This he would apply at the time of sowing the see Clay would probably do well on these sandy lands. Cl has an alkaline quality, and hence its action would be some degree similar to ashes; besides it would act me chanically, by rendering the soil more retentive of wa ter, &c.

Dr. L. alluded again to Mr. Humphrey's corn crop Mr. H. took off 60 bushels of corn per acre. Now th horn-shavings did not actually make half this. Wha then was taken from the soil? In the stalk and leaf, h took off that which in some shape should be returned the land. If when the corn was husked, the stalks ha been immediately plowed into the land, he thought th matters which the corn had taken out of it, would hav been nearly restored. If the stalks were eaten by cattl then both the dung and urine should be put back on th land.

Mr. J. C. FULLER of Skaneateles, said he was please to be at this meeting. He found himself among scient fic men, and perhaps it would be better for him to do a friend once told him he did—that is, keep still and se what others did—but he would make a few remarks. H would repeat that he was glad to see a disposition to en courage such meetings; *farmers* should come here, an bring their sons with them. He had noticed the remark that had been made about horn-shavings and other sub stances, used as manures. He had been interested what had been said; but he wanted to know one impor tant thing which he believed had not been mentione and that was, how much these substances *cost*—how muc *profit* there was in using them. His object was to se how much *money* could be made by any plan or mode o operation.

In regard to the mode of applying lime, he thought th best way was to put it on the ground, before it was sl ked, in small heaps, and throw a little earth over it, an let it thus remain till it is slaked.

He spoke of the agriculture of England, his nativ country. He said he had spent a considerable part of th last year in that country. Great improvements had bee made there within a few years. It might be said th they were much in advance of us; yet many of the modes of farming are not adapted to our circumstance We must, therefore, have a system in some degree pecu liar to ourselves; and it should be the object to seek suc modes as are adapted to our climate and general condi tion. He would not discourage improvement; he was i favor of it, but he thought farmers might well use cautio in adopting untried schemes. The chemist may mak useful suggestions. He had formerly some acquaintanc with chemistry himself; but he believed men might b good *farmers* without being good *chemists*. He knew many such in England and in this country.

Some remarks were made by the chairman, also b Mr. HORSFORD, Prof. HALL, and Mr. STRONG, which fo want of space, we are obliged to defer.

The meeting was adjourned to Thursday evening next

NATURAL FERTILITY OF WESTERN LANDS—DETERIORATION FROM CULTIVATION, &c.

The west is justly famed for its fertility. The alluvial banks of the Ohio, with its tributaries the Muskingum, Scioto, Miami and Wabash, as well as many other portions of the great valley of the Mississippi, are probably unequaled for richness, and the luxuriance of their productions, by any portion of the globe. The citizen of the northern and less fertile sections of our country, on passing through these rich vales in the midst of summer, and for the first time beholding the exuberant vegetation which there springs almost spontaneously from the earth, is struck with astonishment! From some points, his eye rests with admiration on the dark-green corn-fields, stretching for miles before him, and embracing at a single glance thousands of acres! Neither is his wonder lessened as he views the stately magnificence of the plant itself. The corn which the stranger here sees, is not the dwarfish thing which he or his fathers may have cultivated on the rocky hills of New-England, but a larger variety of that "*king of vegetables*," whose topmost leaf is higher, perhaps, than the walls of his own dwelling! Here may be seen from 100 to 400 acres, and sometimes even 600 or 700 acres of corn, belonging to a single individual; from 100 to 300 head of cattle, and 100 to 500 hogs being annually fattened from the produce of a single farm.

But the extraordinary productive power of these lands, *appears to the best* advantage when the length of time to *which they have* been subjected to an exhausting cultivation, is considered. We will cite a few instances as examples. Mr. F. Renick, a distinguished farmer near Chilicothe, Ohio, has cultivated corn near forty years successively, on his farm, and has obtained an *average* of *sixty bushels* per acre—no manure having ever been applied.

The crop of corn for which the Muskingum Co. (O.) Ag. Society gave the premium last year, was grown by Mr. Hosea Woodruff, near Zanesville. The land on which it grew, had been cultivated without manure, twenty-eight years—twenty-six years of which, it had been in corn. There were fifteen acres in the lot, and Mr. W. had about fifty acres of nearly equal product. The crop was cut and put up in shocks of as nearly equal size as practicable—a portion of the shocks, which it was thought would show about an average of the yield, were husked and measured; and assuming this as an average, the product was *sixty-nine bushels* per acre.

Other instances as remarkable might be given, but these will answer our purpose.

From a cursory glance, the idea might be entertained, that all circumstances most happily conspire to render this, of all other regions, the most desirable to the agriculturist. But by a more minute examination, it will be seen that in this case, as in most others of a similar nature, the advantages and disadvantages are so nicely balanced, as to leave no cause for charging nature with partiality in the bestowment of her favors. As Goldsmith, (with a little variation,) has said,

——————— If countries we compare,
And estimate the blessings which they share;
Though men may flatter, still shall wisdom find
An equal portion dealt to all mankind.

The farmers of the fertile region of which we have spoken, are subjected to immense risk and trouble in conveying their produce to market. Their beef is sold "on foot" in the eastern cities—Baltimore, Philadelphia, New-York and Boston—their cattle being thus obliged to perform journeys of from four hundred, to more than a thousand miles in extent. The soil of a very considerable portion of that country, is not suited to the production of wheat; Indian corn being almost the only grain that is cultivated; and the difficulty of transporting this article to a distant market without damage, or without incurring an unwarrantable expense, obliges the farmer to feed it to cattle and hogs, which, with other circumstances, tends to keep beef and pork at a very low price.

But we have thus far spoken only of the *best* soil under good cultivation; and it should by no means be inferred that what we have said of such lands, will apply universally, or even generally, to the western country. It must not be inferred that the soil of the whole of that region, is of such inexhaustible fertility. There are poor lands there, and a very large portion of all, may be said to be of not more than medium quality; yet in the cultivation of the inferior soils, as little attention is generally paid to prevent exhaustion, as with the richest ones. The consequence is, that the older settled portions of the west, exhibit, in too many cases, the most striking evidences of rapid deterioration. We speak more particularly of some of the hilly and wheat-growing districts of Ohio. The most prominent defect in the husbandry, is the too frequent use of the plow, and running the land too much to grain crops, without manure and without the use of clover or grass; by which course the land is much impoverished, and greatly injured by the washing of rains, and by the growth of foul stuff which the slovenly cultivation has permitted to spring up. So bad has been the management, that land which only a very few years ago produced good crops of wheat, now yields only a scanty harvest that scarcely pays for the gathering. But the injury from bad cultivation is not confined to the hills; it is often seen on the level lands and "bottoms." No soil but that of the very richest quality, could be subjected to this devastating course, without exhibiting signs of deterioration.

The system of *renting* which prevails in many districts, is the cause of much bad management. The tenant occupies the land only on an annual lease, perhaps, and the terms are such, as in connexion with the low prices of produce, oblige him to go on the *do-for-the-present-plan*; the *skinning* course is the only one for him. The present crop is the only one thought of. The fields become hemmed in with bushes and brambles; elders and rank weeds gradually get possession of favorable spots in the interior, and they are left to grow and flourish, gaining strength and wider possession every year, because each occupant cannot (or supposes he cannot) afford to eradicate them. Neither are these appearances confined to rented land; they are seen under the management of the owner himself.

As before observed, but little care is used in saving or applying manure; the first settlers appearing, too generally, to have adopted the strange idea, that *all* the land would alike bear continued cropping, without giving to it any return. So common seems to have been this notion, that it is not very unusual to see the stables and hog pens, (where such things as hog pens are used,) placed in situations, where the manure may be got out of the way without the trouble of carting it. For this purpose, they are sometimes placed near steep banks, or over small streams or "*runs*," where as the manure falls, it may be carried off by the water. More than one instance has been seen, where haying failed to secure the most *favorable* site, the stable has been actually pulled down and rebuilt in another place, to avoid the inconvenience occasioned by the accumulation of manure! And this too, where the stinted crops showed the most obvious necessity of returning to the impoverished soil some portion of those fertilizing substances of which it had been so unwisely deprived.

In this section of country, as in others where the same wasting course is praticed, the last remedy, the grand escape from all its troubles, is to "sell out" and emigrate to the west, the *west*, *west*, that *Hesperian Elysium*, which like the beautiful rainbow, recedes as it is approached, leaving its visionary pursuer in disappointment at last. Yet will this *ravaging* population move on, spreading desolation as they go, till having overleaped the Rocky mountains, and being finally checked by the wave of the Pacific, they will probably *weep* that there are "no more worlds to conquer!"

Let not our remarks on this subject be misunderstood. Although the practices we have been here deprecating are far too common, yet examples of good farming may be found in the west, that will bear a comparison with any in other parts of the country. It is only to be regretted that such instances are too rare.

Cure for Corns.—Our correspondent, Mr. John M. Johnson, says corns on the toes may be removed by two or three applications of the *oil of spike*, before going to bed.

COMMON SCHOOL LIBRARIES.

We have received the "Second Annual Report of H. S. Randall, Superintendent of Common Schools of Cortland Co., together with a Special Report on School Libraries; prepared by direction of the Superintendent of Common Schools of the State of New-York;" and have examined it with great interest and satisfaction.

The first part of the Report is devoted to an exposition of the state of schools in Cortland county, and some suggestions as to the best methods of rendering our admirable system still more effective. Mr. R. expresses his conviction "that the condition of the common schools, as well as the standard of teacher's qualifications, is manifestly and steadily improving;" and in this opinion we fully concur. Among the suggestions for the further improvement or advance of the system, is one, that the State Superintendent visit annually, say half of the counties in the State, when a convocation of the teachers of the counties, with drafts from the several schools would be in attendance; an event which would form an incitement and reward to exertion in the scholar, and skill and attention on the part of the teacher. We have no doubt that such a course, if practicable, would be attended with the best results. It certainly deserves consideration.

The second part of the Report, occupying about 30 pages, is devoted to the subject of Common School Libraries, and is evidently the result of much observation and reflection on the workings or this important part of our system. In the language of Col. R., "New-York has the proud honor of being the first government in the world, which has established a free library system adequate to the wants and exigencies of her whole population. It extends its benefits equally to all conditions, and in all local situations. It not only gives profitable employment to the man of leisure, but it passes the threshold of the laborer, offering him amusement and instruction after his daily toil is over, without increasing his fatigues or subtracting from his earnings. It is an interesting reflection that there is no portion of our territory so wild or remote, where man has penetrated, that the library has not peopled the wilderness around him, with the good and wise of this and other ages, who address to him their silent monitions, cultivating and strengthening within him, even amidst his rude pursuits, the principles of humanity and civilization." The importance and certain influence of our School Libraries in giving tone to the moral character of our population, is strongly enforced; and as a necessary consequence, the great care of selection is urged upon those entrusted with this duty. New-York owes much, in our opinion, to the present able State Superintent, for the decided and correct stand he has taken on this subject, for arresting the flood of trash, of "tales of atrocity, seduction, or sickly sentimentality," which was beginning to overflow these repositories of knowledge, and convert what may be one of our greatest blessings, into a source of almost unmixed evil.

The kind of books most suitable for school libraries, their size, useful as distinguished from amusing, juvenile books, moral tendencies, sectarian books and what is to be understood as such, political books, miscellaneous books, &c. &c., are all respectively treated, and in an able manner. On what is usually termed sectarian works, the report is peculiarly lucid and conclusive; and though some may possibly be found to dissent from the conclusions arrived at, they will without doubt, be satisfactory to the great mass of those interested in our school libraries. The same may also be said of his remarks on what are termed political books.

Our acquaintance with the books most read in these libraries, and our knowledge of the class of young persons most likely to be benefited by them, and form their habits and tastes from their perusal, induces us to concur with his remarks made under the head of "juvenile books," to a great extent. The child between six and twelve years, requires a very different class of books from the youth of from twelve to sixteen; but too many of our school libraries, show no recognition of such a distinction; and while mental aliment in abundance is provided for the last class, the first seems to have been almost entirely overlooked. The habit of reading in most children, is acquired early, or not at all; the importance of book that will interest such, is apparent, and we are glad t find Col. R. recommending such books as "Parley' Magazine," and the "Rollo Books," to a prominent plac in the school library.

We thank Col. R. for his valuable Report, and hope i will find a place in every school district in the State. Fo the length of this notice, we offer no apology. The object of the Cultivator is to improve the "Mind" as well a the "Soil," and every thing that has reference to the instruction of the young, is clearly within the scope of ou publication, and on account of its intrinsic merits, deserves a prominent place.

STATE PREMIUM ON CORN.

If the reader of the Cultivator will turn to page 53 o the current volume, he will see that in addition to th usual premium for the best corn crop, there are also thre premiums of $25, $15 and $10. for the best conducted experiments in the culture of Indian corn; not less than on acre to be experimented upon, and the report to embrac every detail necessary to a full understanding of ever part of the proceeding.

When it is recollected that corn is one of the most important crops, if not *the* most important one cultivated i the United States; that there is not one on which goo culture and good management produces more magical effects; that there is none in which the plant is more readily improved in productiveness by care and skill; an that all must admit there is a most lamentable want o knowledge among farmers as to the best mode of planting, manuring and cultivation, the importance of thes premiums will be found second to none offered by th Society, and we hope will call into requisition the skil of many of our best cultivators.

Every one who enters upon the experiment, will o course choose his own method of operating, but there ar some things requisite to the completeness of the experiment, and necessary to be embraced in the reports mad which it may be well enough to mention here.

In the first place, the natural condition of the soil, i geological and mechanical composition, as far as practicable, the previous crops and treatment for two or thre years, the preparation for the crop, plowings, harrowings, manurings, &c.

In the second place, the kind of corn used for see should be fully described; the quantity used per acre stated; the manner of planting, whether in rows, drills, &c. whether manured in the hill, and what manure use whether top-dressed, and whether the plants were hille or the surface left level.

In the third place, the treatment of the crop; the number of hoeings; the securing of the crop, whether b cutting up or by topping; the measurement of the cro whether by weight or by measure, with the cob or shelled, and the time of doing it; in short, every thing th can give an accurate knowledge of the time, labor an expense of producing the crop, or the several parts of i

It seems to be particularly desirable, and we know to have been the intention of the proposer of these premiums, that there should be as much diversity of cultur introduced into each experiment as possible. That th effect of different methods and distances of planting, o different kinds and quantities of manures, and differen modes of application, different modes of culture and curing, and the difference of labor and expense in each cas may be known, as compared with the product, and guide to the operations of the farmer in corn culture b established, so far as such experiments will establish, suc variations in each experiment would seem to be prope We throw out these suggestions at this time, in the hop of calling the attention of farmers to the subject, and induc ing if possible, many to enter the list of competitors.

New variety of the Turnep.—Mr. Breck, edito of the N. E. Farmer, at a late agricultural meeting a the State-house, Boston, spoke of a new kind of turnep called the "Early Snow-Ball," which he says is an improvement on the White Dutch, and is decidedly superio to any yet cultivated.

NOTICES OF BOOKS, PAPERS, &c.

Farmer's Encyclopedia and Dictionary of Rural Affairs, by C. W. Johnson, Esq. adapted to the United States by G. Emerson. This work, which has been issued in numbers, is now completed, and is offered for sale at $4. It is an excellent publication, and we trust it will find a ready sale. The American edition has received many additions, which will render the work more valuable than the English edition. It is published by Carey & Hart, Philadelphia.

Prize Essays on Manures.—We have been furnished copies of Dr. Dana's Prize Essay on Manures, which was noticed in the last volume of the Cultivator; and the Prize Essay read before the Berkshire Agricultural Society, at its meeting in October, 1843, by Asahel Foote, Esq.

Of Dr. Dana's Essay, we can only repeat the commendation of its matter and its manner, we have before given. It is at once scientific and practical; it gives the effect and the cause, and we think no farmer can peruse it without advantage.

Mr. Foote's Essay is a most valuable compilation; well arranged, plain in its statements, and abounding in facts. It shows a close investigation of the subject, and a thorough acquaintance with the best sources of information on this topic; and is alike honorable to the writer and the society that called him out. That these works will have an extensive circulation, and do much towards reforming the erroneous practices too prevalent among farmers, in their preparation and treatment of manures, we cannot doubt.

Prof. Liebig's Familiar Letters on Chemistry.—Mr. Campbell of Philadelphia has furnished us with a copy in a neat pamphlet form, of this late production of Prof. Liebig's; and we should notice it more at length, had not a correspondent in a late number, given an able and satisfactory account of its contents. It contains 16 letters, and consists mainly in a recapitulation of the doctrine advanced by him in his former great works, and an explanation of some points on which he appears to have been misunderstood. They exhibit evident traces of the profound intellect and persevering investigation, which mark his other publications, and which so far as the chemistry of animals and vegetables is concerned, has created a new era in science.

Geology for Beginners, by G. F. Richardson, of the British Museum. Second edition—Longman & Co., London; Wiley & Putnam, New-York. We acknowledge the reception of a copy of this valuable work from the London publishers. It comprises a familiar explanation of Geology and its associate sciences, Mineralogy, Physical Geology, Fossil Conchology, Fossil Botany and Paleontology. As a work for beginners in the study of Geology, it seems admirably adapted. The contents are arranged in so interesting and attractive a light, that when the examination is once commenced, it is sure to be continued. The book is accompanied with a handsome frontispiece, representing the shores of the primeval ocean, when the vegetation of our globe consisted only of those trees and plants, the remains of which are now discovered buried beneath its surface—when the only animals were those of the lowest orders. Reptiles, some of which are of enormous size, are seen in the water and on the land; and some have even the power of flying in the air. We most cordially recommend the work to all who feel interested in such studies.

Simmonds' Colonial Magazine—*A Journal of Literature, Art, Science, Commerce and Finance.* Edited by P. L. Simmonds, London. The principal design of this work seems to be that of giving correct and valuable information relating to the colonies of Great Britain; but it also collects and disseminates much useful intelligence on the commercial and political relations of the world in general. Judging from the two numbers before us, and from the acknowledged ability of Mr. Simmonds to conduct such a work, we have no doubt it will prove highly interesting. Among the contents of the numbers received, are the following articles:—Navies of the world—Original Treatise on the cultivation of the Sugar Cane—Notes of a residence in Van Dieman's Land in 1842-3—Recollections of Algeria in 1843, with illustrations—The Oregon Question—Culture of Cotton in Jamaica—State Affairs in New Zealand—Bituminous lakes in Texas, &c.

"The Farmer's Mine."—Mr. Heermance, the author of this work, writes us that our "notice of it last fall, has done and is still doing him great injury." He says—"Among other things, I am charged with the grossest plagiarism." In this he thinks we have done him injustice, inasmuch as he says in his preface,—"In the following compilation, I have selected largely from the Farm House of the 19th century, also from Dana, Gaylord, Liebig," &c. This general acknowledgment, however, in our opinion forms no excuse for the manner in which this book is got up. Parts of it are *credited* in the body of the work to the several authors alluded to, while other and *much larger* portions are given as apparently original. For instance, the "Introduction," occupying six pages, appears as original—at least as much so as any other part of the book—whereas it is copied word for word, with the exception of eight lines, from the Prize Essay of Mr. Gaylord. The title-page says the work contains "much new and important information on the subject of manure," and the person by whom it was "revised and corrected," says that is "one of the most valuable works on manures which has been issued from the press for a long time"—and that the author "has been some time a practical and scientific agriculturist," and "recommends nothing, the value of which he has not himself tested." We shall be greatly obliged if the author or revisor will inform us how we are to distinguish between the *original* and *selected* portions of the work, that we may know what part of it contains the results of Mr. Heermance's experience.

The Central N. Y. Farmer.—At the commencement of the present year, this paper, published at Rome, appeared in a new form and new typographical dress—a very decided improvement both in form and appearance. It is edited by C. N. Bement, B. P. Johnson (Cor. Sec. of the State Ag. Society,) and E. Comstock—all well qualified to make—as they do—an excellent paper. Monthly, at 50 cents a year.

New Genesee Farmer, edited by M. B. Bateham, Dr. D. Lee, and T. C. Peters. Published monthly at Rochester, at 50 cents per annum, in advance. It is only necessary to announce the names of the editors, to show that it is conducted with skill and ability.

The Prairie Farmer.—This excellent and well filled sheet, commenced its 4th volume with the present year. It is edited by J. S. Wright and J. A. Wight, and is one of the very best of our agricultural periodicals, being ably conducted, with a large list of contributors, and beautifully printed. Monthly, at $1 a year. It will give us much pleasure to order it for any of our friends, who may wish to know what is doing in the prairie country. Published at Chicago.

Western Farmer and Gardener.—This work, commenced by Mr. E. J. Hooper, and afterwards managed by Messrs. Affleck and Foster, has now passed into the hands of Mr. Hooper (its former editor,) and Mr. Chas. W. Elliott. It has lately assumed more of a horticultural character, and in this capacity, as well as that of an agricultural journal, we are satisfied it will prove eminently useful to the west. Each number contains one or more copper-plate engravings of fruits, by Mr. Foster, which are generally exceedingly well executed. We sincerely recommend the work as worthy the patronage of the western farmers and gardeners. It is published monthly at Cincinnati, at $1 per annum.

The Western Cultivator.—A dollar monthly commenced at Indianapolis in January, by W. T. Hatch. Well edited, and handsomely printed.

British American Cultivator.—This is a spiritedly conducted agricultural paper, which has now reached its third volume, published at Toronto, U. C. It is issued monthly, in a quarto form, with 16 pages, at a dollar a year in advance. Edited and published by W. G. Edmundson.

Canadian Agricultural Journal.—We have received the first three numbers of this paper, lately commenced at Montreal, L. C., edited by **William Evans**. This is an octavo of 16 pages, well filled. It appears to be well deserving of patronage. Terms, one dollar a year in advance.

Medico-chirurgical Review.—This is a work which deserves extensive patronage, as its contents cannot fail to be interesting and useful to all who have the opportunity of perusing them. Among the numerous articles in the Jan. number, we have been particularly interested, (as pertaining more to our vocation,) with the notice of Lectures on Comparative Anatomy and Physiology of the Invertebrate Animals—Physiological Anatomy and Physiology of Man—Glanders and Farcy in Horses and in Man, from the Veterinarian—remarks of M. Dumas on the Fattening of Cattle, &c. &c. This Review is published quarterly, by R. & G. S. Wood, New-York, at $5 per annum.

DEATH OF HENRY D. GROVE.

Soon after our last number went to press, the news of the death of our much respected friend, H. D. **Grove**, Esq., reached us. With the general and unfeigned regret which is felt in view of this event, we most sincerely sympathise. At our request, a friend has furnished us the following obituary:

Died, at his residence in Hoosick, Rensselaer co., N. Y., on the 22d of February, **Henry D. Grove**, Esq., aged 40 years. He was a native of Germany. Possessing a spirit of enterprise, and a soul uneasy under the arbitrary restraints of European government, he early in life sought relief therefrom by emigrating to this country, about eighteen years since. He soon made himself familiar with the language and character of our people. By his correct deportment, his intelligence and enterprise, he commended himself to an extensive acquaintance of admiring friends. The respect which he commanded, arose not from adventitious circumstances. His was not the reflected light of a "long and illustrious line," grown dim in its passage down the vista of time; but it was the clear, transparent ray which emanates only from true genius and real worth. With a mind possessed of an unusual share of intelligence, generous and refined in his taste and feelings, honourable in his intercourse, pleasing in his person and commanding in his address, he belonged indeed to "nature's nobility." Mr. Grove was an enlightened agriculturist; theoretic without being visionary, and practical without rejecting the improvements and advantages derived from a proper application of science, he contributed much to its advancement within the sphere of his influence. He was particularly devoted to sheep husbandry, and has rendered a valuable service to this country, by disseminating knowledge in the management of flocks. He was the first and principal importer of the Escurial Saxony sheep, which have contributed so much to improve the quality of the American fleece, and consequently elevate the character of our woolen fabrics. He was one of the pioneers, the founders of our State Agricultural Society, and has continued one of its most useful and efficient friends. The county in which he resided, the neighborhood where he lived, will long have cause to regret his loss. Popular education, and indeed most of the benevolent enterprises of the day, have lost in him a warm advocate, a patron and friend. In the social circle, he was highly esteemed; and in domestic life, he sustained fully the responsibilities of those tender relations. But he is gone. The angel of death, with an aim,

> "Sure and steady as the eye of destiny,"

has made him her own. No more shall we hear his merry laugh; no more be greeted by his happy salutations. He fell suddenly; in the meridian of life, in the full vigor of manhood, in the midst of his usefulness, was he stricken down. He fell in a land of strangers, far, far from his kindred and his native home. Yet he went down to the grave followed by an unusual concourse of friends; with a reputation unspotted, and a character untarnished. Honored and esteemed in life, he will be deeply lamented and mourned in death. His memory will inherit a "green old age," bedewed by the tears of an afflicted family, and an extensive circle of friends.

SUMMER WHEAT.

There are large sections of our country in which, owing to the character of the soil, or a defect in its preparation, winter sown grain does not usually succeed: and the chances of failure from freezing out is so great as to render the attempt of fall sowing wheat, of doubtful propriety. In all such places, the culture of spring wheat is of the first importance, and fortunately, when conducted in a proper manner, rarely fails of a handsome remuneration for the labor of the farmer; and even where winter wheat succeeds well, circumstances may render it desirable to grow more grain than can be sown in the fall, when a few acres in summer wheat will prove a profitable crop.

Spring wheat requires that the soil should be in good condition, clean or free from weeds, and hence succeeds generally better after root or hoed crops, than on freshly manured lands. Recent manuring, unless with thoroughly decomposed matters or compost, is injurious, as giving too rank a growth to the straw, causing it to lodge or fall, and preventing the filling of the kernel. We have rarely found summer wheat to fail of a good crop, sown after potatoes or corn, to which manure had been liberally applied. We have also grown fine crops of this grain on sward lands or clover lays, turned in the fall, rolled closely, and allowed to pulverize by the winter's frost. We prefer fall, to spring plowing in this case, as, unless extraordinary matters forbid, land can rarely be turned and fitted for sowing, as early as this grain should be put in the ground.

In our culture of this crop, we have succeeded best with grain sown early. It has rarely failed, thus put in; it gets its growth before the intense heats of summer come on; it is not so liable to fall, and what is of still more consequence, the berry will be fuller and heavier, and the yield greater than if the sowing was longer delayed. Where the wheat worm has infested this crop, very early or very late sowing, has been found one of the most effectual preventives. Sown before the middle of April, or after the middle of May, the grain generally escapes; in the former case, the insect not appearing until the proper state of the grain for the deposition of the egg has passed; and in the latter case, the period of the insect has usually passed before the grain comes to the stage in which it suffers most from the fly.

Few crops are benefitted more by change or choice of seed than this; but whatever may be the kind of seed, it should never be sown without a thorough preparation. Soaking in brine, carefully skimming it during the process, and then drying in caustic or new slaked lime, has with us proved the best course of treatment. These salts not only contribute to giving the plants a vigorous and healthy start, but tend to keep it free from smut; a disease to which this grain is liable. Summer wheat will not make superfine flour, it having a slightly yellow cast, but it makes superior bread, containing a large portion of gluten, and sufficiently white for all useful purposes. On favorable soils, the yield is from twenty to thirty bushels per acre.

Death.—Died in this city on the 8th of March, of consumption, Mrs. **Mary S. Tucker**, wife of the proprietor of this paper, and daughter of the late Eebenezer Sparhawk, Esq. of Rochester, Vermont, aged 38 years. Her life was a beautiful exhibition of the principles of the Gospel, and her death, that of the firm consistent christian, peaceful and happy.

INFORMATION WANTED.

Drill Barrow.—I observe in the second volume of the Transactions of the N. Y. State Ag. Society, a notice of a drilling machine invented by Jonathan Battey, of Peru, Clinton Co., of uncommon excellence. Will the inventor favor the readers of the Cultivator, with a description? Much difficulty has been experienced in procuring such as are adapted to sowing beet seed, and a description of J. Battey's machine would doubtless be of value to many.

J. J. T.

MANURES.

"Gentlemen—Will you through the medium of your valuable paper be so kind as to reply to the following queries:

1. When stable manure is not to be had, what is the best substance to mix with swamp muck, so as to make it profitable as a manure?

2. Will lime without any thing else answer the purpose?

3. Are ashes better than lime? or would ashes and lime mixed together be better than either of them separate?

4. Would salt be of any use?

Essex Co., N. J. T. C."

Experience as well as chemical analysis, seems to have determined that for the conversion of peat or swamp muck into manure, there is nothing, after stable manure, within the farmer's reach equal to ashes. If the ashes are unleached four or five bushels, and if leached about double the quantity, are sufficient for a common load, or two-thirds of a cord of muck. If the muck has been exposed to the action of the air, so as to be in a fine, or decomposed state, these materials may be thoroughly worked together, and used at once for a crop. But if the muck is clearly undecomposed, or contains much vegetable fibre, the mixture of ashes with it should take place some time before using. There can be no doubt of the great value of this compost; and it is prepared so easily, that it is a matter of surprise it is not more extensively used.

Lime, alone, has been used as part of such a compost, and in some instances with success. The case of Mr. Benedict, of Pittsfield, Mass., is of this kind. His compost heap was made in the fall of swamp muck and lime, a bushel of lime to a load of muck, as it came from the bed, and well mixed. In the spring, he manured part of his corn-field with this compost, a shovel full in a hill, and the remainder in the same way with manure from the stable. The whole crop was a fine one, the compost fully equalling the manure. We, however, should have more faith in the ashes than in the lime; perhaps because we have tried the first, but not the last.

We don't know that any particular advantage could be gained by mixing ashes and lime together; but the experiment might be easily made where both materials were at command.

We question whether salt would be of essential use alone in forming such a compost, but if used in the manner recommended by Dr. Dana, it would doubtless be an important auxiliary. He recommends to saturate water with a bushel of salt, and with that slack a barrel of lime. After the lime has lain ten or twelve days mix it thoroughly with three cords of muck or peat. The mass is to be turned with the shovel occasionally for five or six weeks, when it may be applied to the soil. Mixed with lime in this way, chemical changes take place, which give a value to both the salt and the lime they could not before possess.

But the man who has a supply of swamp muck, has the means of restoring fertility to his soil, even if he has no ashes, stable manure, or lime. He has but to draw and spread it, or pile it up in heaps where wanted, and the action of the atmosphere will do much towards converting it into manure. If he has yards or pens, let a large supply of it be kept in those places, to receive the urine and wash of his yard, or to let his pigs operate upon, and he will find his and their labor well bestowed.

☞ Our good friend "P." of the Southwestern Farmer, need give himself no uneasiness about the subscription to the Cultivator. If it is not "killed" till it has "less than 3000 to 5,000 subscribers," it is likely to live to a good old age. P.'s insinuations and presumptions are alike unjust. The sales of the Cultivator have at no time been less than 12,000 vols. per year, and he will doubtless be glad to learn that it will probably much exceed that number this year.

APPLICATION OF MARL.

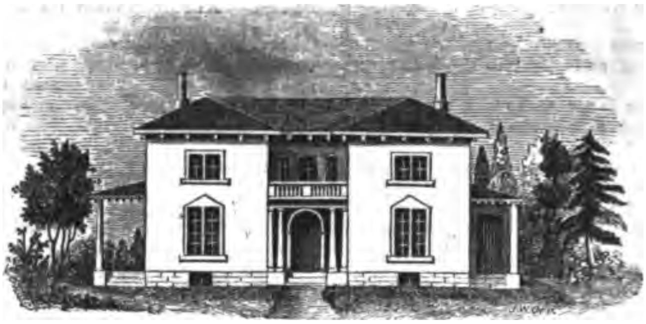
"I should be much pleased if you or some of your numerous correspondents, would give through the columns of the Cultivator, the best system of managing marl; whether it should be dug out and spread immediately over the surface, or put in the hills or drills; whether it should be suffered to lie some time in heaps after it is hauled up, or, whether it should be mixed with other manures? I am myself at a loss on these points; also as to the quantity that should be spread over an acre. I believe shell marl abounds throughout this region of country, but as yet we have scarcely attempted to raise it from its bed, though we contemplate soon making a trial of it.

Eufaula, Alabama, 1844. A. M'D."

There are several varieties of marl used for the improvement of land; but the principal distinction is the one existing between the shell or calcareous marl, and that which contains the green sand. The former is the proper marl, and owes its value principally to the lime it contains, and this varies from twenty to sixty per cent. The green sand marl, which is the kind so common in New-Jersey, and which has so much increased the value and productiveness of the light sandy soils of that State, is supposed to owe its value principally to the potash it contains; this substance in some specimens reaching twelve per cent. The two kinds are sometimes found intermixed, both in New-Jersey and in Virginia, and doubtless farther south, where the same formation prevails. The highest authority on the subject of marl, is Mr. Ruffin; and the volume that records his experiments on this and other calcareous manures, is one of the most valuable contributions yet made to our agricultural literature; and should be consulted by all who are intending to use this important auxiliary in improving the soil.

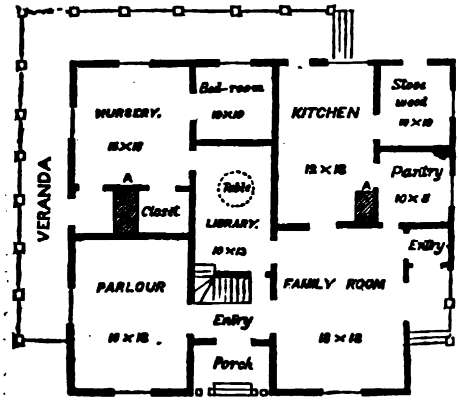
The best method of using marl is to take it from the bed, and apply it at once as a topdressing to the soil. It should be spread as evenly as possible, made fine, and effectually incorporated with the soil by the plow or the harrow, or both. Marls differ in the quantity of clay or sand combined with the calcareous part of the marl; and hence the best marl for light soils, the calcareous part being equal, will be that which contains the most clay; and for clay soils, that which contains the most sand. Marl should not be used in the hill or in drills, as are animal or vegetable manures; since if used in this way it would in most cases be productive of more injury than benefit to the crop, the first one at least. There can be no doubt that a top dressing of this substance would be more effectual, if mixed with a considerable quantity of common manure, but this is rarely done, the marling being first perfomed, and the manure applied in the subsequent years. The quantity necessary or proper, will depend on the quality of the marl itself, or the nature of the soil to which it is applied. In New Jersey the quantity used varies from six to ten tons, of twenty bushels each, per acre. It is applied to grass lands, and as a preparation for crops of all kinds; and in some cases the effect is almost marvellous. Mr. Ruffin found from many experiments that calcareous marl containing from 45 to 50 per cent of lime, succeeded best when about 200 bushels per acre was used. Applied at the rate of five or six hundred bushels per acre it proved injurious for a year or two, or until a dressing of animal manure was given. It is probable, therefore, that our correspondent will find it safe to use from 150 to 200 bushels per acre, spread over the surface and thoroughly incorporated. The presence of such immense quantities of marl immediately beneath the light sands of so large a part of our country, where it is so much needed, is a matter important to the planter, and should not be allowed to pass without being improved for the benefit of his crops.

Inquiry About Wool.—We would refer our correspondent R. M. to the remarks of Mr. Lawrence and Mr. Jarvis, in this number. He will there see that the best wool does not come from poor, starved sheep, as some have supposed. It seems necessary that sheep should be well kept to give strength and elasticity to the wool; though it is not necessary that they should be actually *fat*

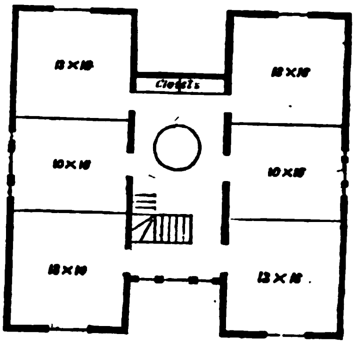


DESIGN FOR A FARM HOUSE AND OUT-BUILDINGS—(Fig. 34.)

BY JOHN J. THOMAS, MACEDON, N. Y.



Ground Plan—(Fig. 35)—Scale, about 20 feet to an inch.



Second Floor—(Fig. 36.)

Figures 34, 35, 36, represent the farm house—fig. 34 the elevation, partaking of the Italian style—fig. 35, the ground plan, and fig. 36, plan of the second floor. A form nearly square is given to the building, for the sake of economy, requiring far less external covering for the space enclosed; at the same time the outline is somewhat broken, to prevent heaviness and monotony of expression. About half is surrounded with a veranda, under which lathing and plastering may take the place of clapboards, and thus save expense. The whole building may be considered as composed of two parts or wings, extending from front to back, the ridge of their roofs also in the same direction, connected by a center building with the roof at right angles to the two former. The two wings are chiefly occupied as parlor and family room in front, and kitchen and nursery back; and the center part as a library, (for books, minerals, maps, astronomical diagrams, &c.,) lighted by a sky-light in the roof, through a circular opening, surrounded by a railing, in the second floor. This opening will admit of thorough ventilation of the adjacent rooms below, if desired, or it may be closed by a sash of glass, the light softened by a translucent varnish. The kitchen is lighted with one very broad window. A. A. are chimneys, and admit of open fireplaces for the parlor, nursery, kitchen and family room. If a hot air furnace is used, by placing it under the center of the library, the heated air may be easily conducted to all the rooms above. The nursery entry opens on the large veranda, enabling children to take fresh air in all weathers. A back entrance to the parlor may be easily made from the same entry if wished. The bed-room adjoining the nursery, is covered with a lower roof, separate from the rest of the roof, and corresponds with the roof of the porch.

The eaves are 5 feet above the second floor; and 4 feet additional rise in the roof gives ample height for the upper rooms, which may be six in number, and allow sufficient space for closets.

The dairy should occupy the coolest part of the cellar, and be entirely separated from other parts by walls. The best and cheapest material for the floor, is a coating of two inches of water lime mortar.

The size of this house will appear too large to many, but it is not larger than the houses of a large portion of our farmers, after piecing and patching; costs much less, and appears far better. It is much easier to pass from one room to another on the same level, than to pass a flight of stairs; hence the aim has been to have as many of those in common use on the same floor. This also contributes to economy in erection—as calculation will readily show. A one story house, 10 feet high and 40 feet square, will enclose 1600 feet of floor; a two story house, 28½ feet square and 20 feet high, will also enclose 1600 feet; but the latter will require 650 feet more of siding, which will cost more, with painting, than the addition in shingling the former.

A careful and liberal estimate, made from full bills of cost of several houses actually erected by the writer, places the cost of this building, if made plain and of wood, at about $1,400, at the average price of materials, teaming, labor, &c., in central and western New-York. This cheapness is owing principally to the cottage form, compact arrangement, and the diminution of siding and paint under the veranda.

Figure 37, is an elevation of the farmery, and fig. 38 is a plan of the farmery, house, and adjacent grounds. The farm buildings form nearly a hollow square, the barn in the center of the further range. In fig. 37, the barn cellar only is shown, being on a level with the stables on each side. The further part for roots, and is filled through two windows with hopper-like troughs, into which the cart is dumped. The nearer part is for straw, to be used for cutting and for littering. From the intermediate space, passages 4 feet wide run in front of the stables on either side, for feeding. Fig. 39, shows the upper floor of the barn; A. unthreshed grain; R. corn crib; C. granary, the bin for oats with an opening below for feeding horses; this opening closed by a sliding board. A door opens from each of the last, to facilitate loading

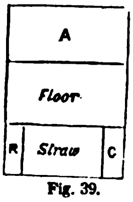
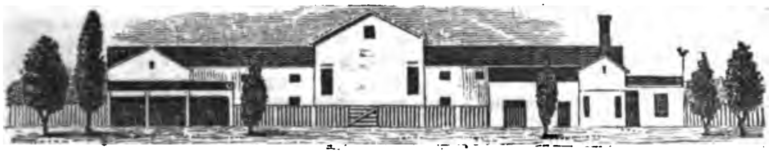
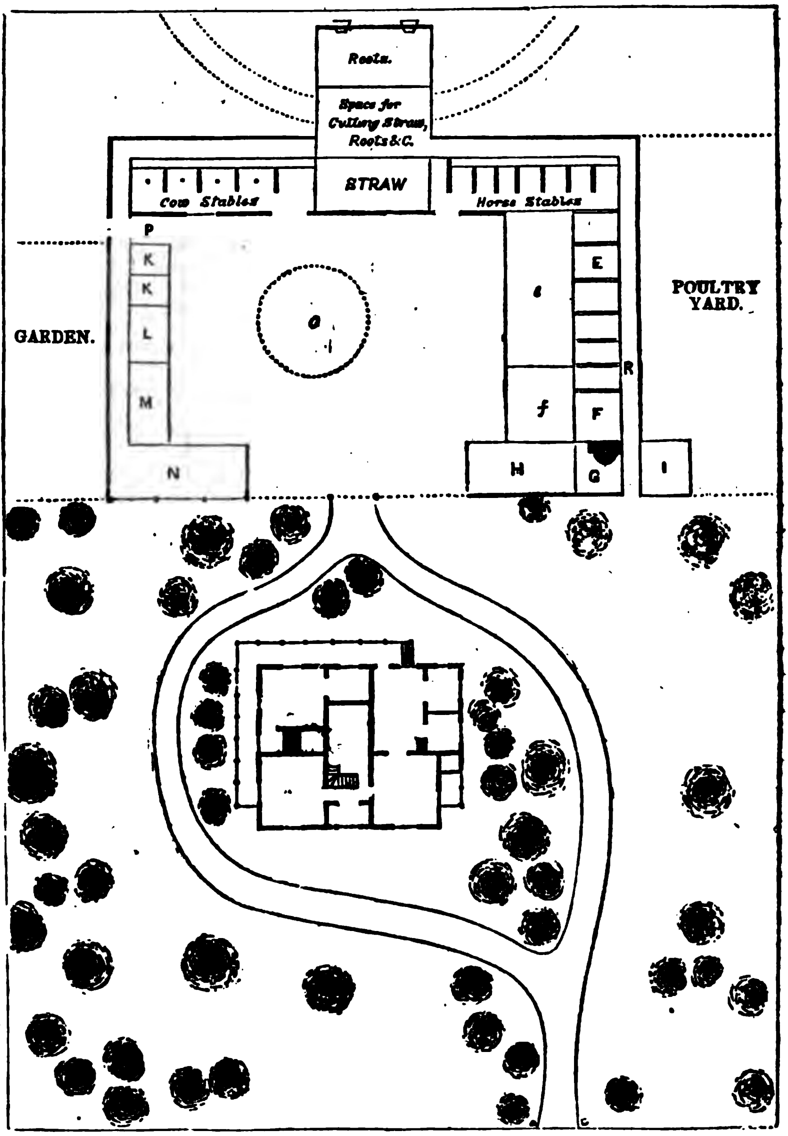


Fig. 39.



Elevation of the Farmery—(Fig. 37.)

of wagons from them in the yard below; the bay for straw extends upwards as high as the top of the granary, over which a floor is placed for holding unthreshed grain above. The dotted lines show the wagon way for entering and passing from the barn floor. This way should be wide enough on one side to place the horse power of a threshing machine. A band may extend from this horse power through a hole in the floor, and drive the straw-cutter, root-slicer, &c., below. The hay for horses and cows, is kept in the loft over the stables, from which it is conveniently thrown down into the passage in front of the animals. E. shed for sheep, with racks at right angles to the passage R., from which they are filled with hay thrown down from above; *e*, sheep yard; F. piggery; *f*, pig yard; G. room for boiling roots; I. poultry house; P. passage from manure yard *o*. to back part of farm. K. K. calf house; L. work shop; M. house for plows, harrows, horse rakes, rollers, &c.; N. wagon shed. H. house for keeping store wood during seasoning, wood seasoned two or three years being much better than for a shorter period; and a rough boarded outbuilding, being also cheaper than a well finished painted one in contact with the house. The manure yard *o*. should be about two feet below the surrounding buildings, to which the cleanings of the stables are to be taken daily in a large boxed wheel-barrow, and straw and marsh muck supplied as needed. The yard should be well supplied with water, as convenience may dictate. Ventilators, made of square board tubes, should be placed over the stables and run up through the roof.



Plan of Farmery, House and Grounds—(Fig. 38)—Scale about 40 feet to 1 inch.

This plan may be changed without altering the general arrangement, so as to contain more or less grain, more or less hay, stable room, &c., according to circumstances. The hollow square affords shelter to the yard from wind, an important consideration for our climate. The extent and expense of the buildings, are not greater than are often seen, when convenience of arrangement is entirely set aside; and the labor of preparing food and feeding animals, double what it should be. The wings, sheds, poultry yard, garden, &c. may be reversed, according to aspect and exposure to winds.

Louisiana State Fair.—We acknowledge the reception of a copy of the address delivered before the Agriculturists and Mechanics' Association of Louisiana, on the 9th of January last, by the Hon. T. H. McCaleb, together with a full report of the doings of the Association on that occasion. We should be pleased to give a more lengthened notice of all these matters at some more favorable opportunity. We are glad to see the spirit of improvement which seems to be awakening in that section of country. The ladies, in particular, we rejoice to see, are engaged in the work with animated zeal, and whatever they undertake in earnest, *must* go.

HORSES FOR THE ROAD.

Messrs. Gaylord & Tucker—But little is said in any of our agricultural journals, and less done by the farmers of New-England, and I believe of many other States, to improve the breed of horses; less than has been done to improve any other of our domestic animals.

The horse, standing as he does at the head of all our domestic animals, should not thus be neglected. It is for the interest of the farmer, if he breed horses, to breed those and those only that will readily sell at prices that will fully remunerate him for the breeding. It costs no more to raise a horse that at four years old readily sells at one to two hundred dollars, than one that it is hard to get rid of at forty dollars. Experience and observation have convinced *me* that this can be done by the use and use only of *thorough* bred stallions with the best of our country mares and grade mares. The thorough bred horse is possessed of sufficient bone, and that of flinty hardiness, muscle of more firmness than that of any other horse—his gait more elastic, with wind and bottom to excel any other breed of horses. Stallions possessing these qualities, rising 15½ hands, with good country or grade mares, ever have and ever will produce a race of horses well calculated for the coach, road or plow. They walk faster, trot faster, and will endure hard labor better than any horse destitute of this strain of blood.

Messenger, by *Mambrino*, was imported into Pennsylvania about the year 1795. His location was favorable for the use of country mares; his descendants were numerous, and have ever been celebrated as the best of horses. *Mambrino*, a son of imported *Messenger*, the sire of the celebrated trotting horse *Abdalla*, has added to the fame of the "*Messenger breed*" of horses, so called. Imported *Messenger* was the sire of Miller's *Damsel*, the dam of *Eclipse*. *Duroc*, the sire of Eclipse, left many valuable and highly prized horses out of country and grade mares. *Bajazet*, *Bucephalus* and *Obscurity*, all thorough bred horses, were brought from Virginia to Hartford, from 1790 to 1794; they were used to country mares only, and at moderate prices. Their descendants were as celebrated here, as Messenger's were where known.

King William, *Matchem*, *Guido*, *Benjamin*, and two or three more thorough bred horses, were imported from England into Hartford, about the year 1798. Several of these horses were kept in Hartford two or three years, and stood for mares at five guineas the season. King William left many very fine and valuable horses in this county. By him, out of a Bajazet mare, I had a colt which made the best gelding ever bred in the county. These horses were finally taken to Vermont and New-Hampshire, and to the use of them, I believe is to be attributed the excellence of the Vermont and New-Hampshire horses.

Col. Talmadge of Litchfield, had a thorough bred horse *Highlander*, which was of immense value to that county. *Roman* was imported by S. Williams, Esq. of Northborough, Mass.; by him I had two fillies out of a Vermont mare, which at 4 years old, were worth three hundred dollars each. A pair of mares by him, sold in Massachusetts, when six years old, for one thousand dollars; and I knew many others by him nearly as valuable. *Sir Harry*, a thorough-bred, was kept in this vicinity, about the year 1830. A gelding by him out of a country mare, was sold at 4 years old for two hundred dollars, and a mare at 10 years old for one hundred and twenty-five dollars; and the same country mare produced four other colts, by horses of *domestic manufactured* pedigrees, which were sold at forty to seventy dollars each, at four to six years old.

A friend of mine had a Naragansett mare, which produced a foal by *Moses*, a thorough bred horse, that proved to be worth double to two other foals she had from other horses. Mr. Samuel Wolcott of this town, well known as the most judicious and successful breeder of cattle we ever had in Connecticut, also bred horses. He bred principally by thorough-bred stallions to his grade mares; and now many well recollect the valuable horses he bred, and particularly a carriage horse and a saddle horse he left on his farm at his decease in 1813.

One of Gen. Eaton's *Barbs*, stood two or three years in this vicinity. It cannot be said we received any benefit by that cross. *Wister Arabian*, was for a time kept in Kentucky, and then in Virginia. In 1832, I had him—he never produced a valuable foal either from blood or country mares.

Bellfounder, imported by Mr. Boott of Boston, stood several years at the farm of Mr. Jaques, was a Norfolk trotter, a descendant on the side of his sire of the *Fireaways*. At five years old he trotted two miles in six minutes, and was 15 hands high. Of his get, I have never seen or heard of any of extraordinary speed or bottom, or in any way particularly valuable for stallions. A Cleaveland bay, imported and kept near Baltimore, was the sire of some fine and valuable horses out of blood mares. At the farm of the Hon. Charles Carroll at Carrolton, in 1826, I saw two very superior young stallions produced by this union; and had they been geldings, would have made splendid coach horses. Had I thorough-bred mares, more than I wished to propagate race nags from, I should put them to a Cleaveland bay stallion. A stallion and mare of this breed were imported into Massachusetts by Admiral Coffin. This horse was inferior to the one imported into Baltimore, and I never could learn he was the sire of any very valuable horses from country mares. Had I Canadian mares, I think by the use of a thorough bred stallion, I could breed from them at a profit. Henry Watson.

East Windsor, Ct., Feb. 1844.

Note.—Mr. Watson remarks that he has never seen or heard of any horses of Bellfounder's get, "of extraordinary speed or bottom." We have seen several which were certainly remarkable in this respect. We distinctly recollect a roan colt (the owner's name is forgotten,) which attracted much attention at one of the Brighton (Mass.) cattle shows. Dr. Nourse of Hallowell, Me., had a horse and mare got by Bellfounder, of extraordinary speed. The man who broke this mare, (a great horseman,) said that her *natural* gait was a mile in three minutes or less, and that she would do this under a tight rein, while he was breaking her! The Messrs. Allen of Buffalo, a few years ago owned a horse of Bellfounder's get, which has since obtained considerable celebrity in Ohio. We dare say Col. Jaques can tell us of others equally celebrated.

Admiral Coffin presented two Cleaveland bay horses and a mare, to the Mass. Ag. Society. The first horse sent, (*Sir Isaac*,) was not a handsome animal, and we think did not turn out very well. The next one came over with the two race horses, which were also presented by the same gentleman. This last Cleaveland bay was a noble horse in appearance. We should be glad if Col. Jaques or some other gentleman in Massachusetts, would inform us in regard to the progeny of these horses—whether they were considered an improvement in any way, &c.—Eds.

HAY MAKING.

Messrs. Editors—I have seen it recommended from time to time in your excellent paper, to *salt* hay, as a remedy for imperfect curing. Having tried this method occasionally, and observed its effects with some care, I am led to doubt its utility. My objections are two, viz: that it is not so nutritious as when well cured; and that it causes cattle to *scour*. My desire in stating these objections, is to call forth further information on the subject. The temptation is very great, when hay is nearly dried, to flatter ourselves that it will keep, especially if well salted, and in it goes. The same state of things occurs the next day perhaps, and temptation once yielded to, in this as in other things, soon becomes a habit; and in unfavorable seasons particularly, our barns are filled with hay, which on feeding out, salt notwithstanding, proves musty and unpalatable. As we open these musty mows, and see our cattle poke over and snuff at the hay, we promise ourselves perhaps, not to do so again; but the next season the same thing is enacted, and so on through a man's life.

This town is somewhat celebrated in this region for good hay and fine cattle. Our best farmers can hardly be tempted to put a lock of hay into their barns until perfectly cured. There are those among us however, who are not so particular. A peep into the yards of the two classes, would, I should think, satisfy any one, whether *perfect* or *imperfect* curing is best. *Salt* is good, in a trough or manger where cattle can help themselves; but it will not, as I think, make badly cured hay *good*, and well cured hay does not need it.

Whilst on the subject of hay, I will say a few words more. The practice of leaving uncured hay until near night before it is cocked, is a bad one. It should invariably be put up by 4 o'clock, at which time the dew begins to collect. When thus put up, it cures rapidly in the cock, requires less handling afterwards, and loses less in weight, than if put up when cold and wet with dew.

The horse rake has recently been introduced among us with good results, enabling one man with a horse to do the work of five or six with small rakes. We have also a broad hand rake for cleaning after cocks and raking after cart, with which one man can do as much as two with small rakes, and with less fatigue. With these and other improvements, hay is now got in, *well cured*, at $1,75 to $2,25 per ton. A few years ago the cost was estimated at $3 to $4 per ton.

As this is my first, and may be my last communication to the Cultivator, I must say a word about Devon cattle. We have made something of an experiment with Durhams; and the prevailing opinion is, that taking into consideration milking, fattening and working, our old stock is preferable. This old, or as we call it, *native* stock, came undoubtedly originally from Devonshire and the *adjoining* counties of Somersetshire and Gloucestershire, where the Devon breed prevails. Great numbers of our ancestors came from those counties. The breed has been greatly improved in England within thirty or forty years; while with us, no care whatever has been taken, either to keep it distinct or to improve it. It is surprising, however, after so many generations, how plainly the distinctive marks of the Devon can yet be traced, notwithstanding so many crosses and so much neglect. We want now a new infusion of the original blood. Many of your readers here, would be gratified with particulars of the present state of the breed, and also where they can be obtained in this country. RICHARD COWLES.

Farmington, Conn. Jan. 9, 1844.

MORE ABOUT TURKIES.

MESSRS. GAYLORD & TUCKER—I intended to have written out, somewhat in detail, my views upon the subject of raising turkies, but have delayed until I am inclined to omit it altogether. Something however seems to be required from me, in justice to a correspondent in your December number; and I will therefore, even at this late day, proceed to spread before your readers, a few thoughts which may be of service to some who would like to cultivate a better acquaintance with this noble bird. Many persons who have practiced raising turkies for years, still think that success depends very much in "luck." Let me say then in the outset, that in my opinion, this is a great mistake. He who trusts to luck in this business, will be quite sure to meet with disappointment. Turkies, when left to themselves, to seek their place for a nest, hatch out their brood, and wander about with their young, are not very likely to be "lucky." Chance may lead some "old fox," or other lover of good things, to pass by the nest where the old turkey sits, and her escape in such a case, would be luck indeed.

My first experiments with the turkey were unsuccessful; and most of my good neighbors, when they heard of my failures, were prompt to exclaim, "we told you so." But the loss of all my eggs the first year, and little better the next, did not convince me that turkies could not be raised. I have this year raised eighty-six, and feel quite sure, I could raise two hundred another with little difficulty. For two or three years past, I have succeeded so well, I feel some confidence in saying that others will run no great risk in adopting my plan.

He who would succeed well in this business, must, during the winter, feed his flock well, and *familiarly*. By the middle of March or first of April, they will probably commence laying. If they are quite tame, as they can be made to be, they will be likely, if left to run at large, to lay about the house or barn; but the safest way is to drive them into some shed every morning, and let them out about noon. They will then lay in the corners of the room; and when they come to set, they will be convenient to be taken care of, and by closing the door at night, they are secure from harm. After some three or four, or more, commence setting, others may be shut in a different place. I usually take the eggs from the nest as they are laid. A turkey will cover from seventeen to twenty-one eggs. I last season, set three turkies with twenty-one eggs each, and they hatched sixty. One of them hatched every egg. These were in one room. I never feed the turkey on the nest, and I am decidedly opposed to the practice of so feeding them. It is well enough to place feed where they will find it; but if the turkies are hardy and in good condition, this is not very necessary. Most turkies are good setters, and such will commence hatching in twenty-eight days. They should be left upon the nest until the young are dry and able to stand. The hen may then be put into a coop in a warm, dry place, and the chicks permitted to run out, *but should not be fed for twenty-four hours*, or even a longer period. I am very particular on this point, as I think many young turkies are destroyed by over feeding soon after they are hatched. After the first day, a little curd or boiled egg may be scattered upon a board or flat stone. If the weather is cold or wet, it is well to season their food with pepper. I have experimented with giving young turkies feed *very highly peppered*, and have never seen any bad effects, and have frequently noticed cases where I was quite sure the use of it had produced much good. Very little if any Indian meal, should be given. If used, it should be wet up some hours before being fed out. I will not tax your columns with prescriptions for the cure of the different "evils" which young turkies are "heir to." A *sick* chicken is worth nothing; and my experiments with such, have been of the bold kind, upon the "kill or cure" principle; and I have sometimes effected astonishing cures. But it can be of little practical use to your readers, to give a full statement on this head. "An ounce of preventive, is better than a pound of cure." After the first two or three weeks, it is well to let the old turkey out some four or five hours each *pleasant* day, if you have a pasture or other suitable grounds. There is much danger, however, in leaving them out over night, as they are disposed to wander about while the dew is on.

There is a diversity of opinions as to the best variety of the turkey. Some preferring the pure white, others the black; and some there are, if we are to judge by their practice, who prefer every mixture of color, "ring streaked and speckled." I go for the native color. My flock at the commencement of last season, consisted of a turkey cock, the first generation from the wild state; the color and shape exactly agreeing with the wild turkey; and eight hen turkeys of my own raising. The hens are of a dark color, yet not black, with an inclination to white at the end of the wings. A very large share of those raised the last season, were in color and form like the cock, with less of the flesh color on the legs. I would give a more full account of my flock as it appeared in the fall, before I made inroads upon it; and a more full description of the color and brilliant plumage of many turkies now on hand, but fear your readers would think me drawing from fancy.

My opinions and recommendations thus briefly stated, are based upon experiments of my own, and differ in some particulars from writers upon the subject. "Boswell," for example, advises "the putting two or three eggs of the common fowl, under each turkey, that the common chicks may set an example for the turkey chickens, and which determines them to eat sooner than they otherwise do." Now this is all moonshine. Young turkies are more in danger of eating too much than too little; and I would again caution all who would hope for success, not to feed high the first week or two. Feed often, but sparingly. If during the first four or five weeks any of them should droop, and decline eating in the morning, give them pepper, by taking a small quantity of their regular food and about an equal quantity of pepper, mix it, and give as much as a healthy one of the same size would eat.

In my opinion, one healthy male turkey is sufficient for twelve or fifteen hen turkies.

I intend, when the reform bill on postage shall have become the law of the land, to write over my real name, but must decline doing so for the present. I have now on hand some six or eight letters asking my opinion upon this man's Poland fowls, and that man's Dorkings, &c.; and had they come to hand *post paid*, I should have been happy to answer them. I should be extremely happy to hear from your Virginia correspondent; and my remarks above are intended for a very different "variety" of mankind, than I believe him to be. K. L.

Hartford, Ct., Feb. 28, 1844.

SUGGESTIONS TO COTTON PLANTERS.

WILLIS GAYLORD—Sir—I quote here your queries propounded to me in your very friendly letter, also the remarks following those questions, and will endeavor to give you what I think are the facts in the case, leaving you to use either, to satisfy yourself or others, as you may wish. You say, "is it an error in me to suppose that the cotton growing districts of the United States, mistake their true interests, by devoting their attention to that article so exclusively? Would not a more mixed husbandry, one that should secure to the planter from his own soil, his required supplies of beef, mutton, bacon and bread, be preferable to risking all on one crop? I take it for granted, there is no good reason in the nature of things why this might not be; I suppose experience has demonstrated that there is no difficulty whatever in the growing of cattle, sheep, (and fine wooled ones too,) and pigs, in quantities sufficient for the wants of the planter; and that the system of extensive purchases of articles of food now so common, is more the result of habit than of necessity."

It gives me no inconsiderable pleasure to give you an answer to all this matter, by showing you what is now done by a great many farmers, and some planters in this part of the cotton region, which may tend to stimulate others to equal exertions, and will show many who live north of us, that we are not dependant for supplies to our northern friends, and thereby induce them to feel more like we were brethren and equals, than that we we were dependents. The capabilities of our soil to produce, our climate to perfect, and the energy of the sons of a southern clime to effect reasonable objects when necessary, are misunderstood by many in even this country, for that author of the effect of climate, is a southerner, and it is reasonable to suppose that there are far more in a northern country.

All experience has proved in every country where yet tried, that mixed husbandry is preferable to a devotion to any one crop, and to a certain extent is true in the cotton region; we must have no other crop to interfere in the gathering, that requiring all the time and attention of the farmer. That there is too much reliance on the cotton plant, the practice of our farmers will be a sufficient proof, and that much other business might be introduced that would not conflict wtth the interest of the cotton grower, we all now believe.

We can assuredly make an abundance of beef, mutton, bacon, bread and wool to feed and clothe us well; we can also rear our own horses and mules; and I make no question but what we could add sugar and molasses, with silks for our fair dames, would they but take hold in a proper spirit. I make not these assertions without absolute proof, and enough to satisfy any jury of 12 men in the United States. My five nearest neighbors in this county, having near on to 300 persons in the aggregate, have made for the last 3 or 4 years more meat, corn and beef than was necessary; I might add mutton also, although the quantity consumed is small. I can better say of myself than of others, I must therefore rely more on this, trusting a bare exposition of facts will be construed fairly.

I can make an average crop for any consecutive 10 years, (and am even willing that the last 4 be counted in, as I have been here myself only 4 years since 1836,) 6 bales of cotton weighing 400 lbs., 200 bushels of corn, 500 lbs. of pork, raise 5 lambs, 3 calves, per hand that works in the field, with 1 colt to 4 hands, and an abundance of oats, rye, millet and fodder, potatoes and garden vegetables, to feed one horse to each hand, all cattle in the winter daily, and whites and blacks. I have been much engaged in putting the farm in ship shape order, and have lost much time from the mere farm work, but I can make a better showing than this, and make no question that I will ere 10 years pass, make, besides my crop of cotton, (6 bales,) pork and hay for sale. I can even now sell off yearly some half dozen beeves, a few milch cows, 30 or 40 mutton, and have sold on an average, $500 worth for 3 years, without at all interfering with what I say can be made, or at all injuring in number or quality the stock that I found here on my return in 1839. I am not yet fixed, for you well know how long it requires to get a farm properly arranged; owing to this, and to a never ending range for hogs, I am harrassed yearly for meat; the pigs I had castrated and spayed in 1840, Jan. and April, for killing Dec. 1842, numbered 93, and although I had an abundance of corn, I did not kill *of them* over 20 head; the others I have never seen. I must raise my meat in an enclosure.

Now, sir, if one man can do this, others can, and if cotton will not rise over 8 cts., we will all do it, and do more, for we can and will make our own clothing.

The great difficulty in this country has been, cotton has been to all appearances, a remunerating crop, and in many instances only in appearance; for when it rises, and the planter sells a per hand crop of $300, every thing is high in proportion, and by purchasing every thing, he is really but little better off at the end of the year than at the beginning. My own opinion is, and I have made every reasonable effort to give it publicity, that it is a duty every man owes his family, his country, to make every thing necessary which will not withdraw his force from their trade, and after which, as much cotton as he can—thus making sure of bread, meat and work animals, so if he makes only 4 or 5 bales per hand, those few bales will be nearly clear.

I have a portion of a mutton now in my smoke house that is very passable meat, though not fat; killed off a rye patch, which was sown on the corn ground, no plow being used at all. This season being more unfavorable for sheep than any I have ever seen, continued rains, not a head of sheep has been housed an hour; and worse on my sheep than on natives, being part bred Bakewell. I killed some two of my choice veals this fall, no extra care or keep, and a beef near 4 years old, a spayed heifer raised entirely in the woods, with a run in the field after gathering corn; she weighed 426 lbs. and gave me 46 lbs. of tallow; she was to appearance, no fatter than when turned in, and was only turned in to give flavor to her meat; I have got over 30 lbs. of tallow from a beef 6 to 7 years old, killed out of the woods. I therefore say there is no difficulty in raising either beef or mutton. Pork can be bought, made in this county, at 3 cts.—enough to prove that we can raise pork. My own opinion is, that we can raise pork cheaper than those countries where pork is the staple commodity—and here are my reasons—a farmer can cultivate 10 acres of corn land per hand, besides enough in cotton to ensure him 4 bales, and a large crop of oats and sweet potatoes, which with the aid of a peach orchard, planting his corn land with peas and pumpkins, he can rear readily double the quantity of hogs he will require; he then can take time to handle these 4 bales so as to nett him in price, over 5 bales, and give him the surplus quantity of pork a clear gain. Thus in reality making by his staple production a fair crop, which as a matter of course, gives him the pork free of cost. Should he require a crop of 6 bales, let him plant for 5 and handle well, to make in price and saving of expense, the 6th bale.

A neighbor of mine has killed hogs averaging 300 lbs., this winter; they were raised entirely in the woods, as our stock hogs are raised, then turned into the pea field, and afterwards corn fed for a few weeks; clearly proving the good effect of crosses on his stock; 4 years ago his stock did not average 200 lbs., and raised as now, but the range far better; he has killed 46 that will over-go 275 lbs., some going to 320 lbs., 18 months to 2 years old. He has purchased of me boars at different times. The exact weights I will ascertain and publish in the S. W. Farmer.

We do not raise large cattle or hogs, or make large yields of corn like our northern brethren; but have a fair range, and with land not worth over $5 to $15 per acre, we can afford to cultivate more.

I have a friend, who in South Carolina even, makes what is considered a fair crop there, and though he works something over 100 hands, yet makes corn to sell with his own meat. In an address delivered in South Carolina, by the Hon. George McDuffie, he states he makes a fair crop, raises his own corn and meat, and even his work horses. I think this statement is made in his address; and I think it entirely feasible, for every county in a cotton growing State to do the same, and supply its county seat with bread and meat.

Were I to devote myself entirely to a cotton farm, not attend to improving stock and buildings, I feel perfectly certain that I could sell as much meat as I would use, raise enough horses to fully supply the wear and tear, and yet sell my 6 bales of cotton. There are many even here who would doubt it, but sir, I am a practical farmer, make farming my only business, and I feel that injustice is done, when called theoretical, because I have had the chance of receiving a first rate education, and read more or less every day of my life. I only ask for the same measure to be meted unto me, as is done to other men who reside on their farms and superintend themselves all the minutia of farming. Yours, &c.

M. W. Philips.

Log Hall, Miss., Dec. 31, 1844.

SWAMP WILLOW—(*Salix discolor.*)

Messrs. Gaylord & Tucker—In a postscript to my communication published in the Cultivator, vol. 10, p. 98, I promised you some information relative to the cultivation of the swamp willow for economical purposes, attention having been directed thereto by Mr. Wm. Partridge of New-York. The promise had slipped from my memory, until recently turning over the leaves of the last volume of the Cultivator, I was reminded of my promise, and now proceed to redeem it.

An important and extensive employment has grown out of the use and cultivation of the willow. Great quantities are imported, while we see it growing wild in swamps and along water courses, from one end of the United States to the other, and almost untouched, although if collected in its native state, or cultivated as in Europe and some parts of this country, it would afford a profitable occupation to the industrious, at seasons of the year when other work would not interfere.

Hoops for casks are made of willow in Europe, as we see in the wine casks of France and Portugal. Irish potatoes are imported in hampers of the same material, and champagne in willow baskets. Bottles and demijohns come to us covered with willow, and willow is cut and dried to be converted into charcoal, which makes a better article than any other wood for the manufacture of gunpowder.

But of all the uses to which willow is applied, both here and in Europe, that of making baskets of all kinds, and many articles of wooden ware, is the most extensive. It gives employment to many, and might to many more, if our own resources were husbanded, and our own raw material more generally sought, cultivated and used.

Willow and willow baskets are both imported from Holland and France. Most of the baskets manufactured in this country, are made from the imported willow, but some of American growth is also converted into useful articles, as will hereafter be shown. The imported willow is of the osier kind, long, slender and flexible. It comes in bundles four feet in circumference or sixteen inches in diameter, and of three lengths. It is sold in assorted parcels, and the purchaser is required to take a portion of each length. The smallest size is from three to four feet long; the middle size five to six, and the third size seven feet or over. The present price of such willow, free of bark and in good condition, in the city of New-York, is 8 cents per pound. The writer has known it to sell at $1 to $1,25 bv the bundle.

Immense quantities of willow baskets are imported from France, but they are all of the smaller and finer kinds of wooden ware made of split willow. Our artizans cannot compete with the French in the manufacture of these kinds of willow work, on account of the very low wages in France, or other cause. There, much of the fine and fancy work is executed by females, while here, willow baskets are wholly made by males, who require higher wages than males or females in European countries. Hence it is that France and Germany have possession of the American market in the supply and sale of fine and fancy willow-ware, which can be manufactured here by American artists, but they are undersold by foreign workmen. There is perhaps another reason for this state of things. Some years ago, a French merchant now retired from business, informed the writer that he could not conceive how the French willow baskets could be imported and sold so cheap, unless the government was defrauded in the duties.

But on the other hand, our countrymen have exclusive possession of the manufacture of the large, coarse and bulky articles made of willow, which cannot be imported on account of the space they occupy, and the amount of freight such space would command. The greater part of the willow they use however, is that imported from Holland and France. The trade of making willow-ware is an extensive one, and is principally carried on in our large cities; though of late, it is extending to other parts of the country where the native raw material is abundant and easily procured, or where this and the foreign varieties are cultivated.

Here then we have a trade, an occupation for many of our countrymen, which consumes a great amount of raw material, much of which might be supplied from indigenous growth, or from cultivated plants of native and foreign varieties of willow. There is much to encourage this undertaking, were it more generally known how easily it may be accomplished. The following information was obtained from a person who has a plantation of willows on Staten Island.

Mr. John Reed of Southfield in Richmond county and State of New-York, is an Englishman by birth and has followed the business of cultivating the native and foreign willows for thirty years or more in this country. The farm he cultivates, contained a useless bog of an acre or more, which by ditching and draining, he has converted into a willow plantation, from which he reaps an annual harvest much greater than from an equal amount of land on the best part of his farm. He has the native willow at the head of this article, the Pennsylvania, the Welch, the Dutch and other varieties which he imported from England. He has another plantation of willows in the adjoining township of Westfield.

Mr. Reed has at different periods imported fifteen varieties of willow of the osier kind from England, but the best kinds raised there, degenerate here from the nature of the climate. They start well in the spring, but stop growing in the heat of summer, and limb out rough. Two varieties however, grow here as well if not better than in England. One of these is the Welch, the other known there as the Dutch, with a white bark. These are important facts for those who may hereafter undertake to cultivate willow plants, derived from the experience of thirty years in lat. 40 deg. 30m. north.

The American swamp or wild willow, grows all over the United States, of which there are several varieties. The Dutch immigrants who settle in the interior, cut and use it in the manufacture of articles of utility. Some is cut in the neighborhood of Albany, and sent in bundles to the New-York market. The native willow is best for coarse, strong and tight work, but is not adapted for splitting or twisting, qualities which belong in an eminent degree, to the cultivated Welsh willow.

There is a variety of willow cultivated along the Schuylkill and Delaware rivers in Pennsylvania, which is reputed to be the best in this country for all kinds of work. It is extensively cultivated by the Dutch, who are said to have imported it into that State in the time of William Penn, the original founder of the colony of Pennsylvania. It is known there by the name of the *Green willow*. Mr. Reed also cultivates the Pennsylvania willow, which he introduced into this State in 1810. Several besides himself, raise this and other varieties of the willow on Staten Island. The green willow grows large, and when properly prepared and dried, is converted into charcoal by Dupont to make gunpowder.

To those who are desirous of undertaking the cultivation of the willow, Mr. Reed can supply cuttings of the best varieties, as he has heretofore complied with orders from Boston, Kentucky, and the interior parts of the State of New-York. March and April are the months to procure them. They should be set out in rich land along streams occasionally overflowed, or in swamps, which if too wet, should be ditched and drained.

The yearly crop of willow twigs is cut in March. The cuttings are tied into bundles, and the butt ends placed in the water of the swamps where they grew. They are left there a shorter or longer time, according to the season, and until the swelling of the buds indicates the flow of sap, which loosens the bark, when they are removed and denuded of the bark, which then comes off very easily.

Mr. Wm. Leveridge, a miller on the Great Kills in Southfield, also has a plantation of Welsh and American willows. The former grows long, slender and smooth, and is well adapted for work which requires it to be split or twisted. Enough for the present. Perhaps more hereafter, from yours, Richmond.

IMPORTATION OF MERINO SHEEP.

Messrs. Gaylord & Tucker—Some two or three months since, I saw an article in one of our papers, purporting, I believe, to be taken from the Albany Cultivator,* giving a very erroneous account of the importation of Merinoes into this country; and what was somewhat more surprising, the writer made a parade of communicating the information for the benefit of posterity.

The deep interest I took in furnishing my country with this invaluable animal, the direct concern I had in the shipments, and my official station, afforded me the means beyond that of any other person, of becoming accurately acquainted with the number shipped, and the ports to which shipped; which information I have embodied in my letter of the 31st January last, to L. D. Gregory, Esq. which was published in the Bellows Falls Gazette of the 24th ult.; and I take the liberty to send you a paper with the request of a republication in the Albany Cultivator. This request I have no doubt you will comply with, because you must be desirous that the agricultural community should have correct information upon all subjects affecting their interests, and because you must be averse to give currency to statements, professing to be intended for posterity, that are not marked by truth and fairness, which all, except gentlemen of poetical imaginations, must deem essentials, when information is intended to be transmitted to future generations.

I am the more desirous of the republication, as I have understood that much imposition has been practiced in regard to Merino sheep, in the western part of your State.

Respectfully yours, Wm. Jarvis.

Weathersfield, Vt., March 1, 1844.

Weathersfield, Vt., Jan. 31, 1844.

Dear Sir—In reply to your letter of the 15th inst., requesting me to give you an account of the Merino sheep of Spain, and of their introduction into this country, &c. &c., I shall with pleasure do it so far as my memory serves me, and I believe that will be found to be tolerably correct, as I long since gave much attention to the subject, from a conviction that the wool growing business in the United States would prove a source of national prosperity. In Spain the fine wooled sheep are divided into two classes; the Trashumantes or traveling sheep, and the Estantes or stationary sheep. The wool of the Trashumantes is very much superior to that of the Estantes, owing undoubtedly, to the superior care and attention which is given to them. The Trashumantes are owned in flocks from 5,000 to 30,000; the larger flocks are placed under the superintendence of a mayoral, who has the whole control over the flock, and annually accounts with the owner for the nett income. Two shepherds, four dogs, and a pack-horse or mule are employed for every thousand sheep. The traveling sheep are divided into three classes, which take their names from the provinces where they are principally kept, viz: the Leonesa, which are by far the most numerous, and are esteemed the finest sheep in Spain; the Segovian, which are considered the next best, and the Sorian, which are deemed a little inferior to the latter. I never saw any of the Segovian or Sorian sheep, and therefore speak of them from their general character, derived from Spaniards the best informed on the subject. The Leonesa are pastured in the summer on the mountainous and hilly country of Leon and the two Castiles, and in the fall are driven into the plains of Spanish Estramadura to be pastured through the winter.

Many of their flocks are driven two hundred miles from the summer to the winter pasture and *vice versa*. Some explanation will be necessary for the better understanding of the cause of this management. The plains of Spanish Estramadura are subjected to an almost invariable drouth from the latter part of April to the autumnal equinox; but the rains commence about the 21st of September, and continue to fall every two or three days in very heavy showers till the latter part of March, when they gradually fall off till the end of April. In six or seven weeks from the first rain, from an apparently arid waste, those plains are covered with a beautiful coat of verdure and so continue till April, as the thermometer rarely falls below 40 deg. of Fahrenheit at sunrise. Whilst the plains are thus parched up in summer by drouth, in the mountainous and hilly regions, they have occasionally refreshing rains, which there keep their pastures good throughout the summer. Their flocks are usually started in the month of April from the plains of Estramadura to their summer pastures, and in October back again. They are generally sheared in the latter part of May, and the wool is sent to St. Andero and Bilboa, the two nearest seaports to their summer pastures, for sale. The proprietors of the flocks always own lands in the mountains and in the plains, sufficient for both their summer and winter pastures. From the circumstance of their sheep being fed the year round upon green fodder, it was the general opinion in Spain that the merino would not succeed in any other country. But the experiments made in Saxony, in 1765, by the introduction in that year of the Spanish merino, it has been proved beyond all question, that with proper care and management, wool can be grown quite as fine as the Spanish, when fed upon dry fodder four to six months in the year. In fact they have succeeded in all countries where they have been tried, except in England; and their deterioration there, must undoubtedly be owing to the extreme humidity of that climate.

The origin of the fine wooled sheep of Spain appears to be a question of much doubt. It is certain that Columella, a Spanish writer on agriculture in the days of Augustus Cæsar, speaks of fine wooled or covered sheep. It is probable they were carried into that country by the Carthagenians or Romans, as the name *mareno*, implies in Spanish, from or beyond sea. But it is of little consequence to those who want a soft, warm, handsome garment, whether those sheep were natives of Spain, or whether the original stock was imported into it from another country.

I shall now call your attention to the first introduction of them into the United States. Soon after the accession of Mr. Jefferson to the Presidency, Chancellor Livingston was appointed Minister to France, and in 1801 or 1802, he obtained from that government three or four merinos of the Rambouillet flock, which he sent to New-York and put on one of his farms. This flock was obtained by the king of France from the king of Spain, and were undoubtedly pure blooded sheep. A little before Gen. Humphreys left Spain, he was enabled to get two hundred sheep from Spain into Portugal, and they were sent to Figueira, at the mouth of the Mondego, and thence shipped to the United States. From what flock he obtained them, I never could learn, though I inquired a number of times; but as Spanish Estramadura and Leon border on Portugal, from 38 deg. of latitude to the northern boundary of Portugal, and as no other than the Leonesa Trashumantes are found in that part of Spain, there can be but little doubt that they belonged to that race.

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* In a letter since received from Mr. Jarvis, he says—"I perceive that I was mistaken in attributing to the Albany Cultivator the article to which I alluded, in my letter to Mr. Gregory; and I now cheerfully and promptly offer to you an apology for the error."

I attempted in 1806, also in 1807, to obtain some from the most celebrated flocks, but the laws were so strict against their exportation without royal license, that I failed of success. After the French invasion in 1808, the laws became more relaxed, and in 1809, by special favor, I obtained two hundred Escurials. At the second invasion of the French under Joseph Bonaparte, the rapidity of the march of the French troops hurried the Supreme Junta from Madrid, and they retired to Badajos. Being without money, and being afraid of disgusting the Estramaduras, by levying a tax upon them, they were compelled to sell four of the first flocks in Spain, which had been confiscated in consequence of the proprietors joining the French. These were the Paular, previously owned by the Prince of Peace; the Negretti, previously owned by the Conde Del Campo de Alange; the Aqueirres, which had been owned by the Conde of the same name, and the Montarco, owned by the Conde de Montarco, and were such sheep as could not have been got out of Spain, had it not been for the invasion of the French and the distracted state of the country growing out of that invasion. When the Junta sold, it was upon the express condition of their granting licenses to carry them out of the kingdom. Four thousand of the Paular flock were sent to England for the king; and Col. Downie, a Scotch officer in the British service, but who then held the rank of General in the Spanish service, and I, purchased the remainder of the flock, between three and four thousand more; and of this purchase, I took fourteen hundred, and he sent the rest to Scotland with the exception of two or three hundred, which he sold to come to this country. Sir Charles Stewart purchased the Negretti flock and sent them to England, with the exception of about a hundred I got out of his flock after they reached Lisbon.

I purchased about seventeen hundred of the Aiquairres flock of the Junta, and the remainder was sold and sent to England. The Montarco flock was bought by a Spaniard and a Portuguese, and about two thousand seven hundred were shipped to this country. I shipped to the United States, the fourteen hundred Paulars, one thousand seven hundred Aqueirres, two hundred Escurial, one hundred Negrettis, and about two hundred Montarcos. Of this number, about one hundred were sent to Wiscasset and Portland, one thousand one hundred to Boston and Newburyport, one thousand five hundred to New-York, three hundred and fifty to Philadelphia, two hundred and fifty to Baltimore, one hundred to Alexandria, and two hundred to Norfolk and Richmond. Besides those which I shipped to the United States on my own account, there were about three hundred Gaudaloupes purchased by others, and two to three hundred of the Paular flock sold by Gen. Downie, shipped to Boston; and of the Montarco flock, shipped by others, about two thousand five hundred were sent to Boston, Providence, New-York, Philadelphia, Baltimore and Savannah. The Gaudaloupes, Paulars and Montarcos, which were shipped to Boston by others, were for the account of Gorham Parsons, Esq , Gen. Sumner, D. Tichenor and E. H. Derby, Esq. All these sheep were shipped in the latter part of 1809, during 1810 and the early part of 1811, and were the only Leonesa Trashumantes, if we include Gen. Humphreys' and Chancellor Livingston's, (which I have no doubt were of the same stock) that were ever shipped to the United States. Badajos is but little over one hundred miles from Lisbon, and all the sheep purchased there and in that vicinity, were shipped from Lisbon. I was then Consul there, and from my office was accurately acquainted with all the shipments, as certificates of property from me always accompanied them.

I shall now, in compliance with your wishes, give you a description of the sheep of the different flocks sent to this country. The Paulars were undoubtedly one of the handsomest flocks in Spain. They were of middling height, round bodied, well spread, straight on the back, the neck of the bucks rising in a moderate curve from the withers to the setting on of the head, their head handsome, with aquilline curve of the nose, with short, fine glossy hair on the face, and generally hair on the legs, the skin pretty smooth, that is, not rolling up or doubling about the neck and body, as in some other flocks, the crimp in the wool was not so short as in many other flocks, the wool was somewhat longer, but it was close and compact and was soft and silky to the touch, and the surface was not so much covered with gum. This flock was originally owned by the Carthusian friars of Paular, who were the best agriculturists in Spain, and was sold by that order to the Prince of Peace when he came into power. The Negretti flock were the tallest merinos in Spain, but were not handsomely formed, being rather flat sided, roach back and the neck inclining to sink down from the withers; the wool was somewhat shorter than the Paular and more crimped, the skin was more loose and inclined to double, and many of them were wooled on their faces and legs down to their hoofs. All the loose skinned sheep had large dewlaps. The Aqueirres were short legged, round, broad bodied, with loose skins, and were more wooled about their faces and legs than any other flock I ever saw, the wool was more crimped than the Paular, and less than the Negretti, but was thick and soft. This flock formerly belonged to the Moors of Spain, and at their expulsion, was bought by the family of Aquirres. The wool in England was known as the Muros flock, and was highly esteemed. All the bucks of these three flocks had large horns. The Escurials were about as tall as the Paulars, but not quite so round and broad, being in general rather more slight in their make; their wool was crimped, but not quite so thick as the Paular or Negretti, nor were their skins so loose as the Negretti and Aqueirres, nor had they so much wool on the face and legs. The Montarco bore a considerable resemblance to the Escurials. The Escurial flock had formerly belonged to the crown, but when Philip the 2d built the Escurial palace, he gave them to the friars, whom he placed in a convent that was attached to the palace, as a source of revenue. These four flocks were moderately gummed. The Gaudaloupe flock was rather larger in the bone than the two preceding, about the same height, but not quite so handsomely formed, their wool was thick and crimped, their skins loose and doubling, their faces and legs not materially different from the two latter flocks, but in general they were more gummed than either of the other flocks. In point of fineness there was very little difference between these six flocks, and as I have been told by well informed persons, there is very little difference in this respect among the Leonesa Trashumantes in general. The Escurials, the Montarcos and the Gaudaloupes were not in general so heavy horned as the other three flocks, and about one in six of the bucks were without horns, or what is commonly called a polled buck.

I had selected by the Paular shepherds, who came with that flock, three hundred sheep which I shipped to Newburyport. The half of these were Paulars, a fourth Aqueirres, an eighth Escurials and the other eighth Montarcos and Negrettis. These I put on the farm in Weathersfield, Vt., that I bought after my return to the United States, and also drove up about a hundred, the remainder of those I had shipped to Boston. In compliance with the invariable practice in Spain, I bred the respective flocks separately, or what in farmer s language is called in and in; the custom in Spain having existed from time immemorial, of breeding the bucks and ewes of the same cabanna or flock together, or in and in; but in about 1816 or 1817, I mixed the different flocks together, and have so bred my merinos ever since.

About ten years ago I found some twenty or thirty samples of the Paular flock that was sent me from Spain to Lisbon, and by clipping from my sheep about as many samples, just as they came to hand, I was satisfied that my flock had improved; and some ten or a dozen wool growers who compared the two, were of the same opinion. Whether this was owing to mixing the several flocks together, or to a very close attention to the selection of my bucks, I cannot say, but the fact unquestionably is so. I well know, as you say, that many have been latterly running about the country puffing up their sheep as full blood Paulars, which name has doubtless been adopted because it is generally understood that the Paular flock carried the heaviest fleeces, but with the exception of eight or ten pure blood merino ewes which I have sold within three or four years, and about fifty pure blood merino bucks within about five years, I do not know nor do I believe that there is a pure blood merino in the United States, besides those which I own.

The reason for this opinion is, that from 1823 to 1836, the rage for Saxony sheep was so great that few or none of our wool growers would breed from merino bucks, who could get Saxony; and after the large importation of Saxony in 1825 and 1826, the Saxonies or their crosses were within the reach of almost every breeder. From 1838, as the different prices of wool were in no fair proportion to the difference of its quality, the light wool Saxony fleeces got daily more and more out of repute until we are finally getting into the opposite extreme, and are giving up the fine, soft felting wools for the coarser and harsher and heaviest fleeces. This is a great error, because fine wools must always be in demand for our superfine broadcloths and cassimeres, and with a proper selection of bucks and ewes, fleeces averaging three pounds weight, may be as easily grown of fine, soft, silky wool, possessing the felting property in the greatest degree, as can be from sheep which yield only two pounds and a quarter to two pounds and a half a fleece.

In 1810 a very intelligent London wool broker, who was sent to Lisbon for the purchase of wool for several English manufacturing establishments, which was principally sent there for sale, during that year, in consequence of the French being in possession of the North of Spain, informed me that the Leonesa wool possessed the felting property in a greater degree than the Saxony, and that it was generally used in England for the manufacture of superfine cloths in preference to the Saxony. Since that time, the Saxony doubtless has been very much improved, and may have attained to equal perfection in this respect. I think there is a general error prevailing in our country in regard to wool. Light fleeces and fine wool are almost universally considered as synonymous. A flock of sheep that will yield three pounds of wool by being evenly fed summer and winter, and kept in fair stock case, by being half starved both summer and winter, may be reduced to two pounds. Now no one who knows any thing about wool, will undertake to contend that this half-starved and sickly growth of wool will make as strong and durable a cloth as will a healthy growth of wool from the same sheep; nor will the cloth made from the starveling wool, handle so soft and well as that made from the healthy wool. Sheep, too, which have been well pastured in summer and half-starved in winter, which is no uncommon case, in keeping more stock than our winter fodder will maintain, will have a very unequal growth of wool; the summer growth will be strong and flexible, while the winter growth, though a shade finer in the fibre, will be dry and tender; and such wool will not make cloth which is strong and soft to the touch. The Saxony manufacturers understand this principle well, and select accordingly, and hence make more durable cloths than the English; and they handle as well, notwithstanding the superior finish of the English. Yet we hear our wool buyers crying out, fine wool, sir! two pounds and a quarter, two pounds and a half, which seems to be their principal standard for fine wool; and according to this standard, the wool of a flock of sickly starvelings, as brittle as rotten straw, would be the acme of perfection.

I think I have now answered all your questions, and if I have tresspassed too far upon your patience, I hope to find an apology in the solicitude which you evinced to obtain full information on the subject. Since beginning this letter, I have looked over some letters and papers, touching the number of merinos exported to this country, which has enabled me to correct an error in my letter to Mr. Calvin Benton in 1836, respecting the number shipped, and which error I fell into from trusting altogether to my memory. Respectfully, Wm. Jarvis.

CULTURE OF COTTON IN GEORGIA.

Messrs. Gaylord & Tucker—About the middle of January, 1843, I moved to this place, which is considered by the neighbors, the poorest plantation in the neighborhood, it having been in constant cultivation for upwards of twenty years, without rest or manure. It is poor pine land, but lies almost level, and is easy to cultivate. I very soon became a subscriber for your valuable Cultivator, and noticing Dr. Cloud's improved plan of raising cotton, I was induced to try one acre. Not having the proper kind of compost, I used for broad-cast, raw stable manure, and in each hill half a gallon of such as I could gather in the barn-yard, and treated it throughout after the Dr.'s plan. From insects and other causes, there was 568 missing hills; from this acre I gathered 1,428 lbs. seed cotton. In August, we had a slight drouth; the cotton turned yellow, and cast a great many of the balls and squares; this I think was occasioned by the raw stable manure.

I also planted six acres four and a half feet by three, and put in each hill half a gallon of barn yard manure, not having any for broadcast cultivation, nearly the same as the above; the yield was above a thousand pounds per acre. The balance of my cotton was planted in the ordinary way without manure, 3¼ feet by 12 inches. From this I gathered 615 lbs.; I think there was no difference in the quality of the land previous to planting. I am fully satisfied, if I had used the proper kind of compost, instead of the unrotted stable manure, and a full stand, I would have had 3,000 lbs. instead of 1,428. I am so much pleased with the Dr.'s plan, that I expect hereafter to practice it as far as my ability will afford; and if I could obtain some of Dr. Cloud's improved cotton seed, I flatter myself that in a few years I would be able to astonish some of our cotton planters that adhere so strenuously to the old system of kill, cripple and go ahead.

Houston Co. Ga., Jan. 30th, 1844. J. D. H.

PHILOSOPHY OF WOOL—No. III.

ELASTICITY.

Messrs. Editors—A writer observes—"There are two antagonist principles continually at work in every part of the frame of every animal; and it is on the delicate adjustment and balance of power between them, that all healthy and useful action depends; the disposition to give way, or submit to some alteration of form when pressed upon, and an energy by means of which the original form is resumed, as soon as the external force is removed." These two principles are beautifully exemplified in the fibres of wool, obviously much dependant on the numerous and minute spiral curves, so manifest in the Saxon and Merino. Take for instance, a single fibre of wool of these varieties of sheep, if it be stretched to its full length, and then suddenly set free at one extremity, it will resume its ringlet form; and hence upon the union of *pliability* with the *elastic principle* chiefly depends the usefulness, and consequently value of wool.

The play of these powers is differently adjusted in different wools. In the Saxon, calculated for our finest fabrics, the action of these opposing principles is beautifully balanced. Hence it is the fabric is so easily shorn of its superfluous nap, the facility with which it yields to pressure, and covers the threads of the cloth with a dense, soft pile. Notwithstanding the injury the elastic powers may receive by the process of manufacture, yet by the aid of a microscope, the nap presents innumerable minute curves closely tinging the texture; and to this much of the beauty of our finest cloth is owing. To these opposing powers of the fibre, the felting principle is not a little indebted, as will be explained hereafter.

SPIRAL CURVE.

The spiral curve or ringlet form of wool, has been referred to. This is one of the distinguishing qualities between wool and hair, the latter being comparatively straight. It is remarkable in all short wooled sheep, but in no other varieties is it so conspicuous as the Saxon and Merino. It is observable in the Leicester and other long wooled varieties, but in a far less degree; and with some species of the goat under the hair of which is found a perfect wool, having the true felting property, and the fibre considerably curved.

I am now about to state a fact, confirmed by my much lamented friend, Mr. H. D. Grove of Rensselaer Co., who was a native of Saxony, and which from its novelty, will surprise many.

There is an intimate connexion between the fineness of the wool, and the number of the curves, or otherwise, is *proportion to the number of curves in a given span, is the diameter of the fibre.* It should be stated, however, that this is more generally true of *pure* Saxon and Merino. It can be easily demonstrated, if the experiment is fairly made with the *micrometer*, care being taken not to destroy the curves by extension, but the fibre placed in the instrument as it *naturally grows upon the sheep.* From M. Lafoun's work on German management of sheep, the following is extracted, bearing on this point:

"Those breeding *pure* Saxons, inspect their flocks three times in the year; before winter, when the selection of lambs is made, in the spring, and at shearing time. Each sheep is placed in its turn on a kind of table, and examined carefully as to the growth, the elasticity, the pliability, the brilliancy, and the fineness of the wool. The latter is ascertained by means of a micrometer. *It being found that there was an evident connection between the fineness of the fibre and the number of curves,* this was more accurately noted, and the following table was constructed. The fleece was sorted in the manner usual in France. The fineness of the Superelecta, or picklock, is represented by a span corresponding with the number 7 on the instrument."

Sort.	Name	Curves in an inch.		Diameter of fibre.
1.	Superelecta,	27 to 29	7	or 1-840th of an inch.
2.	Electa,	24 to 28	8	or 1-735th "
3.	Prima,	20 to 23	9	or 1-660th "
4.	Secunda Prima,	19 to 19	10	or 1-588th "
5.	Secunda,	16 to 17	11	or 1-534th "
6.	Tertia,	14 to 15	11½	or 1-510th "

The above will show the necessity of more care with wool growers in breeding from such sheep only whose wool approximates nearest to the principle laid down, as it is to this curled form of wool its most valuable uses depend. It is one agent, though not the principal, in producing the phenomena of felting. "It materially contributes to that disposition of the fibres which enables them to attach and entwine themselves together; it multiplies the opportunities for this interlacing, and it increases the difficulty of unraveling the felt."

The numerous and minute curves being, as observed, eminently characteristic of the pure Saxon and Merino, will serve as a sure test, in all cases, of the purity of blood, and therefore affords a certain and unerring guide in the selection of breeding sheep. If it is rigidly adhered to, the every day attempts to dispose of grades for high bred sheep will be frustrated.

SOFTNESS.

It is not as generally known as it should be, that softness is a quality of wool of much consequence. When the wool buyer and stapler proceed to an examination of a parcel, their judgment will be materially affected as to its value, whether "soft in handle," or otherwise. This, however, generally speaking, is the result of comparative fineness; but by no means always so, for wool of the same quality of fineness has not the same degree of softness. There are several causes to account for it, and among them is soil; as for instance, the chalky districts of England, affect the wool to such an extent as to make it invariably brittle and harsh. This however, is only local. The general cause of a deficiency of softness in wools of the same breed, may be referred directly to the *condition* of the sheep. In a former number it was stated that when the animal was kept in uniform good condition, the necessary quantity of *yolk* was supplied. Now if there is but little of this substance, which will follow an abuse in management, the wool will be less pliable and "kind to feel." Therefore it may be set down as a universal rule, that wool owes much of its softness to the *presence* of a *sufficiency* of *yolk*.

As a testimony how much this quality of wool is appreciated by the manufacturer, it is affirmed on the authority of an English author, "that two parcels of sorted wool being taken, possessing the same degree of fineness, but the one having the soft quality in an eminent degree, and the other being harsh, the cloth prepared from the first, at the same expense, will be worth more to the manufacturer than the other, by full 20 per cent." The salving of sheep in Scotland and the northern extremity of England, alluded to in my *last*, is very much for the object to promote softness of the wool; and the result from the manufacture of such wool, as stated by Mr. Bakewell, will also be remembered.

Trueness of the fibre, and the *influence* of *temperature* upon wool will be embraced in the following chapter.

L. A. Morrell.

Lake Ridge, Tompkins Co., N. Y.

ROAD WORKING.

Messrs. Gaylord & Tucker—Among the many useful subjects that have received attention in the volumes of the Cultivator, I see this has not been entirely lost sight of. That great errors exist in road working, is obvious to every reflecting mind. If the time spent towards making and repairing the roads in our county had been judiciously applied, it would have made every foot of them free and in better condition than they now are; but such is not the case; on all the great market roads, the farmer is mortified with the sight of a gate across it.

I shall now undertake to give you a description of the way our roads are made and repaired in this township, with this remark, that I believe they are as well attended to as in any part of our wide country. Our population for industry and intelligence, need not fear to be compared with any other. At our annual town meetings, a certain amount is raised for the roads, and overseers appointed for the several districts. Then by a master stroke of policy, before they leave the ground, they pay $500 of this tax by extra allowance on the price of their labor. Next when convenient, the overseer calls them out to work on the road, to meet at such a place, one with his team, and a dozen or twenty, or perhaps more, with each a shovel; this helps to support them when they get too lazy to stand alone; then commences the work; the team, with one to hold and one to drive, goes ahead and scratches up a little dirt, and the rest follow after and throw it in; and should it happen not to rain for some days to come, they will not do much hurt. If one of the number should chance to say where an improvement might be made, he is silenced by the majority telling him that it would be spending too much time in one place. If a small stone bridge is necessary, the overseer, who is generally very much interested in the welfare of the district, tells them it is wrong to take the district money for such a purpose; so a county freeholder is called, and as much paid in fees as would have done the work; thus taxing themselves two dollars to save one, and this is done by men who are shrewd calculators in their private affairs; they appear to feel and act as if this was a burthen imposed upon them in which they have no interest.

Thus I have tried to give you a true picture of road working with some few exceptions so far as my observations extend; I shall now try to point out some remedies as they occur to my mind. And first, let the people bring their minds to bear on the subject. Next, let the one who has the management of the work, call out no more help than can be profitably employed; six men will always do more work on the road than twelve; be sure to have all the necessary team help and tools of every sort that may be wanted. If there is a hill that requires all the exertion of a team to draw 10 cwt., let them be unceasing in their efforts to improve it, either by altering its course, or by pulling it down till they are able with the same exertion to draw 20 cwt.

We live here in a hilly country, and I know many such that before this, might have been lessened one-half in the draft, with the tax that has been paid. There is a large proportion of our roads, from the nature of the ground, and the vast amount of work it would require to cover it with gravel "8 or 10 inches," must remain pretty much as they are; they are mostly level, and when frozen or dry are good; but the hills are hills in all seasons and in all weather. And last of all, bring the subject to notice now and then in the useful columns of the Cultivator. Good roads and good husbandry are nearly allied. On the other hand, where no effort is made to improve the one, the other is in a corresponding condition.

Newton, Sussex co., N. J. Samuel Cassidy.

The Garden and the Orchard.

CULTURE OF FRUIT—No. III.

ADDITIONAL REMARKS ON TRANSPLANTING, GRAFTING, &C.

The writer having just been favored with some criticisms, and additional remarks, from a source entitled to the highest confidence, hastens to add them to the remarks already furnished.

"*Seven feet* in diameter is not too large for the holes, but it is too much to insist on when many trees are to be transplanted; because common folks would not obtain the necessary labor in the planting season. I could not, for one. By being too strenuous, our advice might be wholly rejected." The object of the writer of these articles was to state what he considered the *best* and *most economical* course, not what he thought would be most probably followed.* The holes may be dug for ten cents a piece; the trees cost twice as much, and will grow more than twice as fast, and produce more than double in a given time. But very few can afford to spare the labor in the transplanting season; hence it is better either to make the holes somewhat smaller, to dig and nearly fill them at some other season, or to transplant one-half as many, which, if done in the very best manner, and afterwards well cultivated, would probably yield more fruit than a much greater number taken care of in the usual manner. The necessity for large holes would doubtless be in a great degree obviated, in planting large orchards, by plowing a strip of land eight feet wide for each row, of double depth, and applying and thoroughly mixing with the soil, so much well rotted manure, compost, or chip-dirt, as the case may require.

"The great benefits of chip-dirt and rotten wood, so excellent for all kinds of trees, both for fruit and ornamental, has been overlooked."

"No certain rule will apply well for the distances between apple trees. The *Bough* would do well on a square rod or 160 to the acre, while of "*the* 18 *ounce apple*,"† more dwarfish still, more than 200 might grow on an acre. On the contrary, the *Spitzenburg* ought to stand on four square rods, and the *Swaar* on half that space. Again, the Seckel pear, and all cut-leaved peach trees, are dwarfs. 'Mere varieties [often] differ greatly in in size.'" But it becomes necessary to adopt some uniform distance in planting common orchards, and in the former article, the *average* was taken. The instances just mentioned are unusual variations, and in very large orchards for commercial purposes, it might be well to vary the distances of the rows, without changing the distances *in* them, for the several sizes.

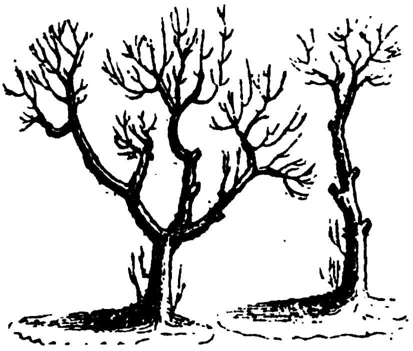
"Does the curculio '*rarely*' though '*frequently*' attack the earlier peaches?" The writer stated in No. 1, that "it rarely touches other than smooth *stone* fruit;" and that "the earlier peaches frequently suffer from its attack." The White and Red Nutmeg were chiefly alluded to, which are *rare* in comparison with the rest of varieties. They are also comparatively smooth, nearly as much so as the apricot, which, though not possessing the glossy surface of the plum and nectarine, is so clear of down as to invite freely the attacks of this insect. "No notice is given of catching it on sheets; and yet without this method, I could not hope for apricots in a fruit garden as large as mine. Last spring we destroyed [by this means] more than 1,600, and more than this number two years before." It is done as follows:—Sheets are spread under the tree, which is jarred violently; the insects immediately drop on the white surface, where they are seen at a glance, and destroyed by the thumb and finger. The best time for the work is the cool of the morning. If commenced early enough in the season and continued every morning for a few weeks, this mode proves very effectual. Twice or three times a day would doubtless be better. The blow of a mallet on the stump of a sawed limb, is the best mode of jarring the tree. A few minutes time is sufficient for many trees, if a few boys are at hand to carry and spread the sheets.

"The *pail of water* should be applied [in transplanting] by throwing on about two or three quarts at a time, though *dashing* would be a better word."

"Transplanting in autumn should be confined to dry soils, or such as are so loose that water will not stand in the holes during winter. In clay, trees should not be set in autumn."

"To guard against mice, raise a small mound of earth one foot high round the tree. This method has never failed with me, and has proved of no injury."

The preceding remarks are given with the hope that they may prove of value to others, to whom objections similar to those just quoted, may have occurred.



PRUNING ORCHARDS.—Fig. 39.

In the remarks on the Apple, in the last number of this paper, a very common error in pruning old trees, was not noticed. It consists in trimming up the branches to a height of ten or fifteen feet from the ground; which, without much benefiting the growth of the tree, renders their appearance extremely unsightly, and precludes the possibility of gathering the fruit without great difficulty. Fig. 39, represents two specimens of this bad pruning; which are not worse in appearance, than hundreds found all over the country. Fig. 40, shows how they should be trimmed, to cause a fine, new, thrifty head, not so high as to be above easy reach, nor so low as to prevent the cultivation of the land. In heading down all large trees of this kind, it will be obvious that the large wounds need a covering; the best of which is a mixture of tar and brick-dust, applied hot to the fresh surface.

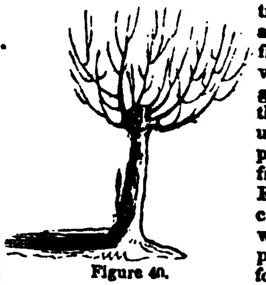


Figure 40.

The trees are represented leafless, in order to show them more clearly. J. J. T.

CULTIVATION OF FRUIT.—No. IV.

THE CHERRY.

Cherry stocks, in common with those of other fruit trees, are best when raised from seed; and for this purpose the stones should be dried moderately in the shade and then buried in earth, or else buried as soon as taken from the pulp. If they become much dried, vegetation will always be retarded a year, and generally wholly prevented. The mazzard or heart varieties are preferable for stocks on account of their straight and rapid growth. They are grafted standard height, when the round fruited varieties are inserted into them, as in such case they furnish better shaped trees. When budded standard height, the first shoot of the bud should be cut down to three or four inches, to form a better head.

Great difficulty is sometimes found in successfully grafting the cherry. It should be performed very early in spring, before the buds have started in the least degree. *Budding* has also been found difficult. This can be successfully practiced only on thrifty stocks during their most vigorous state of growth, which is usually in the early part of summer; the delay of a few weeks will often prevent entirely the adhesion of the bud.

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* In this he acknowledges himself inferior in shrewdness to the man from Limerick, who, writing home, stated he had *meat* in America twice a week: "But," said his companion, "you have it every day." "Aye," replied he, "but do you think I'm such a fool as to tell them what they will never believe!"

† A large striped apple, commonly known as the "*Twenty ounce apple*."

The cultivated varieties of the cherry are divided into two classes; the *first*, consisting of the Mazzards, Hearts, and Bigarreaus, is characterized by tallness, and well shaped and pyramidal form; by light green leaves, large and vigorous young branches, and a sweet, or bitter, but not sour taste. The *second class*, includes the Dukes, Morellos, and common sour or pie cherry, and has small, irregular and compact branches of low spreading growth, dark green leaves, and strongly acid fruit. A little observation will enable any one readily to distinguish these two kinds, even when the trees are not more than a foot in height.

The following are among some of the best varieties:

I. HEART-SHAPED FRUIT.

May Bigarreau.—This is probably the earliest variety of value. It ripens in the early part of sixth month (June,) sometimes earlier, and is not later than the Early May. It is of good size, oblong, heart-shaped, dark red, and of good, but not high flavor. It is an abundant bearer, and is liable to crack from moisture.

Black Tartarian.—A fruit of large size and uncommon excellence, and by some, considered superior to all others. The fruit is sometimes more than an inch in diameter. But when crowded, it is smaller, and is then liable to rot on the tree.

The Black Corone is smaller than the Black Tartarian, a great bearer, and of fine flavor. It is not uncommon in various parts of New-York, and is occasionally known under the erroneous names of Ox-heart, Albany cherry, &c.

White Tartarian.—The fruit is of medium size, and of most excellent flavor, even superior in quality to the preceding variety. It is also a great bearer. Two varieties by this name, are described in some books, both of which appear to be distinct, and inferior to this, which is cultivated by the writer.

The *Elton* is a fruit of uncommon excellence. It is thus spoken of in the London Pomological Magazine:—"This invaluable variety was raised in 1806, from the seed of the Graffion which had been fecundated by the the pollen of the White Heart. Its merits can scarcely be too highly spoken of. In flavor it is considered by many as the most delicious of cherries; in beauty it is scarcely surpassed by any other; and its hardiness and productiveness are now ascertained by the experience of all who have cultivated it." A few years' cultivation in western New-York, fully corroborates the high character above given.

The *Transparent Guigne* is one of the best of later cherries. The tree is of very vigorous growth, and yields abundant and regular crops; the fruit is of medium size, and when *fully ripe*, is of a very high and excellent flavor.

The Graffion, Yellow Spanish, or White Bigarreau, is remarkable for the vigorous growth of the young trees, and for the large size, beauty and excellence of the fruit. It is more spreading in growth than most heart trees.

A new variety from England, named *Knight's Early Black*, resembles the Black Tartarian, but possesses the rare merit of ripening more than a week before it. It has scarcely been proved in this country; but should it be well adapted to our climate, it will doubtless be found a most valuable acquisition to our list of fruits.

The *Black Mazzard* is the natural species whence all the cultivated varieties of the heart-shaped cherries have sprung; the fruit is very small, black and of bitter flavor, and is therefore only to be cultivated for stocks.

2. FRUIT ROUND.

Early May.—The growth of this tree is very slow, and the fruit is small, and not high flavored. Its only merit is that of ripening before any other sour variety. In favorable seasons, it arrives at maturity in western New-York, in the latter part of the fifth month (May.)

Early Richmond.—This fruit ripens about the time of the Black Tartarian, (the early part of sixth month,) and when well matured, is a little above medium size, and is tender, rich, and juicy. It is rather too acid when first ripe to be pleasant to the taste, but is fine for cooking; it becomes delicious when it continues on the tree a few weeks longer.

May Duke.—Much confusion has prevailed in relation to this variety. This is probably owing in part to the cultivation of some inferior sub-varieties, but chiefly to the fact of its great variation in time of ripening. On some trees the fruit is ripe, while on others it remains green, and this difference is often seen on different limbs of the same tree. Hence the absurdity of the usual practice of writers on fruit dating the maturity of other varieties from that of the May Duke. The period continues from the ripening of the Black Tartarian, through several following weeks. It is a fruit of great excellence and richness of flavor, but is usually gathered when it has attained only two-thirds of its size, and before its flavor is half perfected.

The *Carnation* is a large, fine, and handsome fruit, ripening about a month later than the Black Tartarian.

The *Belle de Choisey* much resembles the Carnation in external appearance, but is earlier, of more delicate texture, and of sweeter and finer flavor.

Excellent outline figures of a part of the preceding varieties were published in No. 9 of last volume of the Cultivator, by A. J. Downing.

In most parts of this state, the cultivation of good varieties of the cherry has been perhaps more neglected than any other kind of fruit; many who have made considerable effort, to procure good orchards, seem never even to have seen any better than the black mazzard and Kentish red. And those who have better varities, rarely ever witness their good qualities, from the very general practice of picking them before maturity. Cherries not unfrequently attain the *appearance* of ripeness, when scarcely more than half size, while little of their excellence is yet to be perceived.

The cherry, to succeed well, should grow upon a dry, light, rich soil. It rarely succeeds well in a moist situation, and frequently dwindles and dies in a few years. Pruning is but very little practiced, and is generally not needed. English writers mention cases, however, where old stunted trees have been greatly benefitted by pruning, ank speak of the absolute necessity, where it is resorted to, of protecting the wounds thus made from air and moisture by an application of a suitable composition.*

The diseases and enemies to which the cherry is subject, in New-York, are few and not formidable. The tree is therefore one of remarkably safe and easy culture, after it has been procured. There are some varieties, however, which are attacked by an insect which causes large black excrescences upon the trees. Whenever these appear, the injured branches should be cut off immediately and committed to the fire. Perhaps the greatest difficulty in the cultivation of this fruit, is the depredation of birds, especially of the small, brown crested bird, called the *Cedar Bird*. The only effectual remedy yet found, appears to be powder and shot. The birds soon become suspicious and fearful, and less destructive. Small trees of valuable fruit, might be protected by a coarse cheap net thrown over them. Some of the round varieties are stung in the fruit by the Curculio.

J. J. T.

EARLY POTATOES.

Last spring, the following experiment was made with early potatoes: One row across the garden was planted as soon as the ground was open, with seed which had been kept in a warm cellar, and had become sprouted about two inches long. Care was taken not to break or injure these shoots. Another row beside this was planted at the same time with seed which had not sprouted. The former were up nearly two weeks earlier than the latter, and were from four to six inches above ground when the unsprouted ones appeared at the surface. They maintained the same superiority through the season. J. J. T.

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* For this, see a former number of this series of articles, on Pruning.

CULTURE OF THE GRAPE.

In our February number, we spoke of Dr. "Underwood's" vineyards at Croton Point, Westchester county, N. Y. We should have said Dr. UNDERHILL.

We are happy to lay before our readers the following communication from Dr. Underhill:

MESSRS. EDITORS—I have occasionally written some articles for the Cultivator on the culture of the grape, but as some time has elapsed since you last heard from me, you may have supposed I was taking a Rip Van Winkle sleep, and that you would rouse me by putting another in possession of my vineyards. If these were your views, I assure you you are mistaken. I require no process of this kind to keep up a lively interest in the culture of the grape, though my engagements may prevent my communicating with the *barometer* of the agricultural and horticultural progress of this country, as often as I could wish.

The advantages that would be derived not only in an individual, but a national point of view, from a greatly increased culture of all our choice fruits, is not fully appreciated. The large quantity of animal food consumed by all classes in this country, renders the antiseptic and diluent properties of fruits in temperate and tropical climates, absolutely necessary to the promotion and preservation of health. The alarming increase of diseases of the heart, apoplexy, palsy, obstructions of the liver, lungs, and other vital organs, and the rapid progress and violence of the inflammations consequent upon these obstructions, are directly or indirectly connected with and dependent upon a plethoric or overloaded condition of the blood vessels; a state of the system, which a free use of ripe fruits and vegetables is best calculated to prevent and correct. The object to be obtained in this case, is too manifest and striking to require any enforcement from argument. Physicians, however they may differ in opinion on some subjects, agree on this, that the free use of good ripe fruits, such as the grape, the apple, peach, &c. &c., is well calculated to promote and preserve a healthy state of the human system. We have therefore not only pecuniary inducements to cover our fields and the banks of our rivers with the choicest fruits, to delight the eye and gratify the taste, but a far higher object, the promotion of the health and happiness of our fellow creatures.

Notwithstanding all the efforts that have been made for a number of years past, to advance the culture of the grape and some other fruits, (and the success has been very encouraging,) there does not appear to be any probability of overstocking the markets of the large cities on the seaboard, for a quarter of a century to come. Indeed, if still greater efforts are not made, and far more land employed than has been for these purposes for many years past, the growth of the cities will be greater than the growth of the fruit; added to which, rail-roads and steam have opened many new markets, and will continue to do so for years to come.

The farmers in the interior and to the west, owing to their cheap alluvial soils, find it to their interest to supply us with large quantities of grain and less perishable articles than fruits; and the owners of far more costly land near our large cities and rail-roads, would find it greatly to their advantage to turn their attention more to the productions of the garden, the vineyard and the orchard, than they have heretofore done. The grape, from its arriving at the bearing state so soon, and continuing to produce a bountiful crop every year when well cultivated, for an almost indefinite period of time, possesses advantages over every other fruit with which I am acquainted; and hence, of late I have given it a decided preference on my place at Croton Point. As fast as my peach orchards fail or show symptoms of decay, if the ground is suitable, I occupy it with the grape. A bank well covered with good plants of the Isabella grape, properly and carefully cultivated, will, I am fully persuaded, give larger and more certain dividends, in proportion to the amount of capital invested, than any other bank in the State. Then the enjoyment which the management of a vineyard will afford, the general reader may have formed some idea of from the perusal of the pages of sacred and profane history, but can never fully realise till, while cutting the tender shoots with his own hand, he inhales the delightful perfume of the delicate blossom of the vine; and when at the wane of the season, he clip the large, well filled clusters from the branches, enrapturing the eye, the taste, and the smell, then it is that he can comprehend the reason why the grape has been made the theme of the poet, philosopher and divine, in every age of the world. Yours truly, R. T. UNDERHILL.

New-York, Feb. 17, 1844.

CHANGE OF FRUITS.

"I beg leave to state the result of an experiment made by myself, in order specially to test the correctness of this idea, (that the flowers of one tree are impregnated by the pollen of others, thereby producing all manner of fruit; but when a tree is isolated so that no such union takes place, the fruit will resemble the original. See Cult. vol. 10, page 87.) Some fourteen years ago, when about to emigrate from western Pennsylvania to this place, I procured some seeds from an apple-tree on my father's farm, which stood entirely apart from other fruit trees, and about 60 rods from the orchard. As the produce of these seeds, in due time, I planted in my orchard three trees, which have bore apples for several years past, and we find the fruit of each differing entirely, one from another, in size, color, taste, and time of ripening, and none of them have any resemblance to that of the parent tree.

I am unable to reconcile these *facts* with the view of your correspondent, in any other way than by supposing that the pollen from the trees in the orchard, had blown to the tree from which I obtained the seeds. Has the opinion in question ever been confirmed by actual experiment, or is it founded on theory alone?

Knox Co., Ohio. J. CRAWFORD."

We believe the theory in question, originated with Mr. Knight of England, who made a vast number of experiments, to determine this and other uncertain points in vegetable physiology. Supposing the pollen that impregnated the blossoms, to be in a great degree distributed by bees or other insects, he covered some bunches of of apple blossoms with fine muslin, so that they must have been fertilized by the natural process, and these seeds produced fruit like the original tree, or with little difference. Other bunches he covered in a similar manner, and carefully opening the flowers, removed all the anthers before the process of impregnation commenced. At the proper time, the pollen from other flowers was sprinkled over the pistils of the secluded blossoms, and the seeds from these, produced undoubted hybrids, the result of a cross-fertilization.

Since the labors of Van Mons, Duquesne, &c. have been made known, a different theory has become very prevalent, which is, "that wild plants or fruits, while growing in their native wilds, are generally perpetuated from generation to generation without change; but this is not the case with the *hybrids* or *cultivated* varieties, however isolated, or far removed the tree may be which produces the seeds, from any other of its species." This theory supposes that all the improved or cultivated fruits are hybrids, and that there is in them a constant tendency to show more or less of the different varieties from which in the course of years, they have originated. On this theory, seeds from an isolated tree, would furnish no guarantee that the fruit would be like the parent. The student of nature will not fail to see in this theory a close analogy to facts known to exist in the hybridism or changes of character in animals; and our correspondent will see that the question is one which must be considered open to further investigation.

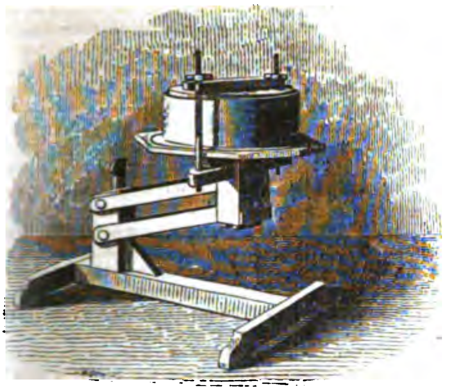
FRUIT TREES.

The New-York True Sun says an orchard of only four acres in Mannington, N. J., produced last year,

360 bushels of apples, at 50 cts......	$180 00
30 barrels of cider at $1,50..........	45 00
	$225 00

The same man had 12 acres of corn—product, 600 bushels, at 87½ cts., $225. So that 4 acres of orcharding yield as much income as 12 acres of corn.

Domestic Economy.



SELF-ACTING CHEESE-PRESS.—(Fig. 41.)

In vol. 9, page 167 of the Cultivator, we gave a description of this press, (fig. 41.) At that time it had not been generally used; but since then, experience has fully tested its superiority. We placed one, which had been sent us, in the hands of Messrs. H. P. & G. Allen, of Duanesburgh, well known as extensive manufacturers of cheese, and after giving it a thorough trial, they have forwarded us the following certificate.

Messrs. Editors—We have had one of Messrs. Collins & Stone's Patent Cheese-Presses in use the past season, and consider it much superior to any thing of the kind we have before seen, and think the properties of this press need only to be known, to bring it into general use. H. P. & G. Allen.

Duanesburgh, Feb. 1844.

N. B. Mr. L. Kennedy, Jr. of Hartford, Ct., is general agent for this press.

CHEESE MAKING.

Our Canadian correspondent, "*Enquirer*," says—"If it would not be trespassing too much on your indulgence, I would solicit an article on the best method of making cheese, either from your own experience, or that of some experienced cheese maker. I do not recollect meeting with any thing of the kind in your publication for this year, (1843,) or at any rate, nothing sufficiently explicit to enable a beginner to count upon success. The best method of reserving the oily particles to the cheese, and at the same time expressing the whey well, is not well understood in this country. There appears to be variant opinions with regard to the method of separating the whey from the curd, also of the proper way and time of salting it. It has been observed to me that the Americans incorporate a little lard with their cheese, thereby imparting the mellowness so much desired in that article."

If Enquirer will turn to the 147th page of the Cultivator for 1843, he will find the concluding part of one of the best papers on the subject of the dairy or cheese making, yet published in this country; but as the present volume will pass into many new hands, we shall give an article which we hope will meet the wishes of our correspondent and others.

Having had considerable experience in the dairy business, we have found that there are so many things to be taken into consideration, that all rules for their management must be more or less general; and no directions, however minute, can compensate for experience. In large dairies, curds are turned, or cheeses made, at both morning and night; in smaller ones, the night's milk is set, and the cheese made in the morning; in still smaller ones, the milk of two or three days is required to make a cheese, and of course different methods must be adopted in each case. We shall suppose the quantity of milk given at two milkings, to make a cheese of some 30 or 40 lbs. weight, a medium perhaps of our dairies.

In making the rennet, the dried stomach of a calf is the best material; it should be cut in small pieces, soaked in water or sweet whey, to which must be added salt enough to keep it sweet; and at the pleasure of the maker, sage, summer savory, or other aromatic herbs. If the rennet is properly made, a gill will be sufficient for a cheese of 20 lbs.; but its strength can only be ascertained by experiment. If too much is used, the cheese will be puffy and strong; if not enough, the curd will not be formed, and a waste of milk will ensue.

In hot weather it will be found necessary to reduce the temperature of the milk drawn at night, to 50 to 55 deg. of the thermometer, which is best done by placing the pans or vessels in cold water. In the morning, the cream must be carefully skimmed off and put in a pan. As the milk when set, should be of the temperature of 90 to 95 deg., the quantity of milk to be warmed, will depend on the external air; as in a cool day, the milk of the morning will be lower than in a warm day, and a too low temperature must be guarded against. Into this milk while warming, the cream taken off, must be put, and raised to such a temperature that when it is united in the tub with the remainder, and with the morning's milk, the temperature may be about 90 deg. Sometimes it is necessary to warm the whole night's milk; but this is only in very cold weather; while when the weather is warm, the cream may be put in the strainer and melted by pouring the warm morning's milk over it. The thermometer in these cases, must, however, be the guide; and the operations of the dairy cannot well be conducted without this instrument.

When the proper warmth has been given to the milk, and the cream fully incorporated, the rennet is to be added, and thoroughly stirred into the mass. The time allowed for coagulation will depend on the strength of the rennet; and if good, an hour will be about the proper time; during which, more or less of the cream will naturally rise to the surface. When properly coagulated, the curd will bear a slight pressure on its surface without breaking; but experience here is much the best guide. To prevent the escape of what cream may rise with the whey, it should be carefully skimmed to one side of the tub, and covered with some of the coagulated milk laid upon it with a skimmer. The whole is then carefully broken up with a cutter like a long wooden knife. Much is depending on this operation, as if not well done, the butyraceous matter which gives character and excellence to the cheese, will be carried off by the whey and lost. A coarse strainer or cloth, is best thrown over the curd, through which the whey is dipped as it rises, as long as it can be dipped conveniently. The curd is then again broken up, and the whey more completely dipped off than before. Some of the first whey is to be heat as soon as dipped off, for the purpose of scalding the curd. Great care must be taken not to scald the curd too much. Two pailsful at 130 deg. will scald a curd of 20 lbs.; but the weather and the quantity of curd must be consulted to determine correctly. When the hot whey is poured on, the curd should be broken up and mixed by hand, that all parts may be equally treated, and made as fine as it can be broken. It is now removed to a strainer and basket, and when the curd is drained, it is returned to the tub for salting. Half an ounce of good salt to a pound of cheese, will prove a good rule, but the taste of the dairy woman is perhaps as good a regulator of this matter as any. The salt must be pure and fine, and thoroughly mixed with the curd, or it will not ripen equally, and the unsalted places will acquire a bad flavor.

The pressure required, mainly depends on the size. The curd is put into the hoop or vat in a strainer, and remains in the press about two hours. It is then removed, placed in a dry cloth, and returned to the press. It should not remain in the press without turning, longer than five or six hours at a time, and from 24 to 36 hours will be necessary to complete the operation. A power of from 80 to 100 pounds for every 15 pounds of cheese, will be a sufficient pressure. Where large cheeses are made, it has become a common practice to pass a bandage made of thin cotton cloth, of the same width as the thickness of the cheese, around them, and secure it by stitching it together at the extremities. This will prevent the spreading of the cheese, and thus prevent the danger of cracking and of loss from that source. We have found such strips of cotton of the greatest use; and the larger and richer the cheese, the greater their value to the dairyman. Milk may be tinged so as to give a richer hue to the cheese; but if the cream is all added, and the cheese well made, coloring matter will be unnecessary. Annatto is the best coloring material, as it is harmless; which cannot be said of all the ingredients sometimes used for this purpose. There should be a free ventilation to the cheese room, but they should not be exposed to strong currents of air, as it makes them liable to cracking. Cheese should be turned on the shelves daily, and rubbed with butter made into an oil, at each turning.

We have never known an instance where lard has been used in any way in the making of cheese, unless perhaps sometimes as a substitute for butter at turning the cheeses during the process of curing, and we think it would scarcely produce the effect attributed to it by our correspondent, even were it adopted in the place of cream, at the time of making. In our next, we will give the mode of making the celebrated Gloucester cheese.

CREAM CHEESE.

Mrs. Reynolds, of Connecticut, desires to be informed of the mode of making cream cheese, mentioned in Mr. Sotham's communication in the January number of the Cultivator. In reply to her inquiry, we are pleased to give the following communication from Mrs. Sheldrick, under whose superintendence the cheese spoken of by Mr. Sotham was made.

MESSRS. EDITORS—According to your request, I herewith send you a recipe for making cream cheese; and if any of your numerous readers can learn any thing from my experience, I shall feel most happy in communicating what I well know to be worthy the trial of all good house-wives.

Recipe.—Take one quart of very rich cream, a little soured, put it in a linen cloth and tie it as close to the cream as you can. Then hang it up to drain for two days—take it down, and carefully turn it into a clean cloth, and hang it up for two more days—then take it down, and having put a piece of linen on a deep soup-plate, turn your cheese upon it. Cover it over with your linen; keep turning it every day on to a clean plate and clean cloth until it is ripe; which will be in about ten days or a fortnight, or may be longer, as it depends on the heat of the weather. Sprinkle a little salt on the outside, when you turn them. If it is wanted to ripen quick, keep it covered with mint, or nettle leaves. The size made from a quart of cream is most convenient, but if wished larger, they can be made so.

ARABELLA SHELDRICK.

Hereford Hall, March 8, 1844.

MINCE PIES WITHOUT WINE OR SPIRITS.

DOROTHY DUMPLING, gives in the Southern Planter, her mode of making mince pies without wine or brandy. She says the best judges say, (and *behind her back, too!*) that her pies are as good as they ever tasted.

Take 4 pounds of plums, (raisins?) 1 pound of currants, 2 of cherries, 3 of beef suet, 4 of sugar, a fresh beeves' tongue, half a pound of citron, 1 ounce of mace, half an ounce of cloves, 1 nutmeg, the juice of 2 lemons, with vinegar to your taste. Make mince-meat of these materials, and put it by for use. When you make pies, add syrup, or juice of sweet apples, to make the mince-meat liquid, and some fresh apples chopped fine.

In place of citron, marmalade or preserves, will do.

OKRA—"GUMBO."

T. Affleck, Esq., gives the following mode of preparing this vegetable:—"A large mess of okra soup (called gumbo,) should be served on every plantation at least four days in the week, while the vegetable is in season. The pods are gathered while tender enough to be cut by the thumb nail; cut into thin slices, and with tomatoes, pepper, &c., added to the rations of meat, forms a rich, mucillaginous soup. It is planted (in Mississippi) about the first of March, in drills four feet apart, every two three feet, if the ground is rich, which it should be."

Veterinary Department.

SCOURS IN CALVES.

Lovett Peters, Esq., in a communication in the N. Farmer, says he has tried most of the remedies reco mended for this disease, but has found the following su ceed better than any other. "It is a half a pint of cid and as much blood, taken from the calve's neck; sho well together and given him with a bottle."

BLIND TEETH.

John Johnston of Geneva, says he has had much exp rience with blind teeth. He states that when they co out in such a way that the grinders of the under jaw pre on them, the eyes are always injuriously affected. Th blind teeth should always be taken out as soon as the make their appearance.

WARTS ON THE TEATS OF COWS.

Cows are sometimes troublesome about being milke in consequence of their teats being sore from wart The Mass. Ploughman recommends rubbing the tea with the juice of *milk-weed*, and also the application of poultice made of grated carrot. Both may be good; a any rate they will do no hurt, but the best plan to obviat this trouble is, to cut off the warts with sharp scissors *when the cows are dry*. Not much blood will flow, an the teats will heal in a few days.

PROGRESS OF THE SILK BUSINESS.

Mr. J. R. Barbour, of Oxford, Mass., has lately returned from a tour of observation in regard to the silk business. In the Boston Cultivator, is an interesting communication from him, giving valuable information relating to this important branch of industry.

Mr. B. states that "there has been a large increase in the manufacture of silk in New-England within the last two years. Several new establishments have been started in that time, and old ones that were prostrated by the mulberry speculation of 1839, have been resuscitated and are now going on prosperously." He speaks of a large establishment just going into operation in Willington, Conn., for the manufacture of cords, gimps, and other trimmings. The building is over 100 feet long and three stories high. Messrs. Dale & Denmead are the owners, and they contemplate doing a large business.

Mr. B. also speaks of the establishment of Messrs. Murray & Ryle, at Paterson, N. J., which consumes 150 lbs. of raw silk weekly—also of that of Mrs. McLanahan, Philadelphia, commenced in 1841.

Mr. B. visited the two principal silk establishments west of the mountains, viz: that of Mr. Rapp, at Economy, Pa., and Mr. Gill, at Mt. Pleasant, Ohio. He pronounces the goods of these establishments, equal to any of the same kind brought from England or France. He found Mr. Gill building a new factory 50 by 20 feet, and three stories high, for weaving plain pongees for printing. He could hear of no establishment at the west that had failed or had been suspended; though many of them have suffered much from the want of more capital.

Mr. B. says the valley of the Ohio has gone ahead of New-England in the production of raw silk. He thinks the west and south will take the lead in the growth of silk, just as they do in corn and other agricultural products, and for the same general reasons and no others. The proper question, then, he says, for eastern farmers, is, not whether the west can lead them in this crop, but whether silk is not one of the best crops they can raise. Indian corn is one of the best crops for the eastern farmer, though it will be admitted that the west can take the lead in this article. Mr. B. says, "I reason about silk in the same way. Here we are, fixed upon our *hills* and plains. Some of us would not abandon them for the fertile west if we could. Here we are, and here we must be, and we must do something. We are on a *tread-mill*, and it is work or die; and the only question is, what articles of cultivation are most worthy of attention? Sooner or later my readers will decide in favor of silk, as one of the class."

PROUTY & MEARS'S PATENT CENTRE-DRAUGHT SELF-SHARPENING PLOWS,

FITTED up with new gear complete of six different sizes. Also, *Prouty & Mears's Sub-soil Plows*, of three sizes, viz: No 1, for one horse, $8; No. 2, for two horses, $10; No. 3, for three or four horses, $12. For sale wholesale and retail, by

D. O. PROUTY,
Seed and Implement Warehouse, No. 176 Market-st.
Philadelphia, March 16, 1844.—2m.

ALBANY SEED STORE AND AGRICULTURAL WARE-HOUSE—No. 38, BROADWAY.

THE proprietor is now receiving from his seed growers, a full and complete assortment of American Garden Seeds, all of which are selected with care. being grown from the best varieties of vegetables to be found in the country; also European Seeds, Plants and Flower Seeds from the best establishments in Europe and America.

Fruit Trees of all the choicest kinds furnished to order at the lowest market prices, and warranted true as represented. Agricultural and Horticultural Implements of American and European manufacture. Also, the New England Ploughs, Cultivator Ploughs, Root Slicers, Corn-Shellers, Straw-Cutters, &c. Those who wish to purchase or examine are respectfully invited to call. Albany, March 15.—2t. W. THORBURN, Seedsman.

ROCHESTER (N. Y.) NURSERY.

THE subscriber offers for sale a choice collection of Fruit and Ornamental Trees. His Nursery contains many choice varieties of fruit trees which have been selected with scrupulous regard to their good qualities; thus affording a collection worthy the attention of the connoisseur or utilitarian. Distant orders will be carefully packed with straw in mats or boxes. Persons desirous of having a succession of fruit, and not being familiar with the kinds, may, by leaving it to the discretion of the proprietor, depend upon having those sorts which are most desirable.

S. MOULSON,
Rochester, April 1, 1844. 36 Front-st., Rochester.

FIELD SEED STORE.

THE subscriber continues to keep constantly on hand at [illegible] long established Seed Store, a supply of the best quality and kinds of Field Seeds, viz:

Red Clover, of the large and small growth,
Timothy, *Red Top*, or *Herd's Grass*, *Orchard Grass*,
Lucerne, or *French Clover*, *White Clover*,
Trefoil, *Kentucky Blue Grass*, &c. &c.

Also, the different varieties of Wheat, as White Flint, Red Chaff, Mediterranean, and English—for sale in lots to suit purchasers at moderate prices, by ISRAEL RUSSELL,
Feb. 1, 1844.—mar. oct. 26 Front-street, New-York

N. B. The following description of some superior English Wheat sown in the month of October last, the product of which will be for sale at the above Store, is given by a respectable English farmer in the State of New-Jersey, who sowed about eleven bushels, a sample of which can yet be seen. "It is called the Uxbridge White Wheat, and is the most noted Wheat they have in England, it being of fine quality, always commands a high price, as the flour is used by the biscuit bakers in London: it is great for yielding, and puts out a much larger ear than any wheat I have seen in this country. I saw when in England, three years ago, on my brother's farm in one field, 120 acres, that yielded 40 bushels and upwards to the acre. It grows very strong, and is not liable to be laid by heavy rains. I will warrant it free from any soil whatever. I did not see in the eleven bushels, a particle but Wheat; and I have sown it on Clover seed, on purpose that there shall be nothing but Wheat; and I will put nothing in the barn with it, so as to put it beyond the possibility of a doubt of its having any thing in it or getting mixed with other Wheat, which through carelessness is often the case. I have grown a great deal of it myself in England, and know from experience that for yield and quality, there is no Wheat to compete with it. Its general weight is from 64 to 67 lbs. per bushel. It is smooth chaff, and easy to thrash, which is not always the case with smooth chaff Wheat."

BAILEY & RICH'S SMUT MACHINE.

MANUFACTURED and for sale by J. T. E. & C. RICH, Shoreham, Vt. Patented in 1841, much improved in 1843.

These Machines are made wholly of iron and steel, very compact, efficient, simple in construction, and durable. They are so made, that a strong current of air is forced into the centre of the machine, and passing out sideways through cracks in the inner and outer cylinders, expels the dust as fast as created, and prevents it from mingling again with the grain, as it does in other mills, so as to often blacken the kernels.

They will clean from 15 to 25 bushels per hour. Warranted to suit upon 3 months trial. Shoreham, Feb 15, 1844.—2t

CAMBRIDGE NURSERIES,

CAMBRIDGE, MASS., TWO MILES FROM BOSTON.

HOVEY & CO, Proprietors of these extensive Nurseries, would respectfully inform their friends and the public generally, that they have now ready for sale, an unrivalled collection of

Fruit and Ornamental Trees,
Evergreen and Flowering Shrubs,
Grape Vines, Raspberries, &c.
An extensive collection of hardy and tender Roses,
Green-house and hardy Herbaceous Plants,
Dahlias and Bulbous Roots,
Hawthorn and Buckthorn, for Hedges,
Apple, Pear, Plum, Cherry, and other Stocks.

This collection of fruit trees embraces all the best kinds; selections of which were made from the best nurseries in England and France, and scions procured from the well known Pomologist, the late R. Manning, of Salem.

The selection of Chinese, Tea, Noisette and Bourbon Roses, includes upwards of 200 varieties, many of them the rarest and choicest to be procured in England. The collection of Dahlias is most extensive, and comprises all the fine varieties in cultivation.

☞ All orders to be accompanied with cash or a draft. Catalogues of fruit trees, roses, Dahlias, vegetable and flower seeds, issued separately, and furnished to all *post-paid* applicants. Trees, plants, seeds, &c. packed so as to be safely transported to any part of the Union.

Address, HOVEY & Co., Seedsmen and Nurserymen,
7, Merchant's Row, Boston, Mass.

AMERICAN FARMER'S ENCYCLOPEDIA AND DICTIONARY OF RURAL AFFAIRS,

WITH 17 beautifully executed plates of Cattle, Agricultural Implements, Destructive Insects, &c., complete in 1 volume, 1160 pages, price $4, bound—embracing all the recent discoveries in Agricultural Chemistry, adapted to the comprehension of unscientific readers, by Cuthbert W. Johnson; enlarged, improved and adapted to the United States, by Governeur Emerson, assisted by numerous scientific gentlemen.

An excellent manual of agriculture—and we venture to say that there is not a farmer in the United States that cannot derive many useful hints and much valuable information from this Encyclopedia—Albany Cultivator.

No farmer or planter who desires to be master of the science of his profession, should be without this work.—American Farmer.

Its merits are far greater than we had before imagined, and we are fully convinced that such an amount of valuable knowledge for farmers can be found in no work in so cheap and convenient a form. In fact, no farmer who pretends to be well informed in his profession should consent to be without it. As a book of reference, it is invaluable—we would not be without it for four times its cost.—New Genesee Farmer.

Should be in the library of every farmer.—American Agriculturist.

We heartily recommend it to our readers, and wish every farmer in North Carolina would take it and study it carefully. Raleigh Star.

A real treasure of practical information wherein the experience of all ages and countries is carefully posted up to the present day, and admirably arranged for convenient reference. —Dr. Darlington.

For the farmer who can have but few books, we know of no one relating to his profession so valuable.—Prairie Farmer.

fe 2t CAREY & HART.

POUDRETTE—A NEW ARTICLE.

IMPROVEMENTS of such a nature have been made in the manufacture of POUDRETTE, by the *Lodi Manufacturing Company*, near the City of New-York, as to warrant the opinion that it is the *cheapest and best Manure* now known and in use. By experiments which have been made, it has been proved that its *fructifying powers have been greatly increased, its operation upon vegetable matter quickened.* It will obviate the effects of *severe drought*, and will retain its fertilizing qualities much longer than any Poudrette heretofore made. It will ripen Corn in 66 days fit for use. The price will be reduced the following season as follows: At the Factory it will be sold in bulk at the rate of 25 cents per bushel. It will be delivered at any wharf or place in the City of New-York, *free of cartage and other expense*, at the rate of $2 for one barrel, which contains 4 bushels; $3,50 for 2 barrels; $5 for 3 barrels, and $10,50 for 7 barrels, and at the rate of $1,50 per barrel for any greater quantity. Persons wishing the article will please give notice in due season, as the orders will be fulfilled in the order of time received. The Company was incorporated in February, 1840, for 30 years by the Legislature of New-Jersey. No liability to stockholders beyond their subscription of $100 per share. A *few shares* of what is called the "*Reserved Stock*," remain to be be subscribed for, which the Company guarantee shall pay a dividend of 30 bushels of Poudrette a year on each share, as authorized by the Charter. A pamphlet containing instructions for its use, and all other necessary information, is in preparation, and will be sent *gratis*, to any person applying for it, post-paid. Agents have been or will be appointed in most of the important places in the Northern and Eastern States, to whom persons may give orders. Where there is no agent, please direct to "*The President of the Lodi Manufacturing Company*, No. 43 Liberty-street, New-York," and it shall receive immediate attention. Please refer to the Letter of Mr. Kentish, in the March number of the CULTIVATOR. New-York, Feb. 15, 1844.

FRUIT TREES.

THE subscribers are now ready to receive orders for superior Trees, viz: Apples, Plums, Pears, Cherries, Peaches, &c. &c., from their new nursery. Trees are all warranted in a healthy condition, and true to their sorts. Orders are entered on the order book, to be forwarded as soon as practicable in the fall. Orders respectfully solicited, and will receive prompt attention. WILSON, THORBURN & TELLER.

☞ A liberal discount made to those who purchase to sell again, or by wholesale.

Orders left with WILLIAM THORBURN, Seed and Agricultural Repository, No. 38 Broadway, Albany, will be promptly attended to. *Albany, April* 1, 1844.—2t.

GREAT IMPROVEMENT IN HUSSEY'S CORN AND COB CRUSHER.

IT is believed the Corn and Cob Crusher, invented and manufactured by the subscriber, in Baltimore, for the last two years has taken the lead of all others. Whatever its merits may be, the machine is now pretty well known, and will still be made in its usual form and kept for sale as heretofore.

The chief design of this advertisement is to introduce to the notice of farmers, a cheaper, and in some respects a better article, which has just been completed and proved. It requires much less power, and crushes and grinds much faster than the others.

The price, including extra grinders, is $25; a machine working two sets of grinders is $35; one with three sets, for water power, $45, including extra grinders for each set; all made in a substantial manner and warranted as advertised.

Orders for Hemp Cutters and Reaping Machines should be sent to the subscriber as soon as possible, so that none who design having such machines be disappointed at harvest time.

Baltimore, Md., March 15, 1844.—3t.* OBED HUSSEY.

AMERICAN HOTEL.

ALBANY.

THE subscriber begs leave to announce to his friends, old patrons, and the public in general, that he has taken a lease for a term of years, of the American Hotel, No. 100, State-st., Albany, which he hopes to have in readiness for the reception of company in all the month of May ensuing.

The House will be closed for a time, in order to renovate and put it in complete repair, and will be newly furnished from the garret to the cellar. In the quality and neatness of the beds, cleanliness of the rooms, he is determined not to be excelled by any other House in the city; and if a table, well spread with the substantial viands and luxuries of the season, will be any inducement for patronage, he hopes to claim a share.

In location, the American has many advantages; being situated in the centre, and in one of the most beautiful streets in the city; within a few moments walk of the eastern and western Depots, and the landing of the steamboats; about midway between the Capitol, City Hall, Public Offices, and the Banks, Post-office and business parts of the city.

The subscriber places much reliance on the countenance and support of the *Agriculturists* throughout the Union, who may visit the city, and pledges himself to spare no exertions to render their stay agreeable, should they favor him with their company.

Three Hills Farm will be carried on as usual under his own supervision, by a careful manager; and the breeding and rearing improved stock will be continued as heretofore.

April 1st, 1844.—1t. C. N. BEMENT.

WARREN'S IMPROVED HORSE POWERS AND THRESHING MACHINES.

THE undersigned continue to manufacture these celebrated machines with increased success and satisfaction; having by experience completely adapted them to the intended use of the farmer.

The many letters received from purchasers of these machines the last season, testify most unqualifiedly, that their performance is even better than our recommendations, and prove conclusively that they are not liable to get out of order if properly used; and that the two horse power and thresher, readily threshes in a thorough manner, on an average, from 12 to 15 bushels of wheat, and 25 to 30 of oats or barley per hour, and also that clover seed is threshed with facility.

These machines are simple and compact, and easily carried in a one horse wagon, (as their weight together is only about 600 lbs.) and only requires three persons to attend them, and the price of the Two Horse Power and Thresher is only $75.

The undersigned will also manufacture a superior Four Horse Power and Thresher, this season, of the same principle, to sell for only $100. The Two Horse Power alone is $50. The Four Horse Power will be proportionable as to price, the machines always deliverable in this city for cash.

The threshing machine we usually make is the permanent beater, but if any prefer the spike thresher we can furnish a superior article at the same price. Our beater machine does not break the straw, but so throws it out that it can be readily gathered into bundles, and sold in the market when desired.

The Horse Power is very often purchased to be used in driving saws, small grist mills, cotton gins, &c. and has always answered the purpose desired, to entire satisfaction.

The undersigned take pleasure, therefore, in recommending these machines, as being what the great majority of farmers want and can afford to have. L. BOSTWICK & Co.

1t 146 Front-st New-York City.

TOBACCO SEED.

THE genuine *broad and narrow leaf Tobacco Seed*—the row leaf is about two weeks the earliest—for sale at Seed Store of the Hartford County Agricultural Society, by Hartford, Ct., March 15, 1844.—1t. E. W. BULL, Seedsma

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S. CORNELL'S DISTRICT SCHOOL GLOBE.

A BEAUTIFUL and cheap instrun 6 inches in diameter, accomp with a card of lessons illustratin form of the earth, day and night, inc tion of the axis of the earth to its o change of seasons, difference of tim different parts of the earth, and the ference in the length of the day.

Owing to the peculiar constructio this globe, and the accompanying less it is better adapted to elementary i trations in geography, than any o now in use; and its cheapness rende admissable to every school. It sh be in every school and every family.

Manufactured by Silas Cornell, R ester, State of N. Y., and retaile $1,50. A liberal discount allowe dealers. April 1.—4t.

DURHAM BULLS, DUKE OF WELLINGTON A METEOR.

AS frequent applications are made by gentlemen at a dista for the use of these animals, to prevent application letter this notice is given.

These animals will be let to cows at $10 each; the money all cases, to be sent with the cows, and paid to the subscri Wellington was bred by Thomas Bates, Esq., of England, out of his prize cow, Oxford, celebrated as a milker. Met bred by Mr. Geo. Vail, of Troy, and out of his imported hei Duchess, and got by Wellington. Duchess was also bred by Bates, and got by his celebrated prize bull Duke of Northu berland. These animals are on Mr. Vail's farm, about miles from Troy, and will be allowed to serve a few cows of his own herd. Pasture for a short time may be had for co sent, at the usual prices. Apply to the subscriber on the fa

April 1, 1844.—3t. A. CLOCKIE

IMPROVED EAGLE PLOWS,

MANUFACTURED BY

RUGGLES, NOURSE & MASON,

And for sale at the Manufactory in Worcester, Mass., and their Agricultural Ware-house and Seed Store, Quincy Hall, Boston.

A FULL *investigation* and *trial* of Plows was had in Octob 1843, (occupying several days,) by an able committee e Essex Agricultural Society, when seventeen plows w presented.

The committee in their report say, "In testing the quality a plow, the *power* by which a plow is moved, the *ease* w which it is handled, and the *manner* in which it completes work, are prominent points in consideration." And in spe ing of the improved Eagle Plow, to which they unanimou awarded the highest premium, they say: "As near as we ascertain, this plow combines all the good qualities manifes in either of the others with some peculiar to itself," and f ther, "our attention was particularly called to the *quality* the castings on the plows of Ruggles & Co., their *finish* and *rability*. Their appearance certainly is more perfect than thing we have elsewhere seen, the process of *chilling* the poi the entire *edge* of the *share*, and *flange* or *base* of the *landsi* gives a permanence and durability to the work that renders of a decidedly superior character," "and we think there is hazard in saying, that the value of the parts thus made is mo than doubled by the process."

At the same society's plowing match held at Andover, O 3d, 1843, where there were *forty-four* competitors, *nine* of *ten* premiums were awarded to plowmen using plows made Ruggles, Nourse & Mason. At the plowing matches held Massachusetts the same year, forty-three premiums were awa ded to plowmen using plows made by R. N. & M., *twelve* which were the highest premiums awarded in the counties Essex, Middlesex, Worcester, Plymouth and Bristol.

SUB-SOIL PLOWS.

Among their great variety of kinds and sizes of plows, th have several sizes of Sub-soil Plows made in form like a gen ine Sub-soil plow imported by them from Scotland. They ha been thoroughly tested with great satisfaction as the increasi demand from all sections of the country testifies. The Ne York State Agricultural Society in September, 1843, aw their first premium to the Sub-soil plow made by Ruggles & (presented by B. F. Smith, of Syracuse.) Prices, $6, $8, $1 $12, and $15.

Also, plows particularly adapted to the culture of cotto rice, tobacco, &c., for the SOUTHERN STATES, of *style* and *quali* equal to those made by them for this section of the country.

At their warehouse may be found the most extensive an complete assortment of Agricultural and Horticultural imple ments to be found in the United States, embracing every too used in the cultivation of the farm or garden. Also, a larg and well selected assortment of field, grass, garden and flowe seeds. All of which are offered at wholesale or retail, at pri ces which cannot fail to suit the purchaser.

April 1, 1844.—1t

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

Vol. I ALBANY, MAY, 1844. No. 5.

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

ONE DOLLAR A YEAR.

Seven copies for $5,00—Fifteen copies for $10,00—all payments to be made in advance, and free of postage.

☞ Complete sets of the *First Series* of "The Cultivator," consisting of ten vols., quarto, are for sale at the office, and may be ordered through the Agents of the paper throughout the country. Price, stitched,—vols. 1, 2, 3 and 4, 50 cents each—vols. 5, 6, 7, 8, 9 and 10, $1,00 each—for the whole set, $8,00.

OFFICE IN NEW-YORK CITY, AT
M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,
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THE CULTIVATOR.

DEATH OF WILLIS GAYLORD.

A bright light has been extinguished in the death of our associate and friend, Willis Gaylord. He expired at his residence, Limerock Farm, Onondaga county, on the 27th of March, in the fifty-first year of his age. An aged mother deplores the loss of a most devoted son, over whose fragile form she had watched with all a mother's tender care for more than fifty years—a brother and sister weep for one who had ever manifested for them the most heartfelt affection—and his friends, and none more than ourselves, mourn the loss of one, beloved alike for his genius, his faithfulness, and the happy temper of his mind; while the American farmer has to regret the sudden departure of one who has labored zealously and successfully for years to promote his interest, to enlighten his mind, and to elevate his calling to that dignity and respect to which it is so justly entitled. His death was sudden, and to his family, as well as to us, most unexpected. He was taken with a bilious affection of the stomach on the night of the 25th The next morning a physician was called in, and remedies were administered, which it was thought would afford relief. No alarm was felt, as no immediate danger was apprehended, till early on the morning of the 27th, when it was discovered that his life was rapidly drawing to its close. At 9 o'clock, thirty-three hours after the commencement of the attack, he sunk gradually and gently into the arms of death without a groan or a struggle. He had been for more than thirty years a worthy member of the Presbyterian Church, and the hopes and consolations of the gospel had enabled him to endure, not only without a murmur, but with a buoyant and cheerful spirit, an amount of bodily suffering which falls to the lot of but few

Mr. Gaylord was born in Bristol, (Conn.) in 1792, and removed with his father's family to Otisco, in this State, in 1801. This town was then almost an unbroken wilderness, but three families having preceded that of Mr. Gaylord's father. Young as he was, the deep, dark and majestic forests, as he entered them, at the beginning of summer, made an impression upon his mind, and excited a love for trees, which was never effaced. He always spoke of them with enthusiasm. In a letter, written but a few weeks before his death, he says—"When we entered these forests, the heavy foliage wore its freshest green, and the elm, the maple, and the linden, were successively laden with flowers; and never shall I forget the rich, the indescribable perfume which filled the air as tree after tree was cut down, and day after day passed away before the blossoms had ceased to exhale their odors from their withered cups." Deprived as he was, by this removal, at the age of nine years, of the advantages of even the District Schools of his native State, he was soon after visited with an affliction which prevented his reaping the benefits to be derived from the establishment of the similar institutions which are sure to rise up in all new countries, peopled by emigrants from New England. At the early age of 12 years, he was attacked with a violent rheumatic affection, which resulted in a curvature of the spine, and unfitted him, in all after-life, for any active or laborious pursuit. His innate love of knowledge, however, was such that no bodily infirmity or ordinary obstacle was permitted to dampen his ardor for its acquirement. Being unable to attend school, he studied such school-books as were to be procured at that early day, carefully noting such parts as he could not alone surmount, till he could obtain the assistance of some one who was able to solve his difficulties. He not only read with avidity, but *studied* all the books which came within his reach. He was remarkably fond of rural scenery, and when the weather would permit, it was his delight to sit for hours under the shade of trees, and cheered by the singing of the birds, pursue his studies with pencil and paper in hand to note the current of his thoughts. While thus engaged in the pursuit of knowledge, and in the enjoyment of such a degree of health as permitted him occasionally to engage in the lighter labors of the farm, he met with an accident, slight indeed at first, but which entailed upon him a vast amount of suffering, and rendered him almost as helpless as a child to the day of his death. It was occasioned by a fall, from which, at the time, he noticed only a slight bruise on the left arm. It afterwards swelled, and became a running sore, causing the decay of the bone and rendering his arm for ever after entirely useless. This affection of the arm continued for about a dozen years, and when it healed an abscess occurred in one of his sides, which continued, with occasional alleviations, till his death. Notwithstanding the pain he was thus obliged to endure for a long series of years, which was sometimes excessive, he was ever cheerful and happy; and even under the most acute suffering, was never known to utter a word of complaint.

At the appropriate season, if his health permitted, he resorted much to the woods and fields. A favorite retreat was the shore of one of those beautiful lakes which adorn the western section of our State; and there, enjoying the charming view and inhaling the refreshing breeze, his mind was at once soothed and strengthened by a contemplation of the varied phenomena of nature. His was that happy constitution of mind which finds

> "Sermons in stones, tongues in trees,
> Books in the running brooks,
> And good in every thing."

"Disqualified by these calamities from labor or active physical habits," in the language of one who knew him well, "he devoted his mind to study; and although suffering under severe bodily affliction, deprived of the ordinary facilities for obtaining information, without teachers, and by the aid only of such books as he was enabled at that early day to collect, he became a ripe and sound scholar, and eventually one of the most able and powerful writers of our times. For more than twenty years he had been a regular contributor to many of the American Quarterly and Scientific Journals, and in several instances to some of the most popular Magazines in Europe. His contributions to the newspaper press of this country, on almost every variety of topic, literary, religious, scientific, miscellaneous, and occasionally poetry, have been numerous and of the highest order of excellence. As a writer on all of these varied subjects, whether we regard the beauty of his style, the chasteness of his diction, or the invariable accuracy of his facts, it would be difficult to find his superior.

"The versatility of his talents, the rapidity with which he wrote, and the great number of his productions, have excited alike the admiration and astonishment of his friends.

"But the most valuable part of his writings, and for which he will be longest remembered, relate to the passion of his latter years—practical and scientific agriculture. In these departments he was thoroughly versed, as his contributions, commencing in 1833, to the old Genesee Farmer and the Albany Cultivator, will abundantly attest. The services he has rendered to the farming interest of the country have been immense, and form a legacy which will endure to a late generation. He was eminently practical and judicious in all his views and recommendations, and possessed a happy tact in communicating his impressions to others. To the readers of the Cultivator, and to the agricultural community, his loss will be irreparable.

"Isolated and excluded as he was by physical infirmity and location, from a general intercourse with his fellow citizens, there are consequently but few who can justly appreciate his many social qualities. Thoroughly informed on almost every subject of general or individual interest, he was always ready, as it was his delight, to impart to others who sought his society, the rich treasures of his well stored mind. Those few and favored friends, will long and fondly cherish his memory. As a man, his philanthropy knew no bounds. He studied and labored emphatically for the benefit of mankind. As a friend, he was true and faithful; as a son and a brother, kind and affectionate. When a man of such gifted powers and universal acquirements, in the full maturity of his intellect, and in the midst of his usefulness, is cut down suddenly and removed from among us, we may in truth mourn a public bereavement."

We add an extract from a letter of H. S. RANDALL, Esq:

"Your associate and *our* friend, Mr. Gaylord, has joined the 'innumerable caravan' that people 'the silent halls of death.' How little was I prepared to hear it—or hearing, to realize it! The ink is scarce dry on the last letter I received from him! It was written in one of his most lively and felicitous veins, and closed playfully with the oriental valediction, 'may you live a thousand years, and your shadow never be less.' How little did he dream when writing it, or I when reading it, that the last sands of his own last year of life were so nearly run out!

"Mr. Gaylord was never in good health. To be free from *racking* pain was the nearest approximation to that boon ever vouchsafed to him. There can be no indelicacy now in alluding to that dreadful physical calamity which, in language which I borrow from one of his letters, 'cut him off from the great brotherhood of man.' This, superadded to constant and oftentimes intense suffering, would have driven an ordinary mind to madness, or morose and querulous misanthropy. Not so he.
hearted, meek and enduring, he raised his voice
the gay and happy, and he even catched their ton
his last letter to which I have alluded, after dis
history and fiction, commenting on Alison, Paul d'
Eugene Sue, &c., he speaks of life, man, the
ture and events of the day, in the tone of one wh
seen the world only on its sunny side—of one who
has never known the presence of a cloud. Such w
uniform tone of his letters.

"Of Mr. Gaylord's early education I know little.
from declarations in his letters, that he was what is
ly styled a 'self-taught scholar.' His reading wa
rally boundless. He was as familiar with the natur
ences, history, poetry, and belles-lettres, as with ag
ture, and nearly if not quite as well qualified to
them. It was difficult to start any literary topic
you did not at once perceive had been examined by
with the eye of a scholar and critic. In one of my
ters, half sportively, yet in a serious tone, I asked
'what he thought of the German Philosophy?' In his
swer, Kant and Fichte, and I think Schelling and Ja
were discussed with as much familiarity as most scho
would find themselves qualified to make use of in sp
ing of Locke, or Stewart, or Brown! In comme
on that report of mine, (on Com. School Libraries,)
luded to by him in the last Cultivator, he betrays an
tensive knowledge of parts of the literature of ne
every nation in Europe.

"As a writer, the public have long been acquainted w
Mr. Gaylord. He wrote on nearly every class of top
connected with human improvement; in papers, ma
zines, and not unfrequently in books. But it is as an ag
cultural writer that he is best known. Here, taken all
all, he stands unrivalled. There are many agricul
ral writers in our country who are as well or bet
qualified to discuss a single topic, than he was. Bu
deem it not disrespectful to say that for acquaintan
with and ability to discuss clearly and correctly eve
department of agricultural science, he has not—he nev
has had an equal in this State. He was every way fit
for an editor. Placable and forgiving in his temp
modest, disinterested, unprejudiced, never evincing
foolish credulity, above deception, despising quacker
with an honesty of motive that was never suspected,
advice to the farmer was sound, discriminating and saf

"Mr. Gaylord's style as a writer, was peculiarly chas
intelligible to the meanest and most illiterate capacity,
charmed the scholar by its grace, its perspicuity and
flexibility. It was marked by an utter destitution of all m
retricious ornament. As has been before said, he was esse
tially a modest man. His most decided convictions we
expressed without dogmatism or assurance,, and his su
gestions came as from a fellow-learner, rather than fro
an instructor. In epistolary writing he was peculiar
felicitous. With him I had corresponded for yea
There is a charming simplicity and freedom from a
sumption in his letters, and he had the rare and hap
faculty of discoursing on elevated subjects without sti
ness—on learned ones without pedantry. His extensi
correspondence, were it collected and published, wou
form a valuable volume; infinitely more so than ma
highly extolled similar publications. Such a collectio
with a selection from his other writings, and a memo
of his life, should be published, and placed in every agr
cultural library."

At a meeting of the friends of Agriculture, held in th
State Agricultural Hall, on the evening of the 29th March
JOHN P. BEEKMAN, Esq., President of the State Agricu
tural Society, announced the decease of Mr. Gaylord i
the following just and appropriate language:

The President said that he had just received intelli
gence which would be heard with regret by every indi
vidual familiar with the agricultural movements of th
times. The mail just arrived from the west announce
the death of WILLIS GAYLORD. The judgment of ever
intelligent farmer in the State will respond to the asser
tion that to no man whatever—excepting perhaps Judg
Buel—is the agriculture of the State more indebted tha
to Mr. Gaylord.

The character of Willis Gaylord was in all respect what might be expected from his writings—benevolent, enlightened, elevated—yet plain, practical, unassuming. His character may well serve as a beacon-light not only to farmers, but to men in all conditions of society. Without any advantages of early education—debarred even, by physical infirmity, from many opportunities which others enjoy for self-improvement—he conquered all obstacles by unflinching perseverance in pursuit of knowledge. His acquirements as a man of science, evinced by his writings for literary and scientific journals as well as for the 'Cultivator,' would reflect credit on many who enjoyed the advantages of collegiate education. And those acquirements were of the progressive character—every day of his useful life being marked not merely by the exercise of his versatile talent on the multifarious objects embraced by agriculture and the domestic arts, but by advancing steadily in the acquisition of knowledge from the various departments in the wide range of science. It would be sufficient, indeed, to say of him, that, as senior editor of the 'Cultivator,' he had proved himself every way worthy as a successor of the lamented Buel.

Like Buel, also, Gaylord was cut down in the maturity of his intellect—in the very field of his fame—cut off suddenly, too, as Buel was—precluding even intimate friends from the privilege of soothing his dying hours—so suddenly was death consequent on the commencement of the fatal disease.

When the President concluded his remarks, of which the foregoing is a nere outline, the following preamble and resolutions were unanimously adopted:

Whereas, This meeting of the friends of Agricultural improvement *have* heard with deep regret of the recent *and sudden death* of Willis Gaylord, of Onondaga, senior editor of the 'Cultivator'—well known to the Agricultural world for the versatility of his talent as a writer on subjects essential to the interests of Agriculture and the Domestic Arts:

Be it therefore Resolved, That in testimony of respect for the memory of this distinguished friend of Agriculture, this meeting do now adjourn; and that copies of these resolutions, signed by the officers of this meeting, be enclosed to the bereaved family of the lamented dead, in testimony of our sympathy in their affliction.

Resolved also, That these resolutions be published in the newspapers, as a mark of respect for the memory of the departed.

NEW PUBLICATIONS.

Report on the Commencement and Progress of the Agricultural Survey of South Carolina, for 1843, *by* EDMUND RUFFIN, *Agricultural Surveyor of the State.*

South Carolina has at last entered in earnest, as we trust, upon the development of her great agricultural resources; and one of the first steps was the appointment of Mr. Ruffin, well known as the former editor of the Farmer's Register, and the author of the most able work on calcareous manures that has yet appeared in any country, to make an Ag. Survey of the State. He entered upon his duties in 1843, and we have his first Report before us in a pamphlet of 170 pages. An examination of it, fully confirms us in the opinion formed and expressed by us, that the selection for surveyor was a most fortunate one.

The first object of Mr. Ruffin, in entering upon the practical part of his office, was to determine the existence and extent of the calcareous, or marl and limestone formation of the State, as upon the presence of calcareous manures he considered the improvement of the extensive sandy pine lands of the State to be mainly depending. His experience in the use of marl in similar districts in Virginia, led him to anticipate similar favorable results still further South; and the general sameness of the geological formations of the whole Atlantic coast south of the Delaware, or even the Hudson, induced the belief that the marl districts further north, extended to the shores of the Gulf, and furnished the means of rendering fertile those vast districts of sand which, in the south, have long seemed doomed to hopeless sterility. Besides, if Mr. Ruffin can be said to have any agricultural hobby, it is the overshadowing importance of calcareous manures, in any system of cultivation; and the effects he had witnessed in Virginia, would almost justify him in attributing a paramount influence to this auxiliary of fertility.

The extent and magnitude of the marl beds in the lower part of the State, and the presence (unsuspected in many instances,) of abundance of lime rock in the upper districts thus far included in the survey, exceeded the most sanguine expectations of Mr. Ruffin. What he has termed the "Great Carolinian Bed," is a formation of great extent, showing itself on the tide waters of most of the rivers, and having an unknown thickness. In boring for water near the Medical College in Charleston, it was penetrated about 340 feet, without any signs of its termination; and some of the bluffs higher up the river, show an exposed perpendicular surface of 60 or 70 feet. Of course the greatest facilities are offered for the loading of the marl in boats, or vessels, and transporting it to any point wanted. The richness of the marl in calcareous matter, is surprising, ranging in the several strata from 40 to 94 per cent; the latter only requiring induration to make excellent limestone.

Not the least singular feature of the calcareous deposites of the south, is that called the gigantic oyster bed strata, which stretches from Shell Bluff on the Savannah, nearly or quite across the State. There are two kinds of these mammoth oyster shells, of which specimens were collected by Mr. Ruffin; one measuring 8 or 9 inches in length by 6 or seven in width; and one 13 or 14 inches long, but not more than 3 inches wide. Bartram, who visited Shell Bluff in the last cenury, describes some of the shells as 20 inches long, 8 wide, 4 inches thick, and deep enough to receive an ordinary man's foot. These would certainly be respectable oysters, compared with the degenerate ones that tantalize oyster eaters in these days; but even these, large as they are, would shrink into insignificance placed by the side of the one sent from the East Indics, and which forms the baptismal font of Notre Dame, in Paris.

We have not space to follow Mr. Ruffin through his statements of the preparation and value of marl; his suggestions as to its use on rice lands, and his account of the culture of that important product of Carolina; or his account of the best methods of burning and using lime. We may recur to this part of the report again, and furnish the cuts of the lime kiln given by Mr. Ruffin. We again tender our thanks for our copies of this Report, and shall look with much interest for those which we understand are to follow the present one.

Observations on Vegetable and Animal Physiology. By WM. L. WIGHT, *M. D., Petersburg, Va.*

This is a pamphlet on an important subject, and one on which much light has within a few years been thrown by the advance of chemical science. The object which the writer proposes to himself is "to arrange the phenomena which are invariably connected with organization, and which are designated by the general term, *life.*" In doing this, he has endeavored "1st, By a cautious induction to advance to the general principle which controls and directs the series of actions connected with the growth and nourishment of plants." And 2dly, "To show that this same law, through the instrumentality of organs and agents adapted to each exigency, presides over the higher and more complicated phenomena of animal life."

This general principle or law, he finds in electro-magnetism, and the arguments and facts by which he supports his opinions, are worthy of the attention of every inquirer into the operations of nature. The analogies between the organization and nutrition of plants and animals, has been too often overlooked, and Liebig has rendered an essential service to the cause of science by calling attention to the matter. The manner in which Dr. W. explains the action of his governing principle in the production or determination of many diseases, shows a careful consideration of the whole ground, and is worthy a philosophic inquirer after truth. The field of investigation here entered upon is ample, and we trust will not want explorers.

SCOTCH GUANO.—A plentiful deposit of this rich manure, it is reported, is found on some of the northern islands of Scotland, which will probably supercede that hitherto brought from the Pacific.

CONDENSED CORRESPONDENCE.

Sheep and Wool.—Mr. John Johnston of Geneva, says he has read with a great deal of pleasure, the remarks of Mr. L. A. Morrell, on the subject of sheep and wool. In allusion to Mr. Morrell's observations on the practice which prevails in Scotland, of smearing sheep with a mixture of tar and butter, Mr. J. says it is not usually done immediately after shearing, but in October or November. Mr. J. says he has worked at the business for a month together. He thinks more sheep may be safely kept together than Mr. Morrell recommends—says he has frequently wintered over 600 in a yard not more than 150 feet square, and always had them in good condition—but he took good care to keep them well littered with straw. He has kept 400 in the yard alluded to, this winter, and has lost none. His sheep were fat when winter commenced, and are fat now. He lost an ewe from the premature birth of a lamb, and took 17 pounds of tallow out of her; last spring the same ewe had 7 pounds of *clean wool*. He objects to Mr. Morrell's mode of castration, and would like to show him the Scotch mode. [illegible] says he knows he should stand no chance in a controversy with Mr. Morrell upon their trifling differences of opinion. He says, "I was born the son of a shepherd, on the mountains of Scotland, was myself bred a shepherd on the very *summit* of Scotland; and there received only an education which even at that time was thought barely sufficient for a boy that was intended for nothing else but to earn his living by the sweat of his brow; but having thus been a keeper of sheep from my youth till the number of my years is now more than two score and ten, I trust I know something of the habits of those animals and their management. I have kept sheep here, more than 20 years, and I believe were the Scotch and English farmers to lay out the money for grain to feed their sheep, which they now expend for tar and butter, it would do their sheep more good than sheep-salve. Highly fed sheep need no smearing."

Rye.—R. L. Pell, Esq., Pelham, Ulster Co., says:—"I raised a crop of rye (secale cereale) last season, weighing sixty pounds to the bushel, in the following manner: On the 1st of September, the grain was placed in a vat of water, mixed with salt to a sufficient consistency to float an egg, and the light seeds were taken off with a skimmer. After the grain had remained in the brine ten minutes, it was drained through a sieve, mixed with *lime*, *charcoal dust*, *poudrette* and *ashes*, in equal quantities, and immediately sown at the rate of three bushels to the acre on a clover ley which had been well plowed and harrowed; the crop was cut in the milk on the 11th of July, and housed on the 18th. If left until dead ripe, a rain of three days continuance will cause it to sprout; and if sown when the ground is filled with moisture, nine times out of ten it will rot."

Value of Straw.—Mr. Pell further says:—"Farmers should on no account part with their *wheat* or *rye straw*, as fields may for years be kept in heart, by merely returning the *straw* to them; it contains all the substances requisite for a succeeding crop of grain. By Sprengel's analysis, 1,000 lbs of wheat, leaves 11.77 lbs., and the same quantity of wheat straw leaves 35.18 lbs. of ash; of the straw ash, 28.70 lbs. are silica, without which substance, it is impossible to grow either wheat or rye. In 1,000 lbs. of rye, there is 10½ lbs., and of the straw, 28 lbs. of ash; 22.97 lbs. of which is silica, showing plainly that the agriculturist may sell the grain, but on no account the straw, which contains by said analysis, *chlorine*, *phosphoric acid*, *potash*, *lime*, *sulphuric acid*, *silica*, *alumina*, with a small portion of *iron*, *magnesia* and *soda*."

We give the four following paragraphs from a communication signed "*Jonathan*," from Burlington, N. J. The necessity for condensing, alone prevents us from giving his letter at length. The allusions are to articles contained in our Feb. number:

Timothy Hay.—Our Kentucky friend is not much "too severe on Timothy hay." The writer has for many years, had ample opportunity of proving the comparative value of timothy hay, with other kinds of winter food for cattle; and has found it when mowed at *any* time, inferior to most other kinds, and in fact, not worth as much per
ton as the bright straw of our small grains. As a g
for pasture, it is not early in its spring growth, easil
fected by the drouth and by early frost, and the after
vest produce is quite light. As regards the time of
ting it, (or any other grass,) I much prefer it being
just before the blow appears. The leaves and stem
the plant are then fresh, bright and nutritious, and
quality of the hay superior; and the after growt
grass will generally be much more, and the sward
more safe from the destructive effects of drouth.
clover and herds grass are certainly much better for
ture or hay. The tap roots of the former, and the
mat roots of the latter, make a better sod for plowin
if to remain for pasturing and mowing, it will cert
be found to produce at once a more valuable crop for
sumption, and to be followed more readily by the
natural grasses. If the object is to *sell* hay, cult
what will bring the best returns of course.

To destroy Peppermint.—As suggested by yo
T. Whitmore must have his meadow land sufficientl
for the growth of good grass; and then in the latter
of October, plow flat about five inches deep; pa
roller over it; then in the spring, sow thick with
harrowing them in; and after harvesting them, sow b
wheat and again harrow. In the following spring, c
plow the same depth as at first; roll and harrow
roughly, putting on a thin sowing of oats and a thick s
ing of grass seeds. If the sward should not appear s
ciently decomposed when the second crop of oats is t
sown, keep it an open fallow by frequent harrowi
and perhaps a light plowing, until say the first
month; when put on the grass seed and a thin sowin
buckwheat; the latter will spring up and shade the yo
grass from the injurious effects of the hot sun. No
unimportant part of the process is, to give the gro
about the time of putting on the grass seed, a coat of
yard scrapings or well decomposed manure; by th
means, the expense will probably be met, or in a g
measure by the returns of the oats and buckwheat cr
and the ground placed in nice order, free from the in
der. If the ripening of the oats to be sown first, sho
be too late for the proper sowing the buckwheat, it
be cut when first out in head, and make a fine lot of
cellent hay. It is important during the first year,
some crop should be kept growing, so as to smother i
great measure, the growth of the mint that has not b
killed by the winter.

Reflection.—We want emphatically more reflecti
more careful examination into things; and not allow o
selves to conclude what will do well in one place,
necessarily do well in another, without considering
difference that climate, soil and many other things r
sonably make.

Manures.—"First year at Farming" will probably f
that the top dressing of [illegible]uure will speak well n
year and years to come. [illegible]et us hear from him after
first of October next. U[illegible] the manure if but *one* is to
applied; if both, experiment as suggested by the edito
but with only twenty or twenty-five bushels per acre.

Cleaning wheat from impurities.—A correspond
who signs "Frock & Trowsers," says a good plan
clean wheat from impurities, such as chess, smut, &c., is
pass it through a good fanning-mill. He says *his practi*
"is to remove all the sieves from the mill, put the scre
in its usual place, and put the board that sometimes occ
pies the place of the screen, in the groove *intended pri*
cipally for the corn-sieve, slide it up just far enough
give length sufficient to the shoe, so that when the mi
is in motion, and the wheat falling from the shoe, *it wi*
strike within about two inches of the upper end of th
screen; it will then have a chance to run the whol
length, and get rid of the cockle, dirt, kernels of smu
chess, &c., and if proper care be taken not to let th
wheat through too fast, the wheat will be found at on
end, its *bad company* all at the other."

Culture of Tea in America.—A corresponden
signing "H. R. Americus," says:—"Nothing can b
more certain than that our country is exactly suited to the
culture of the TEA PLANT, and is destined at no very dis-
tant period, to be one of the greatest countries for thi
production in the world." The reasons he gives for this

cursion, we are in the same latitude as the best tea countries of China—that our soil is similar, and its natural productions the same. He thinks the ingenuity of our countrymen would soon enable them to understand its cultivation and the mode of curing it, as well or better than it is done by the "stupid Chinese." He suggests that some of our wealthy capitalists commence a trial of it.

Hams.—Mr. G. Butler of Clinton, N. Y., made an experiment to ascertain whether hams gained or lost in curing. He took four hams, that when ready for pickle, weighed 115 pounds; after lying in pickle six weeks, they weighed 125 pounds; when smoked, they fell back to their original weight. He made a former trial, which did not vary materially from this.

Threshing Machines.—We are informed that Mr. T. D. Burrall, of Geneva, N. Y., manufactures excellent threshing machines, which will answer for from four to eight horses, at $140 each. He is also making a new one, which it is said will be a great improvement in many respects, the price of which will be only $80.

K. L. on Turkies.—Your correspondent K. L. says very little, if any, Indian meal should be given to young turkies; but he omits to state what their food should be. As, within the range of my observation, Indian meal made into dough, is the principal food of young turkies, I should be pleased for one, to know what substitute for it K. L. would recommend. Would he recommend them to be confined during the season of incubation, and through the period of nursing while the young is yet *small, to the poultry yard;* or does he let them go at *large in search* of food for themselves, while sitting, and for their young when hatched, only keeping them up until the dew is off the ground? Some of these questions may have been anticipated in his previous communication, which I have not before me; but I hope he will instruct us at least as to the *best kind of food.* J. S. S.

Turning in weeds or other green crops with the plow.—In plowing stubble grounds, the weeds frequently choke the plow, and it is found difficult to bury them entirely. The same difficulty attends the plowing in of clover, or buckwheat, &c. Various contrivances have been adopted to obviate this trouble. Some fasten one end of a chain to the plow-beam, and the other end of the off-end of the "double-tree," as it is called; which being thus dragged along before the plow, bends down and draws forward the weeds in such a manner that the plow turns them fairly under. Plows have also been made very "high in the beam" to obviate the difficulty of choking. They are called "Crane plows," and are much used in western Virginia and southern Ohio.

Mr. Sidney Weller, of Halifax, N. C., informs us that he uses a very simple instrument for the purpose above named, and which answers better than any other plan he has seen. He says: "It is merely a sufficiently heavy piece of wood, like a common rake-head, with a few short teeth therein, and short handles at each end; to the end of which handles, ropes or small chains, put through holes, fasten the instrument to the end of the whiffle-tree, if a single-horse-plow, or to some part of the two-horse-tree, if a two-horse-plow. This instrument straightens and levels down the weeds, &c., immediately under the plow-beam, and before the furrow-slice. It answers with us every desired purpose."

Black-Sea Wheat.—Mr. S. N. Hawes, of Shoreham, Vt., writes us that from his acquaintance with the Black-Sea wheat, he can recommend it as being superior in hardiness and productiveness, to any other variety of spring-wheat he has known. He says there is a spurious kind sold as Black-Sea wheat. The difference in the true and spurious kinds, he describes as follows: "The true kind may be known by its unusually sturdy and thrifty appearance in both stalk and head; is of one pure kind, with dark-red chaff, and tillers more than any other kind I have known; frequently producing ten stalks from a single grain, and it is conceded by the best grain-growers who have tried it, that a bushel is sufficient seed for an acre. The spurious is a mixture of two kinds in about equal parts; the one bearing a partial resemblance to the true kind, but compared with that is far inferior both in length and size of stalk, head, and berry. The other part of the spurious sort has a white chaff; the stalk and head about medium size, with a berry longer and more slender than either its associate or the true; and it requires the same quantity to seed an acre that is required of other kinds of spring-wheat; that is two bushels. Hence those on whom it is palmed off, frequently lose their first crop by only half stocking their land."

Dampness in Brick Walls.—In answer to an inquiry heretofore published in the Cultivator, Mr. D. Tomlinson says:—"I have no doubt that if *hard burnt bricks,* such as are used for paving side-walks in our streets, and are water-proof, are laid on the outside course, in mortar made of water-proof lime, they would not absorb the rain and become wet. All walls, even wood, exposed to severe frost, in very cold weather, will become wet on sudden changes to warm south wind, by condensation of the moisture in the air, they being colder than the air in contact. In the city of New York some brick houses, whose gable end is exposed to the N. E. rains, have been covered with weather-boards, to prevent the rain from falling on the brick walls. Some of the cellars in Pearl and Water streets in that city, are flooded by the high tides. The corner store, on the east side of John street, at the head of Burling Slip, I have observed to be lined, both sides and floor, with boards, calked with okum, and covered over with pitch, to exclude the tide. Hard burnt, water-proof bricks, laid in mortar of water-proof lime, would have been much more durable, and would shut out water."

Carrots.—Mr. Henry Weston, of Rensselaer, Indiana, says:—"Are you aware that carrots may be left, like parsnips, through the winter with impunity? They seem to undergo no material change. I think it a very important fact; for they may be left in the ground as they grow, and after turneps are consumed in spring, they will be found admirable in aid of the young grass. I mention it, supposing the fact may possibly have escaped your observation; knowing that in N. Y. carrots are always buried or housed in fall."

Inquiry.—Mr. H. Hull, of Columbia county, N. Y., states that he intends to plant corn this season on two fields; one a light gravel, the other a retentive heavy soil inclining to clay; and he asks "which of those fields will be benefitted by a compost of plaster, lime, leached and unleached wood ashes?" He also inquires "whether the compost had better be applied in the hill at planting time, or around the plant after it is above ground?" We should expect the greatest benefit from ashes on light land, and so far as our observation has extended, the effects of plaster have been less favorable on gravelly land than on clayey or loamey; still, we do not believe that any positive rules can be laid down for the application of plaster; its operation is very various in different locations, and evidently depends on causes not yet discovered. We should prefer proving the efficacy of that substance and lime, by a small but careful experiment in the first place, and having done so, should feel more confidence as to what course to pursue. We should use the compost alluded to, either on or near the surface, and should not be very particular whether it was applied with the seed or around the plant soon after it made its appearance above ground.

Nut Grass, or Bitter Coco.—A subscriber at Havanna, Greene county, Alabama, wishes information on the subject of destroying this plant. Not having any acquaintance with it, we are unable to furnish such information. We cannot find any thing more definite on the subject than he will find in the Jan. and Feb. Nos. of the Cultivator. We should feel obliged if any of our friends will tell us of a good mode of destroying it. By a communication in another part of this number, it will be seen that salt is recommended for this purpose, to be sown at the rate of 40 or 50 bushels per acre.

The Season.—Extract of a letter from O. Phelps, Esq., dated Canandaigua, April 17—"The season, thus far, is very favorable for the farmer, and the winter grain on the ground, in this vicinity, never looked more promising and encouraging at this season of the year. If nothing injures it hereafter, we shall have a great crop of wheat."

AGRICULTURAL SCHOOLS.

We have so often urged the importance of having agricultural schools established in our country, that nothing but the full conviction that such institutions are essential to the prosperity and complete success of this most important branch of industry, could induce us so frequently to press the subject upon the attention of the readers of the Cultivator. We are glad to find the matter agitated in various quarters; the legislature petitioned upon the subject; and individuals beginning to enquire into the practicability and advantage of such establishments.

It is certainly one of the most important enquiries that can be made by the man of wealth, in what manner, and to what end he shall educate his sons to usefulness. He cannot look around him without having the startling truth forced upon his notice, that a large portion of the sons of such men are from their youth among the most vicious and worthless part of the community. If he has the feelings of a parent, he will be anxious by providing them with some means of employment, to prevent the ruin consequent on idleness. Shall he force them into what are termed the learned professions? These are already so filled that no little ingenuity and skill is required to devise the ways and means of so taxing the community for their support, as not to drive the producing classes into open revolt; and there are clear indications that but a little more of this kind of pressure would be required to produce such a result. The spread of intelligence, the universality of education, and the consequent expansion of individual mind, will of course do away much of the necessity which has existed for the toleration and use of these classes, and of consequence create new reasons for providing the young with other means of living. Under any circumstances, what greater benefit could he confer on them, than to make them intelligent, practical, hardy cultivators of the soil? This is a matter on which the man of wealth should reflect.

Such schools are not less important to the common farmer, who has sons to educate. It is idle to complain that the farmer has not his proper standing in the community. The fault is his own. Intelligence, science, general knowledge, always is felt, and in a community like ours, where men make or mar their own fortunes, no man destitute of such acquirements, has a right to expect success. Wealth may give a man power; but the power of Xerxes or the wealth of Crœsus, cannot command respect. This belongs to talent, to the mind, to worth; and what situation in life is more favorable to the development of these, than that of an independent, well educated farmer? A great change has come over the opinions of the world, on the important query, of what constitutes the man? and it remains for the laborer, the producer, the farmer and the mechanic, to see that the light now breaking, spreads and brightens, until all notions of a distinction of classes, other than such as depends on position, or the will of the individual, shall be found to have no existence in nature or fact. To the farmer then, agricultural schools are the means by which he can more readily qualify himself for more extended usefulness; bring science at once to bear on his favorite pursuit; and effectually do away the reproach once so common, that of all classes of society, the tiller of the soil is the most contented to be ignorant.

It has been the custom to envelope the subject of an agricultural school in a mass of matters, most of which have little connection with the subject, or which if found desirable, may be connected at any time. The public has been taught to look upon such a school, as it does upon Yale, Harvard, or Union; establishments costing thousands, if not millions; crowds of professors, and all the paraphernalia of pedantry and literary lumber. We have not a doubt, if the shadowy outline of such a magnificent establishment, had not been held up as what was wanted for an agricultural school, if the idea had not prevailed that hundreds of thousands of dollars would be required to put one in successful operation; if in the charters which have been granted looking to such institutions, moderate sums had been named, that long ere this time, we should have had more than one such school in successful operation. If we had relied more on individual effort, and less on legislative aid, and followed the example set at Hofwyl and Templemoyle, there can be good reason given why we could not have had s schools here, or why there should not be in the vicin of all our cities and large villages, farm schools, wh the most thorough practical education, would be com ned with a scientific and fully practical knowledge agriculture, and many of the most useful branches of chanics.

We have never advocated show in such establishme utility is what is demanded. Industry, the means of taining an honest livelihood, by personal, honorable bor, is what we want at such a school; and all expen tures that do not contribute to this end, are worse t useless. Two or three hundred acres of land prope constituted and situated; good dwelling and farm bui ings; a competent person to act as instructor in the ences required to be understood or used for illustrati in teaching, such as chemistry, geology, botany, &c. farmer, practically acquainted with his business in all branches, to superintend the out door operations, an collection of such agricultural and mechanical imp ments, as would be required in the management of s a farm, would be sufficient for a commencement. T library, the cabinet, the laboratory, for all useful pur ses, at the outset need not be costly or extensive; and the demand increased, the means of enlargement wo also accumulate. What is there to hinder any m where such a school is wanted, who can command t requisites we have named, from opening such a scho True, he must be known, the public must have confiden that what he undertakes he can perform; men will n trust their sons in the hands of the incompetent, or wi lingly consent to remunerate mere pretenders, for the labors. The less of show and ostentation there is abo such establishments, the more simple and family-li they are in their arrangements, and the less expense i curred in the course of education, always supposing it be *practical and thorough*, the better it will be for all, a the more likely will they be to succeed.

If it is necessary that a small appropriation be made the state, to put in operation such a school, as a patte school, we think the money would be wisely expende but we would rather see such institutions started and su ported by individual energy, intelligence, and liberalit It gives us great pleasure to state that the Elm Crag A ricultural School near Nashville, under the care of M Fanning, is fast progressing in public favor and usefu ness; and we think with such examples as that, and tho we have before named, no one need to doubt that school in our midst, properly organized and manage would be eminently successful.

CHARCOAL AS MANURE.

We have received a letter signed "*Long Island*," com menting on some remarks made by Dr. Lee, on charco as a manure, and noticing also a statement in reference Mr. Pell's experiment on the same subject. (See Fe No. of Cult.) Want of room prevents our giving th whole of the communication, but the following extra shows a fair view of the writer's ideas. After alludin to Dr. Lee's statement, to show that in the case in France referred to by him, *lime* was used *with the charcoal*, an having also mentioned that Mr. Pell used 52 bushels o charcoal and 300 bushels of oyster shell lime, the write says:—"At about the same time these articles caught m attention, I had been reading "Familiar Letters on Che mistry by Dr. Liebig," who teaches a different doctrin on this subject, the value of ammonia. In letter XV page 51, is the following: 'Nothing can be more certai than the fact that an exportation of nitrogenized produc does not exhaust the fertility of a country, inasmuch as is not the soil, but the atmosphere which furnishes it vegetation with nitrogen. It follows consequently, tha we cannot increase the fertility of our fields by a supply of nitrogenized manure, or by salts of ammonia, but rath er that their produce increases or diminishes in a dire ratio with the supply of mineral elements capable of as similation.' And in the same letter, page 52, he adds 'The effect of an artificial supply of ammonia, as a source of nitrogen, is therefore precisely analogous to that of season, as a source of carbonic acid—it is limited to a gain of time; that is, it accelerates the development of plants.' In the above letter, Dr. L. has spread out the testimony from which these conclusions are drawn. In letter XVI he says 'my recent researches into the constituent ingredients of our cultivated fields have led me to the conclusion that of all the elements furnished to plants by the soil, and ministering to their nourishment, the phosphate of lime, or rather the *phosphates* generally, must be regarded as the most important.' In referring to Dr. Lee's statement respecting the use of charcoal in France, you will observe that he speaks of it in connection with the use of lime. Also, Mr. Pell used upon his wheat field [illegible] bushels of *oyster shell lime* to the acre, besides the charcoal. I think therefore, the question very naturally arises, is it the charcoal or the lime to which this increased fertility is owing? Dr. Liebig would answer emphatically the latter, and if the two examples stated stand alone, we have no evidence to gainsay his assertion. We know oyster shells to be especially rich in phosphates, and we know too, that what are called Indian banks, banks upon which the Indians held their clam bakes, are esteemed the most fertile and least easily exhausted soils. Further investigation therefore seems necessary. Nothing can be more clear than the importance to farmers of definite ideas on all subjects connected with any improvement in the management of their farms; to waste their energies on this or that project, without advancing, is to [illegible]ion to future suggestions. Let the experiment of charcoal and lime be made side by side, the results carefully noted, and given to the world. By a dozen such experiments, we should at least approximate more nearly to the truth."

THE WINTER—EFFECT ON THE WHEAT CROP.

There are two ways in which our severe winters operate unfavorably on our winter sown wheat; the first is when there is an excess of snow covering the fields deeply for a long time, and melting off gradually in the spring, forming a mass so close as to exclude the air, and produce what may be called the suffocation of the plant. When wheat is affected in this way, it appears of a fine green as soon as the snow disappears, but a few hours exposure to the sun and air changes this appearance to a dark color, and it is soon evident that the plant is dead, root and branch. The wheat plant does not, however, so often suffer from this cause, as from the second, which is generally called winter-killing, though it is well known more injury is done in March and April than in the winter months proper. Wheat on soils that contain an excess of water, and of which clay is a prominent ingredient, suffers much from freezing out; and this is done after the snow diappears, and the earth gives under the influence of the sun during the day time, while it freezes at night, and sometimes severely. By this repeated process of thawing by day and freezing by night, the wheat roots are drawn from the soil, and death is the natural result. The loss from this cause alone is millions annually. The true remedy is draining.

The past winter must be considered a favorable one for the wheat crop. The depth of snow was much less than usual; and the steady cold weather prevented the results which might have ensued, had thawing and freezing alternated to any extent while the ground was free from its snowy covering. Experience shows that extreme cold produces little or no effect on the wheat plant, provided the transition from that state is gradual, and without sudden and violent alternations. We are also happy to state that so far as our observation has extended, and from the intelligence that has reached us, the wheat plant, to this date, has suffered little from the action of spring frosts, and presents a very healthy appearance. It is true it cannot be considered as passed all danger from this source, but extensive injury rarely occurs after the month of March. Appearances at present indicate an early spring; the song sparrow, bluebird and robin, have already returned from their migration; the striped squirrel is abundant in the forests, and the husbandman is already in the field with his plow. Some 'snappish' days we must expect, but to those, who, like ourselves, hail the advent of spring and summer as the opening anew of sources of health and enjoyment, present appearances give a promise that the days of wild flowers, singing birds, green fields, and leafy woods, are at hand.

IMPROVEMENT OF CLAY SOILS.

Messrs Editors—What method shall I take to reclaim worn-out land? soil, stubborn clay. Will leached ashes or lime effect a cure? If so, what proportion to the acre?

E. H. Northrup.

Shoreham, Vt. April 5, 1844.

The great trouble with a clay soil, is its tenacity. The compactness of its particles, keeps, in wet weather, too much water on the surface; and in dry weather it 'bakes,' as we say—becomes so hard that it absorbs but little moisture, and cannot be penetrated by the roots of plants. Thus, on clay soils, vegetation is very likely to suffer in turns, both from an excess, and a deficiency of moisture.

To guard against these difficulties, the first object should be to break this obstinate tenacity by a thorough loosening. To keep the vegetable matters near the surface, where, especially on such soils, they are most effective in aiding the growth of plants, we would turn a rather thin furrow with the common plow, and follow with a sub-soil plow, running it as deep as the implement and the strength of the team would permit. This would allow the surplus water to pass readily into the earth—the roots of plants would easily find their way in search of food—while, in time of drouth, the exhalation of moisture from below, as well as its absorption from the atmosphere would be facilitated, and the growing crop would thus be protected from the evils of too much moisture at one time, and too little at another.

As to the kinds of manure to be used, we should endeavor to apply such as would tend to correct, as much as possible, the defects of the soil. From our own experience, we should not expect much benefit from the use of ashes—their effects are more favorable on sandy soils. We would try both lime and gypsum, and if their effects proved to be such as would render their application profitable, should use such quantities as seemed expedient. We should endeavor to induce the growth of clover, and if that crop could be made to flourish, it would be found a certain and great improver of the soil; and should gypsum operate well, a high degree of fertility might be gained by the use of that substance in connexion with clover. Animal manures of all kinds, if they can be had, should of course be applied, as they are valuable on soils; and if there was a chance to obtain saw-dust conveniently, and at small expense, we would us it liberally, having witnessed its effects in improving tenacious soils.

It is proper to observe, that if draining should be necessary, that should be the first object of attention. The loosening of the soil as above mentioned, will operate as a considerable drainage; but actual observation only can determine whether it will be sufficient.

EXPERIMENTS.

Well conducted experiments are of the greatest service to the cause of agriculture. Some of the most important improvements yet made, have resulted from experiments made with care, and directed with skill. Great means are not required to institute useful experiments; the most humble tiller of the soil may contribute his part, and frequently such have rendered more aid to the progress of farming than the rich. Let every farmer then select some subject important in itself, and capable of general application, and enter upon its prosecution with a determination to give it a fair trial, to ascertain the expense, the profits, the best mode of culture or treatment, and as far as he is able, settle that question not only for himself, but for the public. The farmer should allow no year to pass, without prosecuting investigations of this kind; and if properly conducted, he will soon have a mass of facts accumulated, having a direct bearing upon his soil, crops, culture, manures, and general management of his farm, of the greatest practical value.

Corn given to fowls should be crushed and soaked in water; this helps digestion.

MONTHLY NOTICES.

☞ We are sensible that it will be impossible for us to make up, in all respects, for the loss both we and our readers have sustained in the death of Mr. Gaylord, late associate editor of this paper. It is our intention, however, to secure such aid as will enable us to sustain as far as possible the reputation of the Cultivator, and such as we trust will prove satisfactory to our friends.

Communications have been received since our last from E., A Subscriber, H. Hull, F., Another Subscriber, H. H., D. C. Goodale, S. Weller, E. H. Northrup, L. A. Morrell, Americus, L. F. Allen, E. N. Horsford, Plow Boy, (should have paid his postage,) J. Shillaber, B. H., S. N. Hawes, J. Beal, A. J. Prime, A. of the North, A Practical Farmer, H. Woniger, (from Central America,) J. S. S., C. R., Old Nova, (from Nova Scotia,) J. G. W., J. P., Frank Farmer, J. Wells, L. Durand, Mago, Viator, Junius, A Grenada Planter, (from the island of Grenada, W. I.)

☞ Our thanks are due to the Hon. Mr. Ellsworth, Com. Patent Office, for several parcels of seeds, including Essex Spring Wheat, English Spring Rye, Chevalier Barley, Orange Sugar Beet, Tobacco, Marrowfat Squash, &c.—To George Olmsted, Esq. Hartford, for the Conn. Courant, with an article on the "Culture of Choice Fruits."—To D. O. Prouty, Philadelphia, for papers of Seymour's new white giant Celery, and Union Head Lettuce.—To the Agricultural Society of the Island of Grenada, for the beautifully executed drawings of the "Cane Fly," and accompanying essay, which shall have a place in the Cultivator as soon as we get the drawings engraved.

☞ Our friend Thomas Affleck, Esq. of Ingleside, Mississippi, will please accept our thanks for a copy of his very interesting lecture on the Elements of Horticulture, delivered before the Agricultural, Horticultural and Botanical Society of Jefferson College, Miss. The subject was well illustrated by Mr. A. in his usual perspicuous style.

American Herd Book.—We would call attention to the prospectus of Lewis F. Allen, Esq, (in another part of this No.,) for the publication of an *American Herd-Book*. We think such a work will be well received, and from Mr. Allen's talents, and the long attention he has devoted to stock, we do not hesitate to say that he is in every way fully competent to perform the task he has undertaken; and we hope our breeders will afford him such assistance as will enable him to go on with the work.

New Work on Poultry.—Saxton and Miles, New-York, have now in press a work on poultry, by C. N. Bement. From having perused a considerable portion of the manuscript, we are warranted in saying it will be a valuable publication. It will contain numerous engravings, drawn from life, of the different species and most noted varieties; besides engraved plans of poultry, horses, feeding-boxes, &c. Mr. Bement has devoted much labor to the collection of facts illustrating the habits of poultry, and the best modes of management, and we risk nothing in saying the work will be found highly interesting as well as useful.

Sale of the late Mr. Grove's Saxony Sheep.—It will be seen by an advertisement in this number, that these very superior sheep will be sold in September next. An opportunity will then be afforded of obtaining fine wooled sheep, which we have no doubt are equal in value to any in the world. We have seen some animals from Mr. Grove's flock, and for fineness of staple and freedom from *gum*, as well as symmetry of carcass, we consider them unsurpassed by any we have met with.

Scientific instruction on Agriculture.—From an advertisement of the Newburg Academy, of which Dr. A. J. Prime is Principal, we learn that in addition to the branches usually taught in Academies, a department has been formed for instruction in the sciences, particularly in their application to agriculture. It is not now the intention to teach practical farming, though we are told that preparations are being made to do so at no r
day; but instruction will be given in those princi
knowledge of which is essential to the successful
cution of agriculture, and a full course of lectures
given on this subject and kindred branches, and pu
a suitable age will be taught the method of an
soils, &c. From what we have seen of the writi
Dr. Prime, we should think him well qualified f
ing such instruction as is proposed, and we wou
the attention of the public to his school.

Agricultural Science.—We are gratified to
that Mr. J. P. Norton, of Connecticut, son of J. T
ton, Esq., formerly of this city, who has for som
pursued the study of chemistry with some of the
professors of the science in this country, has
for Europe with the intention of pursuing the
of chemistry as applicable to the purposes of agric
under the direction of Professor J. F. W. Johnsto
able lecturer on Agricultural Chemistry. Mr.
will accompany Professor J. in his tour through
land during the present summer, where he is, we b
engaged by an association of agriculturists, for th
pose of visiting and examining their farms, an
soils, and making suggestions for their improv
These tours will afford Mr. N. a fine opportunity
come acquainted with Scottish agriculture, and we
he will favor us with notes of his observations.

Cotton Gin—Inquiry.—A correspondent at "
tepe, Republic of Central America," H. Woniger,
makes the following inquiries, and we shall be g
obliged, if some of our Southern friends will furn
with the information asked for:—"I read in the Jul
1842, of your interesting paper, an article, dated fro
mopolis, Ala., and signed 'I. B. C.' in which the
states that in that place, a gin for cleaning cotton ha
invented on the roller principle, which he says is th
will supercede the saw gin. As I cultivate the lo
ple cotton, known as Sea Island, it is interesting to
know whether this machine answered its purpose,
manufactured, and at what price. As yet, I have no
any farther communication respecting this inventio
less it be published in those late numbers of your
which on account of the great distance, cannot
reached me. I beg you to have the goodness to gi
all the information you can; and also wish to inqu
you know of any machine that is made use of by g
of Sea Island cotton for the purpose of ginning, oth
the common roller gin propelled by the foot of th
who attends it."

Wind-Mill.—Mr. J. Wilkinson, Union Vale,
wishes to obtain a good plan for a horizontal wi
to place on his barn, for cutting fodder, threshin
Can any of our readers furnish it?

Horse Barn.—A correspondent wishes to see
Cultivator, a plan of a cheap horse-barn and c
house, large enough for the accommodation of fo
ses, hay, &c. Who will furnish it?

☞ "Can pure China pigs, "white," be got,
what price?" asks J. R. C. We know of none in
cinity. We saw some at the Fair of the America
tute last autumn, but we could not ascertain the o
them.

"Viator."—We know nothing of the impleme
ded to by this correspondent. We will make the
sary inquiries, and give the results, if we ascerta
thing valuable.

Partner wanted.—A gentleman residing
Rock river country, Ill., owning a tract of land
of supporting from ten to fifteen thousand sheep,
rous of engaging a partner to embark with him
sheep and wool-growing business. He describes
cation as so favorable in soil, climate and prod
that "one would almost suppose nature had formed
pecially for sheep." The region (he says,) is el
commanding a view of the surrounding country
distance of from ten to twenty miles—presenting
eye some of the most beautiful scenery imag
Sheep are very healthy there, and show an incre

weight of 10 to 20 per cent, on being carried there from Ohio and Indiana. Any person wishing to engage in this business, may learn particulars by addressing (*post paid,*) the editors of the Cultivator.

☞ The communications of Dr. Prime and Mr. Camak will appear in our next.

Charcoal.—In reply to "A Subscriber" from Dutchess county, we would say, we consider the remarks about charcoal, to which he refers, mainly as *suggestions*, and that the quantity per acre and the value to the crop, is to be decided by experiment.

Farming in New Brunswick.—Our correspondent at St. John, New Brunswick, informs us that there is an increasing interest in the subject of agricultural improvement manifested by the farmers in that Province. Several Ag. Societies have been formed, and a spirit of inquiry awakened, from which much good is anticipated. Of this desire for improvement we have an evidence in the thirty subscribers forwarded us by our friend, for which he will please accept our thanks.

The State Fair.—Persons who intend to compete for any of the premiums at the State Agricultural Fair, to be held in Poughkeepsie in September, should improve all their time between this and that. The Premium List may be found in the February number of the Cultivator, and in the other agricultural publications. See to this matter in time. The extra attention you pay to your crops, and other products of your farms, will produce you pleasant excitement and profitable returns, *even if you don't get* a premium. There is nothing lost *in agriculture*, any more than in morals, by aiming at a *high standard* of perfection.

The chicken-hatching machine is now in successful operation in New-York. About 50 chickens are brought forth daily, or 20,000 per annum. A remarkable fact is stated in regard to weight of chickens when they first come from the egg; the chicken being several times heavier than the egg was at first.

Use of grapes.—Dr. Underhill strongly advises the culture of grapes, both on account of the profit to be derived from the sale of them, and from their value as food to sick and convalescent persons. At a late meeting of the New-York Farmer's Club, Dr. U. made some highly valuable observations on this subject. After 15 years' trial with various kinds of grapes, he prefers some of our natives, and recommends the Catawba and Isabella. He has three acres of the former, and seventeen of the latter. He says our people eat too much animal food, which renders their blood too thick, and causes diseases of the heart, liver and lungs. He thinks it would be infinitely better to substitute grapes and other fruit, with a little pure wine, for a portion of animal food.

ANALYSIS OF SOILS FROM ALABAMA.

To the Editors of the Cultivator—I claim the privilege of an agriculturist and a subscriber to your valuable journal, of sending you the accompanying package, and requesting, if it be practicable, you will examine the contents, state the result, and answer the following queries, which are premised by this statement.

No. 1 is a fair specimen of "sandy soil," planted in cotton, and producing good crops.

No. 2 is a deposite from the overflow of a prairie creek.

No. 3 is "bald prairie."

No. 4 is a *marl* forming the sides and bottom of said prairie creek.

In many instances the problem will soon have to be solved, whether it be best and cheapest to manure old land or buy new. Soil, artificially made rich, will produce more cotton than the best natural soil. To manure as extensively as advised by Dr. Cloud, is impracticable, unless manure can be produced otherwise than by stable-litter and stock-pens. The cotton plant and its staple, when burned, consist almost entirely of carbon. What effect upon cotton would Nos. 2, 3 and 4 (separately) produce, if mingled with No. 1? Which would be the richest and most durable in its effects, and what quantity required per acre to make its results valuable? Would burning add to the strength of Nos. 3 and 4?

There is within reach of almost every one here, quantities of dry oak and pine leaves and quick lime, which are to be obtained for the trouble only of heaping, carting and burning; and also inexhaustible stores of Nos. 3 and 4. This being the case, would Bommer's method answer a valuable end? will it produce from dry trash a manure as rich as *stable-litter*? and are the ingredients costly, other than quick lime, which is supposed to be required, and which here costs nothing in money? An answer in detail, with such additions as your knowledge and experience will suggest, would be gladly received by me, and would benefit ultimately many in this region.

Churchill, Lowndes county, Alabama. F.

We handed the above communication, together with the package of soils, to Prof. Emmons, of this city, who has made a thorough analysis of the soils, and favored us with the following practical results. It is proper to remark here, to prevent further applications for the analysis of soils, that the analysis of the above specimens occupied nearly a week's time, and that we shall not feel at liberty again to ask the performance of a similar favor at the hands of Prof. Emmons. Should any of our friends, however, wish specimens of their soils analysed, they can have it done for a reasonable compensation—say $10 for two or three specimens.

Geological Room, April 23, 1844.

To the Editors of the Cultivator—I have completed the analysis of the four specimens of soil from your correspondent in Alabama.

As the details of the analysis would probably be uninteresting, I will merely state the results:

No. 1—Light brown sandy loam,

consists in 100 grains of

Hygrometric water,	3.37
Vegetable matter,	4.00
Silex,	89.00
Alumine and iron,	3.12
Carbonate of lime,	0.50
	99.99

No. 2—River Alluvion.

Hygrometric water,	5.00
Vegetable matter,	11.50
Silex,	72.00
Alumine and iron,	10.00
Carbonate of lime,	1.50
	100.00

No. 3—Shell Marl.

Hygrometric water,	2.50
Vegetable matter,	3.00
Silex,	32.50
Carbonate of lime,	49.00
Per-oxide of iron,	2.25
Alumine,	1.25
Carb. magnesia,	9.00
	99.50

No. 4—Green Sand or Marl.

Water, and volatile matter,	15.00
Silex,	41.25
Alumine and iron,	17.00
Carb. Lime,	20.25
Carb. magnesia,	0.80
Potash,	5.00
Phosphate of lime and Peroxide of iron,	0.37
	99.57

No. 1 is a light sandy soil, which after a few years cultivation will require constant manuring. This, I understand, is the cotton land, which produces well when new. It contains, as will be seen from the analysis, but a small amount of those elements which are essential to a fertile and productive soil. Now the inquiry is, what will convert this sandy light soil into one durably productive? The answer to this question seems to be furnished by the analysis of Nos. 3 and 4.

Thus, No. 3 contains a large per centage of carb. lime, besides iron, alumine, and magnesia, the latter of which is undoubtedly a valuable element in soil. But No. 4, I think, will be more valuable than No. 3, inasmuch as it contains 5 per cent of potash, and a fair proportion of phosphate and carbonate of lime; and as the writer inquires whether burning might not aid in increasing the value of Nos. 3 and 4, I answer that it probably would, as No. 4 is an indurated marl; and besides aiding in giving it the requisite degree of fineness, it would render its elements more soluble, and quicken its action upon the soil upon which it might be employed.

Both Nos. 3 and 4 are *strictly* marls. The first contains a few fragments of fossil shells; the latter bears some resemblance to the green sand of New Jersey both in color and composition, though the peculiar green particles are wanting in the small specimens which were examined.

No. 2 is the ordinary soil of the alluvion of rivers, and is rich in vegetable matter.

To remark farther in relation to No. 4, I would recommend that this material be raised and made into suitable sized heaps, and then exposed to air and moisture, when it will probably undergo a slow disintegration, which will fit it for use. Or let it be burned and exposed, when the peculiar changes will take place more rapidly, and perhaps be fitted for immediate use. This contains also a pretty large amount of sulphate and chloride of lime, each of which it is easy to detect in a watery solution after boiling.

Upon the whole then, I believe that both Nos. 3 and 4 will prove (if in sufficient quantity and easy of access,) very important materials for renovating the light sandy soils in their vicinity, and even applicable to soils similar to No. 2, and probably an early application of them before exhaustion has taken place would be the best economy.

The only question which remains to be answered, is, what quantity of No. 4 will be required per acre? From what I have seen of the New Jersey marl, I should recommend from 20 to 25 cart loads per acre. It may be used with perfect safety in larger quantities, but it appears to me that this is about the quantity which economy would require. Respectfully yours,

E. EMMONS.

POULTRY.

At a late meeting of farmers and others at the State House in Boston, the subject of poultry was discussed.

Mr. Cole, of the Boston Cultivator, stated that the value of poultry in the United States, was, at the time of the late census, $12,000,000. In four of the New-England states, the value of poultry was more than that of swine. Fowls are as important as hogs, and should receive more attention. Our Agricultural societies should offer premiums for the best breeds, and the best management, showing the largest production in proportion to the expense. He spoke of the Bucks county fowl, and said some capons of this breed had recently been sold in Boston at $3 per pair—or a shilling, (a sixth part of a dollar,) per lb. They weighed 18 to 19 lbs. per pair. He thought the Dorkings were on the whole as good as any breed in the country. The Liberian, or Russian fowl, with a long beard, like a Jew, are esteemed good layers—there is only a few of them in the country.

Col. Thayer, of Braintree, spoke of his experience in keeping poultry for the last forty years. He had kept various breeds of hens—he liked the Dorkings. He thought hens would lay no better, and were even more inclined to sit, if kept without a male. Hens are very profitable. There is more nett profit in six hens than in a cow. When eggs are cheap they should be kept till they are dear. He knew a man who made his fortune in eggs. They are preserved as follows: Take one quart of salt and three quarts of lime, stirred up and dissolved till it is of the consistence of cream; then put in the eggs. He thought the keeping of poultry a very profitable business. He had raised geese. He liked a cross of the wild with the Mountain geese, and he had sold these mongrels at three dollars apiece. They weighed eight pounds each. [We presume the "Mountain" geese sp ken of are what is sometimes called the India, or Af can, or Swan goose.—EDS. CULT.] The Bremen ge are very large, but they lay and hatch while it is too c for the goslings. His hens lay well in winter. He a tight hen-house, so that water will not freeze in coldest weather, though the door for them to go ou left open. He thought the gapes were caused by sm worms in the wind-pipe that sometimes crawled up choked them. He had destroyed them by apply spirits of turpentine on a feather, but he sometimes kil the fowls by it. Turkeys are much inclined to wand He thinks they are not generally profitable; but he o saw a hundred or more at Mr. Webster's, in Marshfie running on the salt-marsh, with a wide range, feedi on grass-hoppers. He thought they might in such a c be raised to advantage.

Mr. Gardner had sometimes raised turkeys—had k 100 to 150 and when fed with curd they did well; if they got loose and wandered about, they nearly died.

Mr. Dodge thought fowls should have meat in wint Any kind of meat, cooked or raw, chopped fine, good.

Col. Thayer said he had not found white-washing he houses, as had been recommended, effectual in destro ing lice. He had been so much troubled with them, th on going into his hen-house, a thousand would come him. He shut up the house close and kept a fire charcoal in it one night, and it destroyed them all.

We have condensed the above from the Boston Cult vator.

NEW WORK ON SHEEP.

Mr. L. A. MORRELL is preparing for the press a wo on sheep, to be entitled the "AMERICAN SHEPHERD GUIDE." The different divisions of the work will em brace copious remarks on the philosophy of wool, th history of the sheep, with appropriate notices of all th different breeds and races in the world—full directions o the management of sheep—a chapter on breeding an crossing, and one on the best mode of fattening sheep fo market—the diseases and anatomy of sheep, with cuts, be compiled from the most unquestionable sources, an from eminent practical sheep-breeders in the Unit States—*cuts* of the *Merino*, *Saxon*, and the distinguishe *English breeds*, drawn from life, &c. &c.

The object of this announcement, is to enable Mr. Mo rell to obtain by a correspondence with wool-grower such information on the various branches of sheep-hus bandry, as will enable him to perfect the work; and w trust the friends of this important interest, will prompt render him all the aid in their power.

Mr. Morrell hopes to complete the work by the earl part of the coming winter, when it will be *submitted* t the examination of the Executive Committee of the N. Y. State Ag. Society.

Such a work as is here proposed is needed, and we ar very glad that the execution of it has fallen into the hand of Mr. Morrell, whose thorough knowledge and well known practical acquaintance with every department of sheep-husbandry, we consider a sufficient guaranty that every thing will be done *right*.

TRIBUTE OF RESPECT.

At the last monthly meeting of the Executive Committee of the New York State Agricultural Society, in the old State-house, in Albany,—the President, J. P. Beekman, in the chair:

After some remarks in reference to the losses the Society had lately sustained by the deaths of members,—a brief memoir of H. D. GROVE, of Rensselaer, *having* been read, and Mr. J. B. Nott appointed to prepare a memoir of WILLIS GAYLORD, it was then, on motion of Mr. Alexander Walsh, of Lansingburgh,

Resolved, That the members of the Executive Committee wear the usual badge of mourning for thirty days, in token of respect for their deceased associates, WILLIS GAYLORD and HENRY D. GROVE.

FOREIGN INTELLIGENCE.

By the Acadia, which arrived at Boston on the 21st of April, we have received our files of foreign papers up to the first of that month.

MR. COLMAN'S TOUR.—The first part of Mr. Colman's Tour was expected by this arrival, but we have not learnt whether it was received by his agent in Boston or not. We see by a notice in our London papers, that it was to be issued in London (in the Farmer's Magazine,) the first part is to appear on the first of this month. The Mark Lane Express, in an article on this subject, says:

"Mr. Colman has been received by the agriculturists of Great Britain with all the kindness and respect which his personal character, his mission, and the kindred associations of his country could demand; he has had the opportunity of visiting the most extensive landed proprietors who take a general interest in the cultivation of the soil and the breeding of stock, and has been hospitably received by the most experienced and talented breeders and cultivators of the soil amongst the tenant farmers. His advantages, in these respects, have been considerable, and we know he will profit by them."

Great preparations were being made for the show of the Royal Agricultural Society, which is to take place at Southampton in July next—commencing on the 18th, and continuing until the 26th of that month. Besides erecting the necessary buildings for the exhibition, the citizens of Southampton have subscribed $5,000 for the use the Society. Much animation exists, and the exhibition will probably equal in interest any former one.

The excitement from the discussion of "free trade" and "corn laws" still continues, and a large space in the agricultural papers is devoted to these subjects. There seems, however, no probability that any important change in the policy of Great Britain in regard to the corn laws, is about to take place. The agricultural population is vastly more numerous, and holds of course a proportionally greater influence than the manufacturing and commercial. It is estimated that there are 12.000,000 of the agricultural, and 3,500,000 of manufacturing population. The former are not likely to relinquish their influence, or submit to measures prejudicial to their interest.

The past winter in England was generally quite mild, though in some districts, especially in the highlands of Scotland, there were in February some very unusual storms of snow, which proved quite destructive to sheep, and in some instances to human life. March was remarkably cold and rainy, and in some neighborhoods considerable damage had been sustained by hail-storms, which were accompanied by very high winds and thunder. At the close of March, however, the weather was fine, and all accounts state the growing wheat never looked better. A considerable proportion of the spring grains had also been put in the ground under favorable circumstances.

The prices of meats were considered low. The best of wether mutton was selling at 6d, or in our currency, about 11 cents per lb., and beef from 4¼d, to 5½d, or 8 to 10 cents per lb. The demand for American provisions generally was dull. Wheat was selling at Liverpool at 8s. 4d. to 8s. 8d, or $1,91 to $1,98, per bushel of 70 pounds. American wheat 7s. 10d. to 8s. per 70 pounds. Duties about 2s. or 46 cents per bushel of 70 lbs. Farm laborers were generally well employed at 10 to 12 shillings per week, or about 38 to 46 cents per day.

PRIZE HEIFER.—Sir Charles R. Tempest's short horn heifer, which took the first prize and gold medal of the Smithfield Club in December last, was slaughtered soon afterwards. The weight of her four quarters was 1770 pounds—the weight of the loose fat or tallow, 228 lbs. She was four years and nine months old.

TO KILL THISTLES.—It is said in some of the English papers, that if a small quantity of salt be put on the centre of the thistle, in the course of nine or ten days the root and every part of the plant will be destroyed. The salt should be applied before the thistles have become large. Try it, and let us know how it works.

ASPARAGUS.—A medical correspondent of an English paper says this plant has great virtues in curing rheumatism. Slight attacks he says are cured in a few days by a free use of this delicious esculent, and chronic cases are much relieved, especially if the patient carefully avoids all acids. He says the Jerusalem artichoke has likewise a similar effect, when used as food.

EFFECTS OF DRAINAGE ON HUMAN LIFE.—The Rev. Professor Buckland, at a public meeting held in Oxford, said that in the parish of St. Margaret, Leicester, containing 22,000 inhabitants, it appeared that one portion of it was effectually drained, some parts but partially so, and others not at all. In the latter, the average duration of life is 13 years and a half, while in the same parish, where the drainage is only partial, the average is 22 years and a half, thereby showing the frightful effects of a bad atmosphere.

EXTRAORDINANY EWE.—Mr. George Underwood, of Shenley Dens Farm, has, for the last ten years, had in his possession an ewe which has, during that period, yeaned the immense number of forty-four lambs! The animal died this year. The lambs were yeaned as follows:—1835, five lambs; 1836, five do.; 1837, five do.; 1838, four do.; 1839, three do.; 1840, five do.; 1841, four do.; 1842, four do.; 1843, four do.; 1844, five do.—total, forty four.

BARLEY.

Many people are deterred from the cultivation of barley on account of the difficulty of keeping it pure. Some have an idea that it has a natural tendency to degenerate into *oats*—a theory analagous to that of the transmutation of wheat to chess. It is contended that if barley is eaten down by worms, by geese, or by any animal, while it is growing, some mysterious change takes place in consequence, by which it produces oats instead of "seed after its kind."

This erroneous (not to say ridiculous,) theory, probably originated from the fact that oats are more hardy than barley; that they sooner recover from any accident, such as being bitten down by animals while growing; that they tiller more, send up more seed-stalks, and increase in a greater ratio from a given number of original kernels, than barley.

There is frequently some oats among barley when sown, and from the above-named circumstances, the increase of the oats is always the greatest, and if the proportion of oats in the seed sown is sufficiently large, and an accident should happen to the crop, the oats start so much sooner and so much more vigorously, that the barley may be smothered.

Mr. Merrifield, (a good farmer, by the by,) informs us that he raises barley for which he always gets in market six cents a bushel more than the usual price. He is particular to keep it pure. In the first place, he took some good two-rowed barley and carefully picked it over by hand, thus taking out from it the oats and foul seeds. He is careful that oats do not get carried to his barley-ground in manure, and therefore does not use manure with that crop; and when his horses are at work where he intends to sow barley, he gives them no oats unless they have been first burnt or baked, so that they will not germinate. From pursuing this method, his crops are clean and heavy, frequently weighing fifty-four pounds to the bushel. Of late, his barley has all been sold for seed at home, and he has brought none to market.

SOWING CORN FOR FODDER.

We would suggest the sowing of corn broad-cast, on rich land for winter fodder. Mr. Sotham, of "Hereford Hall," sowed six acres last year, which he thinks yielded nearly six tons of dry fodder to the acre. He has fed both cattle and sheep with it (cut with a machine,) the past winter, and is so well pleased with it, that he is determined not to be without it in future. Others, who have tried it, speak equally in its favor. The quantity of seed recommended to be sown per acre, is from two to three bushels. Some experiments made by Mr. Welles, of Boston, seem to show that it is best to cut it soon after the spindle makes its appearance.

THE BEST SHEEP COUNTRY.

J. S. Skinner, Esq., has sent us a copy of a correspondence between him and Hon. T. L. Clingman, member of Congress from North Carolina, on the subject of sheep-husbandry, and the best districts for keeping sheep in the United States. Mr. Clingman gives a very interesting description of a tract of country situated in the mountainous region of North Carolina, in the counties of Yancey, Haywood, &c., and judging from his statement, we should think it admirably adapted to sheep. Mr. C. says the elevation of Burnsville, the county seat of Yancey, in about 2,900 feet above the level of the ocean, and that the general level of the county is much higher. The climate is represented as being delightfully cool in summer, the mercury seldom rising higher than 76 or 80 deg. Very little of the county is said to be too rough for cultivation; a large portion, it is said, is a sort of elevated table-land; undulating, but not too broken; "even," says Mr. C., "as one ascends the higher mountains, he will find occasionally on their sides, flats of level land containing several hundred acres of land in a body. The top of the Roan (the highest mountain in the county except the Black,) is covered by a prairie for ten miles, which affords a rich pasture during the greater part of the year. The ascent to it is so gradual that persons ride to the top on horseback from almost any direction. The same may be said of many of the other mountains. The soil of the county generally is uncommonly fertile, producing with tolerable cultivation abundant crops. What seems extraordinary to a stranger, is the fact that the soil becomes richer as he ascends the mountains. The sides of the Roan, the Black, the Bald, and others, at an elevation even of five or six thousand feet above the sea, are covered with a deep rich vegetable mould, so soft that a horse in dry weather often sinks to the fetlock. The fact that the soil is frequently more fertile as one ascends is, I presume, attributable to the circumstance that the higher portions are more commonly covered with clouds, and the vegetable matter being thus kept in a cool moist state while decaying, is incorporated to a greater degree with the surface of the earth, just as it is usually found that the north side of a hill is richer than the portion most exposed to the action of the sun's rays. The sides of the mountains, the timber being generally large, with little undergrowth and brushwood, are peculiarly fitted for pasture grounds, and the vegetation is in many places as luxuriant as it is in the rich savanna of the low country."

The region is said to be particularly well adapted to grass, and grain does well.

Were it not for the great press of communications, we should be happy to publish the whole correspondence.

AGRICULTURAL MEETINGS IN ALBANY.

In our last number we gave the proceedings of the first of a series of weekly agricultural meetings, commenced at the rooms of the State Agricultural Society in this city. We have taken notes of the discussions at the several meetings which have followed, for the Cultivator, but finding that they would occupy more room than we could possibly devote to the subject, we have given our reports of the doings to the daily papers for publication, and must content ourselves with a brief notice of them here.

The subject of discussion at the second meeting, was the connexion of geology with agriculture and other useful arts. Professor Emmons addressed the meeting at length. Professor Hall, and Mr. E. N. Horsford also spoke. Many valuable facts were stated, showing the benefit which has been in various ways derived from the geological survey of this State. Inexhaustible mines of iron ore, of different kinds, have been discovered, and questions in regard to the existence of other minerals, coal, &c., finally settled. It was observed by Professor Hall that more money had formerly been expended in searching for coal in the valley of the Hudson, than the whole survey of the State had cost. It is now certain there is no coal there.

Mr. Logan, the gentleman under whose charge the geological survey of Canada is being conducted, made some very interesting remarks. He stated that the re sults of the geological survey of this State had attracte much attention in Europe, and were there looked upo as quite extraordinary—especially so considering t short space of time occupied in the examination.

At the third meeting Dr. Lee gave a lecture on t subject of the practicability and expediency of growi wheat in the southern part of this State. Dr. L. reco mends for those soils the application of bones and cha coal, saturated with urine. At this meeting Profes Emmons made some interesting chemical experime illustrative of the action of different qualities of soils.

At the fourth meeting the subject discussed was woo growing, the relative qualities and profits of differe varieties of sheep, &c. The speakers were Dr. Lee, Howard, E. N. Horsford, J. B. Nott, Judge Cheever, a Mr. Shaw. At this meeting, also, the valuable pap by Mr. Horsford, on "Feeding Stock for Service a Slaughter," which will be found in another part of th number, was read.

The subject of discussion at the fifth meeting w *sheep-husbandry*. Mr. J. B. Nott, by previous arrange ment, opened the discussion. He was followed by D J. P. Beekman, President of the New York State Agri cultural Society, who gave his own mode of managin sheep, which seemed to be very judicious and practica Mr. Howard, Mr. Bement, and Mr. Sotham, also too part in the discussion.

At the sixth meeting, the subject was the improvemen of the breeds of domestic animals. The discussion wa conducted chiefly by Dr. Lee, Prof. Emmons, and Mr Howard, and seemed to attract much attention. The remarks of Dr. Lee and Prof. Emmons were chiefly of a physiological character, and those of Mr. Howard were mainly designed to show what had been the system of improvement practiced by the most distinguished breeders of domestic animals.

Much interest is evidently awakened by these meetings, and we think that by another winter an organization will be adopted for carrying them on more systematically. We hope they will be kept up at least during the session of the legislature; and we see no difficulty of having such an arrangement as will secure the delivery of lectures on agriclutural chemistry, comparative anatomy, &c., besides discussions on the various subjects of practical farming and rural economy, in which all may take part by giving the details of their own experience. Some such arrangement, it seems to us, would be likely to enlist the feelings of all, and we trust will be adopted.

HISTORY OF THE MERCER POTATOE.—That variety of the potatoe known in some sections of the country as the Chenango or Philadelphia, in others as the Mercer, in others still, as the "*Meshanic*," (corrupted from Neshanoc,) has perhaps been more generally cultivated for several years past than any other kind. The Farmer's Cabinet gives the history of this potatoe, which is substantially as follows: In the year 1772, a family of the name of Gilkey, came from the county of Derry, in Ireland, and settled in Westmoreland county, Pennsylvania. In Nov. 1797, two members of this family, John and James Gilkey, removed to Mercer county, Pa., and settled about 2 miles east of Neshanoc creek. In 1801 or 1802, John Gilkey planted a quantity of potatoe-balls (or seeds,) from red, blue, white and other varieties of potatoes. From the potatoes produced from these balls, Mr. Gilkey selected the variety above named. They were soon after cultivated and brought into notice near Philadelphia, and from thence have been disseminated over the whole country. This history was written by James Gilkey, brother of John, who produced the potatoes. In an account of the origin of this potatoe published a few years ago, it is stated that John Gilkey was educated for a Catholic priest, and that he was an exile from the Emerald isle, &c., which his brother says is incorrect.

CHEESE TO CHINA.—The export of cheese to China from this country is increasing, and will soon form a considerable item. It is packed whole in cases filled with sawdust, and secured so as to exclude the air.

ADDRESS OF THE HON. T. H. McCALEB,

before the Agriculturists and Mechanics' Association of Louisiana—delivered at Baton Rouge on the 8th of January, 1844.

It is not often that we have the pleasure of perusing an address of this nature so well written, so appropriate, and so able, as this one from the pen of Judge McCaleb. Not so practical, perhaps, as some, it still happily blends the useful with the agreeable, and diversifies its remarks to the planter, with the fruits and flowers of literature. While he asserts that the mechanic arts have made their greatest progress on this side the Atlantic, he candidly admits that to northern genius this advance is owing, and points to the cotton gin of Whitney, the card machine of Whittemore, and the steamboat of Fulton as proofs of his position. We never reflect on the fate of Whitney without a feeling of indignation that by a mere fiction or quibble of law, the states, the value of whose soils he more than quintupled by his invention, should have deprived him of the benefits to which he was justly entitled for his discoveries. We have but room for a single extract, and that is one, which, though relating primarily to the south, is, in its principles, applicable every where. We quote it with pleasure, because it is precisely the opinion we have advanced and maintained, in regard to the capability and duty of the south as well as of the north, as the readers of the Cultivator are well aware:

"*But it is in* another department of industry that we *exhibit a deficiency* which is the more deplorable, because there is the less reason to justify it. I allude to the *system of planting* for the most part adopted in some of the southern States of the Union. A great change for the better has been effected within the last two or three years; but much yet remains to be done to place us on a footing of independence. There is no reason why the planters of Louisiana and Mississippi should depend on the States north of us for almost all the necessaries of life. There is no reason why you should look beyond the boundaries of your own extensive domains for the articles required for home consumption. It is a great mistake, a very great mistake, that the labor of the south can be more advantageously employed in the cultivation of the great staples of the South, to the exclusion of the nutritive grains. It is a great mistake to say you will raise nothing but sugar, or nothing but cotton, and then depend upon a *market* for the supplies essential to your very existence. Such a system may be admirably adapted to the encouragement of the industry of others, but it is destructive to your own agricultural prosperity, and directly at war with all your efforts to maintain yourselves in a state of perfect independence. Any one who will for a moment consider the annual fluctuations in the prices, not only of the staples of the south, but of those productions which you are compelled to purchase with their proceeds, will be fully satisfied of the insecurity there must be in reposing implicit reliance upon markets over which you can exercise no control, and of which you must ever be more or less, the unresisting victims. How often has it happened when the price of sugar and cotton has been low, that the price of corn, flour, bacon, and other indispensable articles of western produce, have been comparatively exorbitant; and who can fail to perceive that from such contingencies in trade, the planter is always liable to be the greatest sufferer. * * * Instead of struggling year after year to be able to tell your neighbor how many hogsheads of sugar, or how many bales of cotton you have made, devote at least one-half your labor to the cultivation of the nutritive grain and the raising of every species of useful domestic animal, from the "hog that walloweth in the mire" to the noble "war-horse, whose neck the God of battles hath clothed with thunder." Turn out for pasture the lands exhausted by tillage thro' a long series of years, and so far from destroying the herbage that may appear upon it, try to do that, which, in the estimation of one of the boldest and best writers of the last century, would render you "greater benefactors to the human race than all the politicians that ever existed"—try to "make *two* blades of glass grow where but one grew before." Thus, even your detestable, obstinate coco-grass, the object of so many bitter curses, and the theme of so much pitiful lamentation, may be made subservient to your interests. Cut down the undergrowth of your wild lands, and let in the genial rays of the sun, and the teeming bosom of a fertile soil will present you its verdant landscape, vocal with the bleating of flocks and the lowing of herds. Act as a people with vast internal resources would act under the operation of an embargo law. Husband your own resources. Look to your own soil. Ask no favors from others, and grant what you please. Thus you may plant, and thus successfully defend the standard of domestic independence. With well filled granaries, you may laugh to scorn the attacks of hostile, fickle, or *party* legislation, smile at the whims and caprices of commerce, and turn with listless indifference from anxious speculations on the rise and fall in stocks, or the fluctuations in the money market."

From the report of the proceedings of this association, as we find them in the Concordia Intelligencer, (one of the ablest papers in the south west, by the way,) we think the meeting and the exhibition both interesting and promising. Mississippi and Louisiana have some most able and intelligent men engaged in the great cause of agricultural reform. Banded together in these societies, their labors are united, and will be more quickly and widely felt. We wish them every success.

HORSE AND MULE TRADE.

It is generally known that in all warm climates the mule is perferred to the horse for labor, and that large numbers are annually sent from the United States to the West Indies, for the use of the sugar plantations, and for carriage animals. Some horses are also sent out for the same purpose, and the trade has usually proved mutually advantageous. A large portion of this trade is monopolized by the city of New-Haven, and furnishes a very respectable part of the export business of that city. Speaking of this branch of trade the N. H. Courier says:

"Most of these animals (horses, cattle and mules) are sent out in large vessels, called by the craft 'Horse-Jockies.' The deck of the vessel is converted into a stable, by placing a sort of roof eight feet high over it, and the horses are tied in parallel rows with their heads towards each other. The water for their use is carried in the hold of the vessel, and the hay pressed in bundles, is laid upon the temporary roof. When they are shipped, they are packed as closely as herrings in a box, so that during the whole voyage, they are compelled to stand up. At first this is very tedious to the poor brutes, and until they get their 'sea-legs' on, they suffer a great deal. Most of the mules are brought here in large droves from Canada, but often times they are driven from the west, as far even as from Ohio and Kentucky. In fact these animals are sent here from nearly every state in the Union."

The breeding of mules for southern markets has been one of the most profitable operations of the west, and more good mules have been produced in Ohio, Kentucky and Tennessee, than perhaps in all the other states taken together. One individual, in Ohio, M. L. Sullivant, Esq. of Columbus, usually sells from his own farm 200 to 300 annually; most of which go to the Baltimore market.

GRINDING CORN WITH THE COB.—Mr. John Lewis of Kentucky, in a communication published in the Southern Planter, speaks of a mill lately invented for grinding unshelled ears of corn. He describes it as follows:—"The eye of the upper stone, instead of being circular, is enlarged on one side, and a removable tube, large enough to admit any ear of corn, is thrust into this side enlargement. Into the lower stone, beneath the end of the tube, two knives are fastened, so that at every revolution of the stone, the ear of corn is swept around over these knives, which slice it up and grind it into meal. It is a [illegible] affair, answers admirably, and is fitted to any common mill, patent included for fifteen dollars." Mr. Lewis also says—"Mr. Robert Wickliffe, of Lexington, has had lately a sort of mill erected, which grinds up oats in the sheaf or corn in the husks. I have not examined it, but am told it makes excellent *chop*, ready for moistening or feeding dry."

CORN-STALK MOLASSES AND SUGAR.

Mr. Lewis Paterson, of Tarentum, Pa., informs us of two unsuccessful attempts to manufacture sugar from corn stalks. In one instance he broke off the ears from the stalk as fast as they made their appearance, and in doing so, frequently broke the stalk, as it was at that time remarkably tender. On another lot, part of which was sweet corn, he let the ears get large enough to boil for eating, before breaking them off. The stalks were duly stripped of their leaves and crushed with iron rollers, and the juice, after having been strained through a fine sieve, was boiled off in iron kettles. After the sap was considerably reduced by boiling, it was taken out of the kettles, left to cool for an hour, some lime water added, and again put into the kettles, (leaving behind the sediment,) and boiled till it became quite thick. It was then removed and cooled; but it has had "no appearance of graining to this day." The flavor of the molasses, he says, "is wild and rank." The molasses from the lot on which the ears got big enough to boil, was best; but that "was by no means free from an unpleasant taste." It was tried in some kinds of cookery, but did not answer. Mr. Paterson does not say at what particular stage of the stalk it was cut, and this we presume to be a very important matter; as soon after a critical period the sap changes, so that the syrup is very different in its quality, and cannot be made to crystalize. We have seen excellent molasses made from corn-stalks, and very fair sugar—the molasses, equal at least, to any cane molasses. Will Mr. Aylesworth, of Granville, Ohio, inform us how he made some sugar and very fine molasses which we saw at his house, last year? We would also thank him to describe the whole process—to state particularly how the stalk should be raised and prepared, and the precise stage at which it should be cut—the expense of producing the molasses and sugar, yield per acre, &c.

Since the above was written, we have received a communication from Mr. John Beal, of New Harmony, Ind., furnishing some valuable information on the manufacture of corn-stalk sugar. It appears that Mr. Beal was quite successful in his attempts at making sugar the two last seasons. Mr. B. prepares his ground in the usual way for planting corn, and plants in rows three feet apart, with the kernels about three or four inches apart in the row; then keeps the ground clean by the use of the plow and cultivator. We subjoin an extract from his letter, and in our next will give his mode of preparing the stalk and manufacturing the sugar:

"While I am addressing you, I take the opportunity of noticing a paragraph from the communication of S. Tillotson, in the last (Feb.) number of the Cultivator. I had always much desired that some experiments should be made in Louisiana, where they have all the fixtures, and experience necessary for the purpose; but I must confess that I am not only dissappointed in the result, but surprised at the statements.

Mr. T. says the juice weighed 8 degrees, by which I suppose he means the specific gravity, or the amount of saccharine matter contained in it. Juice from my corn-stalks, was tested by Dr. Owen of this place, two separate years, and at different times, and was always found to be nine and a half; but that which excites the greatest surprise, is, that he obtained no sugar. The first experiment I made, in 1842, with about a gallon and a half of juice, boiled in a common culinary vessel over a cooking stove, yielded sugar, and every succeeding experiment, when the boiling was sufficiently rapid, has done the same. How so successful a manufacturer of cane sugar should so completely fail, is a matter of great surprise, as those who have been accustomed to see and be present at the making of cane sugar during a succession of years, assure me that there is great similarity in the taste and appearance of the juices of the two.

Again, in regard to Mr. T.'s sugar crop, am I under a wrong impression as to the quantity of sugar raised per acre in Louisiana, or was Mr. T.'s a most extraordinary crop. My impression has always been that one thousand pounds per acre was an average yield, and that a hogshead was about the same; and I am informed by a person who has spent many years of his life in the South, that eight hundred pounds is nearer an average there than a thousand. If I am wrong, I should be glad to be right, and if this should meet the eye of Mr. T. he v perhaps explain."

New fact in Natural History.—Col. Thayer, a communication on poultry in the Massacusetts Plowm says:—"There are several kinds of wild geese; th called 'the winter geese,' that stay in our bays till v late, and as some say during the winter, are much the gest and of a higher color than those called 'the sum geese,' and which always go to the south in the fall. have heard of some that are *entirely white*, of a sma size, of the same form, and make the same noise. I h never seen any of this kind, but was told by several my neighbors, that they saw a small flock that lighted a pond near my farm, were very near to them, and w perfectly satisfied."

Veterinary Department.

"THUMPS" IN SWINE.

Mr. J. W. Salter, of Ind., informs us that he has several hogs by a disease called "thumps." We h no personal acquaintance with a disease known by t name. In vol. 8, p. 32 of the Cultivator, it is stated t Dr. Shelby, of Tennessee, had used calomel for the c of this disease, with some success; but the quantity calomel, or the mode of administering it, is not giv If Mr. Salter is correct in supposing it to be inflammati of the lungs, bleeding, as he suggests, would undoubte do good, if done in the early stages of the disease. T hog is a bad subject to bleed, (except with a *butcher-kni* though cutting off the tail and ears may answer the pu pose; but in addition to that we would give plenty physic, such as castor oil, Glauber's salts, (mixed w molasses,) or sulphur. We have had sick hogs whi exhibited many of the symptoms described by Mr. S ter—heaving of the sides, hurried respiration, &c.—a have lost some; but have cured several by giving th a good dose of castor oil as soon as they were discover to be ill. The obstinacy of the hog renders him a tro blesome patient about taking medicine. We fasten a sm rope to his snout, pull up his head by throwing the ro over the top rail of the fence, take a piece of hard-wo board, say three inches wide, bore an inch hole throu it, force it edgewise between the jaws, and having di ted the oil with soap-suds, or other liquid, force it do his throat with a syringe.

BARREN COWS.

Messrs. Editors—I noticed an article from Mr. H lep on barren cows. When his cow is again in he bleed her to near *fainting*, then give her half an ou of laudanum and let the bull to her immediately. I h known this experiment to succeed in many instances. it does not succeed, he had better feed his cow at onc

Wm. H. Sotham.

HEAVES IN HORSES.

Moistening the hay or grain for horses which have t heaves, has a good effect. We see a communication this subject in the Wilkes-Barre (Pa.) Advocate. T writer says he had a favorite horse which was much a fected by this disorder. He happened to have a com mon horse-pail about half full of white-wash. He fill the bucket with water, and left it to settle. He moiste with this water two quarts of corn-meal, morning an evening, which he gave the horse—filling up the buck with water occasionally. In less than a week, a chang for the better was manifest in the horse, and about tw years after, he sold him as perfectly sound.

Blind Teeth.—P. H. B. says he had a mare a fe years ago that became blind, or nearly so. On examina tion he found blind teeth, and took them out. One ey got well, but the other remained blind.

Remedy for Hoven Cattle.—To a quart-bottle o cold water, add a tea-spoonful of spirits of *hartshorn* drench the animal with the same; if not relieved in tw hours, repeat the dose. This remedy has been frequent ly tried and seldom known to fail.—*Eng. Paper.*

THE STUDY OF AGRICULTURE.

Messrs. Editors—In that valuable work, "The School and the Schoolmaster," may be found some statements showing that in manufacturing establishments, the productiveness of labor is materially increased by the employment of educated workmen. If this is true in manufactures, it must be so to an equal or greater degree in agriculture. In manufactures, the division of labor is carried to a great extent; a single workman has but a few distinct operations to perform, and by frequent repetition, he soon acquires dexterity in the department assigned him, though his mind may be void of culture. In husbandry, the division of labor is more limited; one man performs a large number of operations widely different in their character; and hence, there is occasion for a more extensive exercise of the reasoning powers, and more ample room is afforded for the application of diversified intellectual acquirements.

We have been told that in this country, only one pupil in twenty goes higher than the common school. It is manifest, therefore, that seminaries established for the special purpose of teaching agriculture and its kindred sciences, will not confer their direct benefits upon a very large proportion of the farming population; though it must be admitted that the indirect advantages will be felt by the whole community. The great body of our farmers must depend on the common school to obtain the ground work of their education; and the superstructure must then be reared by persevering application during *the leisure moments* which every one can command, par*ticularly on* the winter evenings.

The day has mostly gone by, when the farmer who consulted books for information respecting his employment, was a subject of stupid ridicule. It is now generally admitted that the business of husbandry, may derive valuable assistance from a more faithful application of scientific principles. I believe the public mind is sufficiently prepared for the introduction of agricultural science, as a branch of study in the district schools throughout the State. Many years ago, this measure was recommended by De Witt Clinton, whose enlightened views, as is common with great minds, were in advance of the times in which he lived. The general introduction of this study into the schools, will appear to be an object well deserving the efforts of the town and county superintendents, when it is considered that so large a part of our population are farmers. The improved condition of these institutions of learning, which is confidently expected to result from the vigorous system of supervision now adopted, would undoubtedly make room for the new study, among the larger boys, without detriment to the branches hitherto pursued. In the first place, we must have a suitable text book. My acquaintance with agricultural works is not extensive; but of those which I have examined, Gray's "Scientific and Practical Agriculture," seems to be the best adapted to our purpose. As stated in the preface, this book was prepared more particularly for academies and seminaries of the higher class, and it may not be just the thing needed in our common schools. A work on this subject, for general use in the common schools, should contain only the most important outlines; for if we attempt too much, we are in danger of failing entirely. Whether Mr. Gray's book sufficiently answer's the above description, I leave to the judgment of others. It is certainly a valuable production; and the occasional moral reflections are exceedingly appropriate. If there is any work in the market, better adapted than Mr. Gray's, for common schools, I should like to have it named.

If it should be thought that a text book on agriculture would be prepared, better fitted for the use of common schools than any of the works now before the public, would it not be a good movement for the State Agricultural Society to offer a premium for such a book? If an extensive effort should be made to bring this branch of learning into the schools, it would be of vast importance to have a first rate text book to begin with. A work issued under the auspices of the State Society, would be likely to meet with favor; and perhaps the early attention to this subject, by that association, would effectually prevent, in respect to agricultural science, that diversity of text books which is the cause of so much embarrassment in other departments of learning.

La Grange, Dutchess co., N. Y. A. R. McCord.

LEASING FARMS.

Messrs. Editors—The practice prevails to some extent, of letting farms to tenants, and receiving in the shape of rent, a portion of the produce in kind, say a third, half, or two-thirds, varying with the amount of stock, seed, &c., furnished by the proprietor. This practice has engaged my attention for some years past; and I am constrained to say, that I think it ministers to the inherent indolence of those who are in the habit of taking farms in this way; impoverishes the land, and is an effectual bar to all improvement; for it is not to be expected that they will expend money or make much exertion where they are not to reap the immediate benefit. The landlord who thus lets his farm, will suffer the mortification and loss of seeing his farm ruined in a few years, and of receiving a *very small interest* on the money invested; and the tenant who follows this method of getting a living, will generally become a poor shiftless tool, and never be in a thriving condition. I speak from experience and pretty extensive observation on this subject; and the conclusion I have arrived at is, that every man qualified to work a farm properly, with industry and integrity sufficient to justify the confidence of others, will be sure to have a farm of his own. The practice, then, should be wholly discouraged and abandoned, both by landlord and tenant. Why should a man in our free country, where land as rich as the sun ever shone upon, can be had for $1,25 per acre, be willing to live in servile dependance on others all his days? Let him become the owner of even a few acres, and cultivate them in earnest, and he becomes at once *a man*, takes a higher stand in the scale of society, and feels that he breathes in a new atmosphere. He feels a stimulus to exertion unknown before, has *a home* for his wife and children, and prospers even beyond his hopes. But, says one, "I *must* take a farm for a few years, till I become able to purchase for myself." The fact is, he is seldom any more able at the end of three or five years, than at the beginning; and the landlord, I am quite sure, reaps but little benefit, and is compelled to see his farm deteriorating every year. Briars and thistles spring up, the bushes around stumps and in the corners of fences are uncut, the fences receive little attention, and the land is skinned and exhausted by constant cropping.

Capt. Barclay, in his miscalled Agricultural Tour in the United States, remarks upon this practice with much severity, but urges the propriety of letting farms on long leases. This may do in England, where land is valued at from $200 to $500 per acre, and mostly in the possession of the nobility. But in this country the system never has worked well; it is ill adapted to the genius of our institutions, and to form and sustain the character of an independent American citizen. Besides, such tenants as he speaks of, cannot be found; all such will be found working their own farms. The land in some parts of our country, even to the extent of some whole townships, has been worked for a series of years on long leases, but the inhabitants as a whole, have not been prosperous; and the proprietors have not realized the interest of eight dollars on land worth thirty dollars per acre. If these statements do not correspond with the experience and observation of others, let them speak out and give us the facts in their possession. H. A. P.

A HINT.

Encourage your correspondents by all means, whenever they give a prescription or recipe for any disease of man or beast, never to say *some*—or a *little*—or make a strong or a weak solution. Such recipes are not only useless but vexatious, if not detrimental; beg them always to say *how much* of every thing. Let the *exact proportions* be given. I. S. S.

It is in agriculture, as in every part of creation, a wise and paternal Providence has inseparably connected our duty with our happiness.

FOOD FOR STOCK DESIGNED FOR SERVICE AND SLAUGHTER.

[The following paper which was read by Mr. E. N. Horsford, at the 4th Agricultural Meeting at the old State Hall, Albany, Thursday evening, April 4th, has been furnished at our request for publication in the Cultivator.]

I. It is well known that working cattle and horses perform given amounts of service with less exhaustion when fed upon grain, than when fed upon hay or potatoes.

The reason is this. All labor consists in repeated muscular contractions. No muscular effort can be performed without the expenditure of muscular fibre. Muscular fibre is composed of several elements, one of which is nitrogen, and the substance is said to be a nitrogenized compound. Nitrogenized compounds are supplied to the wasting muscle from the blood. The blood is supplied with nutritive matter from the stomach. The stomach receives its supplies from the food which the animal eats.

Grain and hay and carrots, turneps, potatoes, pumpkins, &c., differ from each other in chemical composition. The grains contain more of the nitrogenized compounds, which are consumed by the active muscle, than the potatoes and kindred agricultural products.

These nitrogenized compounds have been found to be very nearly the same things in the proportions of the elements which form them, in grains and vegetable productions generally, that they are in the stomach, the blood and the muscle. In other words, the matter to be expended in labor is formed in plants and passes to the stomach and floats in the blood, and is secreted to form muscular fibre, without any change.

Some vegetable products contain more of this matter than others, and are therefore more profitably employed as food for working cattle and horses.

The destruction of muscular fibre which takes place with each contraction, and the consequent fatigue, may be illustrated in this manner.

The muscle is a series of parallel fibres. These fibres are made of little particles arranged side by side, or end to end, all of which attract each other. Those immediately contiguous, attracting each other more strongly than those at an interval asunder. If now some of the particles be withdrawn, the contractions among the remaining portions of the fibre, are less effective than they would be if the sections were not interrupted; because the attraction at the ends of the sections is weakened by the increased distance. If the chasms were filled by the deposition of new particles from the blood, the same effort with equal energy may be repeated; and if the blood were an exhaustless reservoir, the nitrogenized compounds might be as constantly supplied to the wasting tissues as muscular effort should require. But at the close of the digestion of a meal, the supply of nitrogenized compounds is in a measure arrested; and the quantity in the blood, being a fixed quantity, determined by the kind and amount of food eaten, will in process of time be exhausted. The inability to muscular effort arises from consumption of muscular fibre, and exhaustion of nitrogenized constituents of the blood. The fatigue is the natural pain which accompanies this condition of a muscle.

This explanation, though gross in comparison with the delicate and elaborate processes constantly going on among the organic tissues, may not be altogether without service in enabling us to comprehend the demand which labor makes upon the nitrogenized and other compounds—makes upon food which contains these essentials. Other organized substances are expended in labor, and must be replaced through the blood from the food, such as the earthy matters of which bone is composed.

Some kinds of food contain these essentials in larger quantities than others, and will therefore be more profitably grown and consumed.

II. It is also well known that cattle and sheep *fatten* more rapidly upon some substances than upon others, and that the food which will sustain much physical labor, is not necessarily the food that will fatten most expeditiously.

To know what kinds of food will most advantageously increase the flesh, the mere fat of stock designed for slaughter, and what admixtures of the two kinds of fo are best adapted to sustain a good coat of flesh and y permit vigorous service, is obviously of no small impo tance.

Prout, anxious to know what kinds of food and wh proportions of those kinds were best adapted to the ph sical development of animals, commenced his investig tions by an analysis of the human milk. He found consisted of three substances dissolved in water; one these containing nitrogen, and the other two destitute nitrogen.

The nitrogenized substance is called *caseine*, and is t basis of cheese. The other two substances were *sug of milk* and *oil*.

The oil is separated from the other two by agitatio and the particles aggregate in the form of butter.

The sugar gives the sweetness to new milk, and in t fermentation which succeeds, gives rise to the acid pri ciples observed in milk after standing a day or two.

The caseine or basis of cheese being the only organ principle that could form muscle or tissue of any kin because the only one that contains nitrogen, the othe two substances must have another office to perform.

The oil of the milk is deposited in the form of fa around the muscles and under the skin, and the suga except a part of it, being converted into fat, is graduall resolved into the various secretions, tears, mucous, saliva, perspiration, &c.

The use of the oil and sugar as types of the two grea classes of oleaginious and saccharine food, have bee made an interesting subject of investigation, and show to be the source of heat in the animal body.

The use of the caseine as the type of the nitrogenized or albumenous compounds, has already been referred to. It makes the muscle, the tendon, the tissues, brain an integuments.

The appetite demands an admixture of these. Bread is chiefly composed of starch and gluten—substances allied to sugar and caseine. Civilized men, every where, overspread the piece of bread with butter or oil, that the three kinds of food may be mingled. Rice must be eaten with butter or sugar. Potatoes with gravy, which consists of the expressed nitrogenized juices of meats. A meal cannot be made, the laborer feels, without meat for the nitrogenized constituent, the *caseine;* potatoes or rice or bread for the saccharine ingredient, the *sugar;* and butter or gravy for the oleaginous constituent or the *oil*.

The student, whose muscles make no expenditures, thinks the meat non-essential. He can live on bread and ale.

The Greenlander who fears the severity of his high northern latitude, thinks oil the great essential, and devours pure fat and tallow with a relish akin to that of more southern men for sugar.

To return. Some kinds of food are better adapted to fatten cattle and sheep. Why? Because they contain more oil.

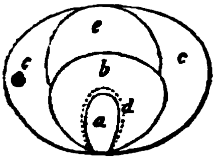
Some are better adapted to sustain cattle in labor. Why? Because they contain more of the substances expended in service.

III. It is not only true that different kinds of food contain in unequal proportions, the caseine, the oil and the sugar; but also true that varieties of the same grain have them in varying proportions, and the same variety of grain has them in unequal proportions if grown upon soils of unequal fertility; and even in two successive seasons, one season being adapted in the amount of its sunshine and dew and rain, to advance the crop and bring out a large return, and the other with its cloud and mildew and drouth fitted to shrivel the stalk and starve the kernel.

The grain of corn may be dissected so as to display the several principles of which it is composed.

The cotyledon or embryo, contains the earthy matters, and most of the nitrogenized substances that contribute to the formation of the organic tissues in general.

The circle immediately around the cotyledon contains a salt of a per-oxide of iron.* This is to serve in coloring the blood. The bulk of the seed is composed of starch and oil. The oil goes to fatten, the starch to supply matter for various secretions, and to some extent to form fat. Mingled with the oil and starch in some varieties of corn, is a third nitrogenized substance, called zeine.



Section of grain of corn.

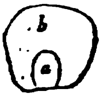
a. Cotyledon.

b. Starch.

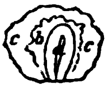
c. e. Oil—sugar—zeine.

d. Salts of iron.

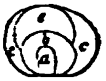
In the associated diagrams, several varieties of corn are presented, and the relative proportions of the several substances that compose them.



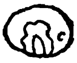
Tuscarora corn.



Sweet corn.



Northern yellow corn.



Pop corn.

In the use of these varieties of the same grain, it is easy to see that given weights of each might be profitably employed, if different objects were to be accomplished. They could not all be employed to fatten with equal advantage.

If it be desired merely to fatten an ox, he should be fed with that corn or grain which in 60 lbs. contains the most oil. If he is to be worked, he should be fed with corn which contains the largest cotyledons, for they contain the capital for labor. If he is to be merely inflated, without producing either fat or muscle, let him be fed on starch and water, or on a grain whose cotyledons are small, and in which the oil is wanting.

From what has been said, how essential does an analysis of the different kinds of grain become, that it may be known, which naturally contains most starch, most oil, or most gluten? And that the essentials of soils that are to produce those grains, be known, that the deficiencies may be supplied or noxious ingredients neutralized?

In other words, how manifestly important that science be interrogated upon subjects of such vital interest to the agricultural community, as the raising of stock and the growth of crops.

SOWING CLOVER SEED—CURING HAY WITH SALT.

Messrs. Editors—On reading Mr. R. L. Pell's letter in the Cultivator for March, (page 97.) I take up my pen to show that some of his opinions are wrong, and some of his practices are actually *cruel*. First, he says, "when preparing meadows or upland, I usually seed on wheat, sowing in the full half a bushel of Timothy seed to the acre, which is limed at the rate of three hundred bushels, and the following spring, after a moderate fall of snow, sow one bushel of clover seed," &c. Now, if Mr. P. means one bushel of clover seed to the acre, (and the letter reads so,) this is altogether wrong; as half a bushel of Timothy seed, and 5 pounds of clover seed, would be sufficient for any land I ever saw in this country. After telling the time he cuts his grass, he says, "the grass thus cut is drawn immediatety into the barn, and *one bushel* of fine salt spread by hand over each alternate layer composing a *ton*." Now I maintain that the quantity of salt he puts on actually *punishes* the poor animals that have to eat the hay, in a cruel manner. Yet eat it they *must*, if they have nothing else, or *starve*. Some 14 years ago, I read in some paper, this mode of curing hay, and I tried the experiment by commencing to feed 612 sheep with hay so cured. It took me all of an hour and a half, each day, to pump water for them, and then, after drinking till they were like to *burst*, they would, in cold days, stand and shiver for hours; and I believe, if I had not changed their feed to something else half of the time, that so much salt would have killed a number of them.

I make no doubt that Mr. Pell is honest in his intentions. I am altogether unacquainted with the gentleman; but I think he must be one of those farmers that tell men to do so and so, but who neither helps do it, nor sees that it is done, else he would see the impropriety of sowing a bushel of clover seed to the acre, and salting his hay so *unmercifully*.

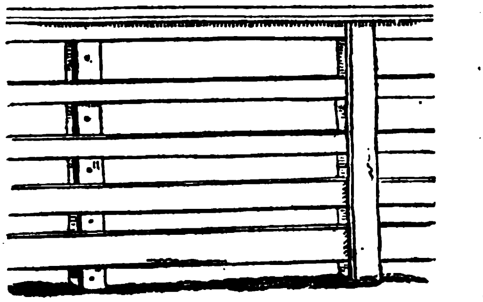
I will give you my mode of curing hay. When the crop is heavy, I spread it as soon as cut, if the weather is good, and let it lie until it is pretty well wilted, then cock it, and let it cure in cocks, only turning them over to let them have an hour or two of sunshine before loading them. If the crop should be light, I let it wilt in swath. When drawing in, I put about a quart of salt to a wagon-load, which is sufficient salt for the sheep while eating the hay.

John Johnston.

P. S. I received Mr. Pell's letters in answer to my inquiries about charcoal, for which I return my thanks. If I live, I will send him some seed wheat of both kinds, in time for sowing.

J. J

New Geneva, March, 1844.



STRONG BOARD FENCE.

The common board fence, made by naling horizontal boards to posts, is often broken by the failure of the nails. This difficulty is partially obviated by nailing an upright face to the post, consisting of a piece of board of a length equal to the height of the post, outside of the horizontal boards. A method, scarcely costing any more, by which the strength and durability of the fence is admirably improved, consists in placing small pieces or blocks a few inches square, in the spaces, on the post, between the boards. The whole thus forms a smooth surface, to which the facing board is fastened, and the fence boards thus so completely secured to their place, that their removal is rendered impossible, while the fence remains upon the post. The blocks thus used for filling up, may consist of small fragments which are otherwise wasted. The above figure represents this mode of construction; the right hand post showing the blocks in place before the facing is nailed upon them, and the left hand, the whole completed.

J. J. T.

PROFITS OF POULTRY.

Messrs. Editors—Having previously kept only the common kind of fowls, Mr. R. procured last year, a pair of crested Polanders, making, with those we before had, 28 fowls. We killed some occasionally, till the chickens were large enough to be eaten, when we had 20 old ones left. We raised over 100 chickens—half and full bloods together. Our early pullets commenced laying in the fall—none of them wanted to set. According to our account kept, we sold from Jan. 1, 1843, to Jan. 1, 1844, 1,866 eggs, and received $19 for them. We kept no account of food consumed, but gave a liberal supply.

Perhaps I ought to apologize for thus troubling you; but we have had your Cultivator so long in our family, that it scarcely entered my mind while writing, that *personally* we are strangers. Yours respectfully,

Prudence Reynolds.

Stamford, Ct., Feb. 24, 1844.

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* Dr. Jackson's paper before the Assoc. Amer. Geologists and Naturalists

DETRUNCATION OF THE ROOTS OF PLANTS.

Messrs. Editors—The Jan. number of the Cultivator, has induced me at this time to make a few remarks upon the cutting of the roots of plants, which our friend Dr. Cloud, admonishes his neighbors upon doing, and as I may have to traverse partly the same ground that I have heretofore, I hope that yourselves and your readers will excuse any repetition, if such should be found necessary. I have heretofore given two laws of nature, upon which I supposed Mr. Comstock based his improved system of "Terra-culture;" and in referring to these, I have no other apology to offer, than their importance to our every day work upon our farms; for if in nature, all arable lands are covered with vegetable growth, is it not evident that our practice should conform so far towards her example in this respect, as to keep our soil as well covered as the nature of our crops will admit. Do we attend in this respect, to nature's teaching, in our hoed crops? I think not; they are generally planted at such intervals, seed from seed, as to admit of luxuriant growths of weeds—which it appears to me nature intends for a protection to the soil—and these weeds have to be kept in check, by the frequent use of the hoe or plow, or they would otherwise injure the crop. In eradicating these denominated pests, do we not disturb and injure the plants we are anxious to grow? there is a law or order of nature, requiring both in the vegetable and animal kingdoms, a certain maturity of growth and distention and completion of absorbent and secretory vessels, before a plant or an animal is capable of reproducing its kind by seed, and my impression is, that there is generally an extensive depredation committed by the tiller of the soil, upon plants, abusive of this law, and with your permission, I will make a few brief remarks in regard to injuries done to the roots, by disturbing and cutting them with the plow, &c. It has been said, long since, I believe, but I cannot say by whom, that the more mouths a plant has, the greater its growth, and this I think, we will all admit; but to obtain an increased number of mouths, it was proposed to cut and lacerate the roots, so that they might branch out and thereby form more mouths, and these being pushed into new situations in the soil, was considered highly advantageous; this in some districts of our country, is a popular error of the present day.

How far the cutting of the roots would be conducive to the growth of a young plant, is not my present purpose to inquire; but at the time the pubescent state of the plant is attained, and possibly before this time, every root that is cut lessens instead of increases, the number of mouths or absorbents for the use required by the farmer. At this stage of growth, the farmer wants a deposit of matter for seed or fruit, and the absorbents of the newly formed succiferous roots, do not appear to furnish this matter to the plant. The new roots or rootlets must have time to pass from their papescent state, to one of a denser medium before they can be organized for the conveyance of matter for seed or fruit, and during this period, the upper part of the plant must suffer in proportion to the injury, and it is very doubtful whether any of this matter is conveyed through the original channels of all plants, as for instance, a depredation of this kind committed upon the apple tree, induces new shoots from the trunk, or from some one or more of its main branches, instead of any accelerated increase of the previous growth, or if the end of the root cut off is drawn to the surface, a new plant is there formed, and the injury on a good soil, is not otherwise perceptible in the woody fibre, unless these shoots or sprouts are not sent forth by nature; in that event, some of the branches go into decay, and this is more particularly the case with old than younger trees, for like the animal system, the vigor of youth is capable of sustaining disease, that would be vitally destructive to old age. The corn plant is capable of overcoming an injury to the root, in a great degree if not wholly, while young, by the formation of a new plant, which we denominate a sucker; but this plant in a more advanced stage of growth, refuses to throw up suckers; what then is the result of the injury? does the root go into decay, or does it communicate disease, by conveying the papescent matter, afforded by the new succiferous roots, into the body of the old plant, and the vital principle being unable to reject it, does it change the requisite juices of the plant into an unhealthy state? My own conjecture is, that the new roots do convey extraneous matter, that the plant upon poor or medium soils is unable to reject, and produces a disease that hastens the plant into early maturity and decay and thereby preventing the proper elaboration of matter for grain; but upon soils producing a rapid and luxuriant growth, gives such vigor to the plant, that the vital principle finds no difficulty unless the injury is very extensive, in rejecting all matter foreign to her wants, and the loss felt by the plant, of the root cut off, nature soon overcomes by an increased absorbent power given to the other roots; therefore, plants are less injured by roots being cut upon rich land, than upon poorer land. Upon rich land, and when the plant is making or preparing to make, either fruit or seed, an injury to the roots produces a slight cessation in the growth; but this soon reassumes its work, and a casual observer would not notice that any change or cessation had taken place.* But upon poor land, or land deficient in an abundant supply of material for the immediate wants of the plant, the injury soon becomes evident in the upper part of the plant, either in its seed, fruit, or woody fibre.

I am strongly impressed with the belief that the fungus growing upon our cultivated plants, is frequently from this cause; that is, the extraneous sap proceeding from an injured root, is thrown out upon the upper part of the plant and forms a fungus; but my experiments for this purpose, are not sufficiently full to admit of my expressing such an opinion as I would desire. I wish to be understood in regard to this fungi, as not taking in the whole cryptogamia class; but only such fungus as affects our agricultural productions. As this is a subject worthy of research, will not some of your learned subscribers interest themselves for the public good, by making suitable experiments to ascertain whether this suggestion is correct. I am aware that much of this fungi, has been attributed to animalculæ; but from whence does these animalculæ spring, are they not the effect, instead of the cause of these fungi? With much respect, your friend,

Ararat Farm, Jan. 9, 1844. Lyttleton Physick.

MANURES.

Messrs. Editors—One of the most important subjects to the Long Island farmer, is the making and management of manures. It is true a decided improvement has been made upon the old fashion of foddering cattle in the open field, by substituting snug yards with hovels sufficiently large to protect the cattle from storms; but this does not prevent the most valuable parts of manure from leaching off and wasting during heavy rains. I would advise all who have advanced no farther than this, and I know there are many, to have one animal stabled every night through the winter, and then when the manure is carted out, to spread one load from the stable adjoining, an equal quantity from the yard, and witness the difference; my word for it, it will be found that the latter, like the corn which I spoke of in another communication, has been soaked too much.

With horses, probably the old method (of allowing the manure to remain in the stable as long as the horse can climb in at the door,) is as good as any for the purpose of making manure, but as standing and sleeping upon the fermenting manure is sadly uncomfortable to the animals, it is a sufficient reason for the change which has been made. The general practice now is, to throw out the manure once a day and allow it to collect in a large heap until wanted for use; in this way, its enriching qualities are much impaired both by leaching, and the escape of gases during fermentation. A decided improvement will be found both in quantity and quality, by having it drawn out once a fortnight and put in a snug heap in the field where it is wanted for use, covering the heap each time with a thin layer of dirt, plaster or swamp muck as may be most convenient or desirable.

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* This check in growth can be readily seen in the corn plant, by taking two stalks of equal growth and forwardness, at the time the tassel is just discovered, at which time the brace roots appear; by cutting these off, or any other roots, the difference in growth is soon discernible.

The above is not mere theory, but has all been tested from worst to best in the practice of one who took his first lessons in farming at the plow-tail, and who feels happy in acknowledging that for whatever advantages he may have derived from these and other improvements, he is mainly indebted to yours and other agricultural publications. Respectfully yours, K.

IRRIGATION.

In answer to the call for information on this subject, by our correspondent J. S. S., ALFRED L. KENNEDY, Esq., has sent us the following extract from a Lecture on the Agricultural Utility of Water, which he delivered before the Delaware County (Pa.) Institute of Science, Dec. 1843, for which he will please accept our thanks:

"The practice of irrigating grass lands by means of the water from springs and brooks, is one of the most frequent, convenient and efficient means of fertility possessed by the farmer. It requires no expensive machinery, and is of the most simple application. It has therefore found favor in the eyes of practical men; and the wonder is not, that it should prevail so extensively on grazing tracts, but that it should not long since have been applied to other crops. European agriculture furnishes us with the details of the plan to be pursued, and its most happy results. And the recent experiments of intelligent foreigners, should not fail to meet with a ready response from our own countrymen.

Water acts in irrigation, by keeping plants supplied with that moisture so favorable to their freshness and beauty. It also acts by dissolving certain gaseous bodies and conveying them to the roots of plants—by removing foreign matter which has been deprived of fertilizing properties. One of its chief means of utility, however, undoubtedly is the solid matter, which it holds in solution and imparts to the herbage.

This will appear perfectly reasonable, if we consider how springs are formed.

The rain in descending, dissolves of the gases contained in the air, more or less, and among those especially, that known to chemists as carbonic acid gas. Falling upon the earth, it percolates through until it arrives at a bed of clay or some other impervious deposit. It there accumulates until enabled to force a passage to the surface. Throughout its subterranean course it is adding to its mineral contents, and gushes forth saturated, that is to say, containing as much as is possible of the rocks with which it has been brought in connection; whether they possess a silicious, aluminous, magnesian or calcareous character.

Although geology is very far from being a science of experiment, yet in the present consideration of its connection with agriculture, we are not left without witness to the position laid down that much of the utility of irrigation depends upon the solid matter dissolved in the water. I need but refer you to experiments made in Scotland, and apparently with great care, to determine this point.

The water, prior to irrigation, was analyzed, and yielded per gallon 10 grains common salt, and 4 grains limestone. The water after passing over 50 yards of meadow was also analyzed and found to contain but 5 grains common salt and 2 grains limestone in the gallon. One-half, or 5 grains of the former and 2 of the latter had been deposited by every gallon of the water, and granting that one hogshead passed in 24 hours over every yard in width of the 50 yards descent of meadow (a very moderate estimate) we have deposited over an acre in the same time 5¼ lbs. of the one, and 3½ lbs. of the other, or 1890 lbs. common salt and 756 lbs. limestone per annum. What a slow and continuous marling or liming of our soil is thus almost insensibly produced! The better, because of being intimately mingled with the earth, and gently and constantly applied.

This view involves nothing to which the farmer can for a moment hesitate to yield assent. In fact it is in perfect consonance with his every day experience of the effects of lime and the alkalies.

Now it is not pretended that the proportions of the ingredients mentioned, will be the same in all springs, or that even the ingredients themselves will always be found, yet as water is seldom pure, but generally holds in solution what chemists term salts, whether of magnesia, soda, potash or lime, there remains no obstacle to the reception of the views advanced, throughout the greater portion of our wide spread country.

Again, as before stated, of all the constituents of the atmosphere, carbonic acid gas is the most readily dissolved by water. It imparts to the water of springs, their sparkling brilliancy and flavor; its presence is therefore well known. This gas thus dissolved, was presented by Sir Humphrey Davy to the roots of plants, and we have the most direct testimony of his experiments to assure us is a most efficient aid to vegetable growth. In this view, the most eminent scientific authorities since his time, have coincided. In irrigation, nature is but exhibiting on a magnified scale, the experiments of Davy, in constantly presenting to plants fresh portions of spring, i. e. of carbonated water. Now we need not pause here to discuss the *manner* in which this gas thus presented, is assimilated by plants. It is sufficient for us to know the *fact*, and we are then satisfied of another advantage of irrigation.

Nor must we forget that spring water sometimes contains one of the products of putrefaction, ammonia, and of thunder storms, aqua fortis or nitric acid. Both ammonia and nitric acid, theorists to the contrary notwithstanding, have been repeatedly proved to be fertilizers.

Whether we adopt the excretory theory, i. e. the theory which supposes that plants reject from their systems those substances which are injurious, and that this vegetable excrement in time poisons the soil contiguous to their roots; or whether we adopt it not, and say that soils become incapable of constantly reproducing the same vegetation, solely because of the abstraction of nutriment, we cannot but feel under obligation to water for yet another important service. If the former hypothesis be received, then irrigation removes the rejected matter from the roots of plants, and supplies its place. If the latter, then it removes or re-invigorates the non-fertilizing earth.

Finally, and perhaps most important. Throughout the existence of a plant there is no period save its early infancy, in which it is more susceptible to external injury, than that of flowering and fruiting. Nature makes her greatest effort and requires the most assistance as the plant's life, and the farmer's hopes approach consummation. Unfortunately, at this very season, the earth is not unfrequently hardened and parched by heat and drouth, and vegetation is incapable of drawing from the callous bosom of our common mother the much needed supplies. Then does irrigation act as a friend in need, by softening the soil, supplying it with air and moisture, enabling the tender roots freely to penetrate, and to absorb invigorating stores of nutriment. 'But,' says one, 'would the speaker have us irrigate our grain crops?' There is nothing unreasonable in the proposition—no reason why to them it should be less advantageous than to grass. Permit a reference to the fertile valley of Durance in France, remarkable for its products and for the industry of its inhabitants:*

"Amongst the very various rotation, wheat is frequently sown, keeping very nearly to the following method which I have seen practiced in Sicily:

"The period of sowing takes place in the beginning of November. The seed is sown upon the land which has been prepared and manured, or sufficiently improved by preceding culture. The ground is divided into ridges or beds from 3 to 6 feet wide, and each ridge is separated from its neighbors by a space of 10 inches opened to the depth of 2 or 3 inches by a single stroke of the hoe, in order to let the waters destined for irrigation pass off In spring, when the wind has dried the earth, when rain is wanting, the average heat exceeds 54 deg. Fah. The water is introduced into the spaces opened between the ridges, and it is retained there sufficiently long to penetrate through and through by filtration; but abstaining from all submersion which would thicken the earth and hinder vegetation. This irrigation which may be called subterranean is repeated, if it is perceived that the plants suffer by drouth, but it rarely takes place more than twice, and frequently is necessary but once.

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* From M. Le Comte de Gasperin's paper in the Memoires de la Societe' Royal et Central d'Agriculture, as translated by Mr Boswell in the Journal of Agriculture, Edinburgh, Oct. 1843.

"The beauty of the vegetation leaves the cultivator but one fear—the lodging of the grain; but notwithstanding this risk. the harvests are so fine and abundant that the farmers are not deterred from following it. When the harvest is gathered in at the end of June, the ground is laid under water, and after allowing it to sink in and dry for two or three days, it is plowed, and beans, potatoes and maize or Turkish wheat and millet are sown, which they treat in the same manner. The second harvests produced by the advantage of a soil that has been thus refreshed during the hottest months of the year, July, August and September, are of great value."

PHILOSOPHY OF WOOL NO. IV.

TRUENESS.

The quality of trueness of the staple especially enhances the value of every grade of wool in which it is found. It comprises an equality of the diameter of the fibre from the root to the point, and uniformity of the fleece generally. When the filament greatly lacks in this particular, it may be ascribed to an irregular and unhealthy action of the secretion of wool, which, in turn, must be attributed, in general, to abuses in management of the sheep. For instance, if the animal has fared kindly till the winter season, and then exposed to storm, and cold, and withal ill fed, the growth of that part of the fibre during this period, will be considerably diminished in diameter, proportionally weak, and when examined by the microscope, presents a withered appearance. On being turned to pasture, the fare being better, and the secretions again becoming healthy and abundant, an enlargement of the fibre follows; but it is greatly destitute, from the causes stated, of the quality of trueness, and therefore debases the value of the whole fleece. The weak and withered parts of the fibre are termed *breaches*, and injure materially every manufacture in which it is employed, the felting property being deteriorated, and the cloth having less strength and softness. The skilful stapler and wool-buyer will, on critical examination, easily detect this serious fault, and prize the wool accordingly. By pulling asunder a single fibre, the break will uniformly be confined to the *breachy* or withered point. This is termed *unsound* wool.

Although this description of wool is generally, as remarked, the result of bad management of the flock, yet it is common to all good sheep. With the Saxon and Merino, after the ewes, particularly, pass the age of eight or nine years, the yolk lessens in quantity, which is followed by comparatively a hard, inelastic, unyielding, character of the wool, with the strength and weight greatly diminished. Therefore, notwithstanding the singular longevity of these breeds, it is better to pass them over to the butcher, when arrived at the age mentioned.

Intimately connected with producing a sound and true staple, is the

INFLUENCE OF TEMPERATURE.

It cannot be doubted that equability of temperature is an important agent in perfecting the several properties of wool. The Spanish custom, continued for centuries, of driving the sheep in the spring to the northern and mountainous parts of the kingdom, which are there kept until the approach of winter, originated in part from the conviction that this theory was sound. Indeed, it is founded in the natural instinct of the sheep. Every one knows it is impatient of heat. In the midst of summer, in all latitudes where it is found, it will seek the most elevated points for the sake of the cooling breeze, and retire to shades to guard itself against the burning rays of the sun. In winter it will flee to a place of refuge from storms and cold. All this testifies strongly in favor of the correctness of the premises. But the question may be asked, what has the bodily comfort of the animal to do with perfecting the several properties of the fleece? The answer is every thing. If health and thrift are promoted by equability of temperature, the cutaneous glands are alike healthy, and a regular and even growth of the fibre naturally follows.

But strictly speaking, equability of temperature is nowhere to be found; therefore, in our rigorous and changeable climate, the fibre of wool must ever present a greater or less inequality of diameter between its extremes. It is remarkable that the point has always the largest bulk. This is the product of summer, after shearing time, when there is a repletion of the secretions which produce the wool, and when the pores of the skin are relaxed and open, and permit a larger fibre to protrude. The portion near the root is the growth of the spring, when the weather is getting warm; and the intermediate part is the offspring of winter, when, under the influence of the cold, the pores of the skin contract, and permit only a finer fibre to escape.

An author remarks, "The variations in the diameter of the wool in the different parts of the fibre will also curiously correspond with the degree of heat at the time the respective portions were produced. The fibre of the wool, and the record of the meteoroligist will singularly agree, if the variations in temperature are sufficiently distant from each other for any appreciable part of the fibre to grow."

It legitimately follows from the foregoing observations, that a hot climate is unfavorable to the continued productions, for any length of time, of *fine wool*; and therefore, the opinion that wool of the Saxon and Merino can be grown in every degree of latitude in the United States, without deterioration, is obviously fallacious.

In confirmation of the general fact as to the influence of climate on wool and hair, the remarks of Mr. Hunter, an English author of high authority, are quoted: "Sheep carried from a cold to a warm climate soon undergo a remarkable change in the appearance of their fleece. From being very firm and thick, it becomes thin and coarse; until at length it degenerates into hair. Even if this change should not take place to its full extent in the individual, it will infallibly do so in the course of a greater or less number of generations. The effect of heat is nearly the same on the hairs of other animals. The The same species that in Russia, Siberia, and North America, produce the most beautiful and valuable furs, have nothing in the warmer climates but a coarse and thin covering of hair."

The above may be questioned by some, and Australian wools referred to as proof that the Saxon and Merino have vouchsafed to them some peculiar qualities of adaptation to every variety of climate, It is hardly necessary to say that this opinion is grounded upon a want of accurate and critical knowledge of physiological science, and other information bearing directly on the subject in point. The climate of New Holland or Australia, a British possession, is not hot but rather of a temperate character, and especially that portion of it where sheep are kept, being between, including the eastern point of Van Dieman's Land, the 43d and 32d degrees of south latitude. But notwithstanding its temperate and equable climate, compared with the more southern portions of our own country, yet Australia wools have deteriorated in fineness in comparison with the Saxon stock, from which many of the sheep in the colony originated. Although as recent as 1815, when the first exportations to any considerable extent were made from Germany, the fibre from a sample of picklock Australian wool now measures 1.750th part of an inch in diameter—the same as Spanish Merino—whereas, one from picklock Saxon is but the 1.840th. Considering the brief space of time, this shows a rapid decidence in fineness. Furthermore, a rapid deterioration in the felting property is equally manifest, the serrations being only 2400 to an inch, less by 150 than the average of picklock Merino, and 320 less than the same sort in Saxon. This fact confirms the observations of Mr. Hunter, and establishes the position that the climate of Germany, and the northern and middle States, with suitable protection in winter, as being the most conservative of the properties of extreme fineness and felting of wool. This subject may be further discussed hereafter.

The *felting property* of wool will constitute an important chapter, which will follow. **L. A. MORRELL.**

Lake Ridge, Tompkins Co., N. Y.

COMPARATIVE SHRINKAGE OF SAXON AND MERINO WOOL.

Messrs. Editors—A correspondent of yours, signing himself "Wool Grower," publishes in your last number, a letter from Samuel Lawrence, Esq. in which it is stated that "*American Paular* (merino) *wool*," will shrink from 40 to 45 per cent in scouring. As this is a much greater loss than the public would be prepared to expect, it may be inferred that other wools do not shrink to any thing like an equal extent. To prevent any such misapprehension, I give you the following extracts from letters received by me from Mr. Lawrence.

Oct. 16th he says:—"American Saxony wool washed in the usual way will shrink from 33 to 37 per cent. We have just scoured Mr. Morrell's wool of Tompkins Co., and it yields 66½ lbs. to the 100. *The finest sort yielded but* 62½ lbs. This is considered one of the best flocks of Saxon wool in Western New-York, and the condition of the wool was very good indeed. American Merino wool *washed in the usual mode* will shrink 40 to 45 per cent, say an average of 42 per cent."

Oct. 29th he says:—"The difference in the shrinkage of Saxony and Merino wool is from 5 to 7½ per cent, when *equally well washed* on the back. The "dark ends" or "crust" on Merino wool do no injury to the staple, but cause it to shrink more than if the ends were clean."

Yours truly, **Henry S. Randall.**

Cortland Village, April 4, 1844.

MANAGEMENT OF COWS, &c.

Messrs. Editors.—I am not a first rate farmer, yet there are some things that I think I know a little about. I think I know that no other kind of stock should be suffered to run in the same pasture with cows; particularly hogs, for they wallow in the water, and spoil it for the use of the cows; and moreover, the mud that adheres to them when they come out of the wallow is carried over the grass, which renders it unfit for the cows to eat. I do not think well of a very frequent change of pasture for cows; for they will soon become so uneasy as not to be satisfied with the best you can give them. Let them have a range large enough so that the pasture will always keep ahead of them, and they will be satisfied and milk as well, if not better, than when their pasture is frequently changed. After harvest, when the grass is not so fresh, it will be well to change sometimes, but not very frequently. Cows that are giving milk, are great eaters; they also require plenty of water and plenty of shade in their enclosure, with salt about twice a week.

Breaking Heifers.—Many a promising heifer is rendered unfit for the dairy, by improper management in breaking to the pail. They should be allowed to run with the cows one summer before you expect to milk them, and be driven regularly into the milking yard, and those who do the milking should frequently soothe and handle them, and treat them at all times with kindness, and there will then be no need to drive them into a small pen and have them held or tied to a post, or coaxed with a "mess," &c., whilst they are being milked. All such practices are very apt to teach them some bad habit that they will never forget. I know of no animal that is more a "creature of habit" than the cow.

Horses.—It is sorrowful to see the abuse and cruelty that is practiced by some on this noble and useful animal. A great many valuable horses die yearly from improper treatment alone. Those who have the care of horses, should work them moderately, feed and water regularly, and give them salt at least twice a week. I believe that three-fourths of the diseases of horses are brought on them by improper treatment. Much has been said from time to time about the diseases of horses and their cures. I have always found it much easier and better to try to prevent, than to cure them.

Breaking and Management of Colts.—They should be treated kindly and taught a little at a time. First teach them to stand tied or hitched, and be sure that the halter is strong enough to hold them, for if they break the halter a few times, they will never forget it; and a horse can hardly have a worse practice than that of breaking loose whenever you hitch him. Next, they should be taught to lead well, for if they do not learn to lead when young, they will never lead well. They may be ridden a little at two and a half years old, if the weather is cool; in riding, always teach them to walk well before they are put to any other gait. Be careful not to scare them by throwing on the saddle, or in mounting. When you wish to break them to work, put them in a team with horses that will not baulk, and put on no more load than the rest of your team can draw. They should be worked a few days in one place and then changed to another; as by this means you may have horses that will work in any place you may choose, or have occasion to put them, and they will be doubly valuable for it. If your colts should be a little unruly when first geared up, never mind it—*do not strike them.* All young animals, (children not excepted,) can be managed best by the law of kindness.

C. H. Hall.

Bluerock, Muskingum Co., Ohio, March 5, 1844.

PRINCIPLES OF BREEDING.

Messrs. Editors—I have noticed in some of the back numbers of the Cultivator, the rules of breeding as laid down by Cline, with which, if I understand them properly, I cannot agree. He says it is wrong to breed small cows to a large bull, or to use his own words, "crossing has only succeeded in an eminent degree in those instances in which the females were larger than the usual proportion of females to males."

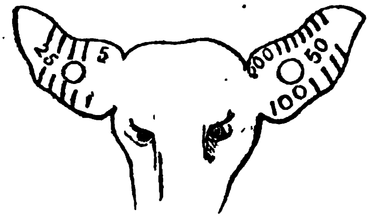
My experience differs from this; and to sustain this difference, I will refer you to an extract from the agricultural tour of Count de Gourcy in the north of Scotland, a notice of which, I lately saw in the Cultivator. He says "Mr. Watson at Keylor, keeps about twenty of the mountain or Highland cows, which he breeds to a Short Horn bull, and it is astonishing to witness the results of this cross, of a *large male* with *small females. The success in every respect is beyond a doubt.*" In the second place, who has not marked the decided improvement in the progeny of a Short Horn bull and the Devon cow—"Indeed," says some writer, "I never knew any of these bulls put to any cow where the produce was not superior to the dam. But the cross which I advocate, and with which I am best acquainted, is with the Devon cow." And farther, it is known that the Rev. Henry Berry of England, is much in favor of this cross. And again, I have observed that the improvement made by crossing the Short Horn upon our native stock, is *most* perceptible when the cow is a small tight made animal; the calf, in that case, being more compact and finer formed, than the produce of a cow nearer the size of the bull. Now what I wish to know is this; how to reconcile this clashing between what are laid down as the true principles of breediug, and actual experience.

I have written this in the hope of eliciting from you a few remarks on the subject. **B. H.**

Georgia, March, 1844.

Note.—We do not suppose that the principles of breeding laid down by Cline, have ever been universally admitted, even among eminent stock-breeders. The point alluded to by our correspondent, is not settled. In England, we find the celebrated Short Horn breeder, Thomas Bates, opposed to Cline's theory; while the equally celebrated breeder of Herefords, the late John Price, was in favor of it. Our correspondent has mentioned the late Rev. Mr. Berry, as having been in favor of the cross of Durhams with Devons. We wish he had given us some reference to Mr. Berry's writings showing that he was in favor of this cross, as we do not recollect anything of the kind. We should expect a better formed progeny from compactly made cows, than from loosely made ones, whatever might be their size, especially if the bull was rather more loose in his make than he ought to be.

North Devon Ox.—An ox of the North Devon breed has been lately exhibited in England, which was 18½ hands high, and measures, as it is said, four feet from hip to hip, and is still growing.



REGISTERING SHEEP.

The above cut illustrates the German mode of ear-marking and regularly numbering the sheep belonging to a flock, so that each individual can be distinctly registered.

Each slit in the lower rim of the right ear represents,	1
do upper do	5
do lower left	100
do upper do	500
The central hole in the right ear,	25
do left	50
In the above figure	
7 slits in the upper rim of the left ear, 500 each	3500
4 do lower do do 100 do	400
The central hole in do	50
4 slits in the upper rim of the right ear, 5 do	20
4 do lower do do 1 do	4
The central hole in do 1 do	25
Number of the sheep,	3999

AN AMERICAN HERD BOOK.

The inconvenience arising from the want of a work of this kind is already greatly felt in the United States; and with the rapid multiplication of our herds, is continually increasing. There may now be estimated, at least two thousand thorough-bred Short Horn cattle on this side the Atlantic, distributed in the hands of perhaps five hundred different breeders. These animals, in most cases, have been selected from among the best herds in England, and imported at great expense; and their descendants widely disseminated into every State of our Union, and the Canadas. Strict attention has been given to their breeding, and great care bestowed to maintain their original excellence. The climate and soils of America have proved congenial to their growth, and from the rapidity with which they have multiplied, and their present comparative cheapness, we may anticipate that but few further importations will be made from abroad. Still, the decided advantages conferred upon one of the most important branches of our agriculture by the introduction of the Short Horns into this country, have distinctly established them as a race to be perpetuated in their purity; and the progressive improvement in American husbandry is a sufficient guaranty that they will hereafter maintain their exalted character in elevating the standard of American cattle.

So important was it esteemed by the Short Horn breeders of England to establish and record the lineage of their unrivalled herds, that in the year 1822 the first volume of Coates' Herd Book was published, containing the pedigrees of over 2,500 animals; and so strongly has the public mind sanctioned the utility of the work and its continuance, that three successive supplements have from time to time been issued, and another is now in the press, embracing altogether, a list of probably 12,000 cattle.

In the great mass of these, the American breeder has little interest; although from the absence of a domestic record, many of our citizens have encountered the inconvenience and expense of transmitting a list of their herds to England for registry. A moment's reflection will convince us of the absurdity of a perpetual dependence upon foreign records for the pedigrees of American stock; and the great expense of obtaining the entire English herd book, comprising five large volumes, at a cost of not less than forty dollars, are subjects not unworthy of consideration; add to this, the probability of errors in printing the registry at such a distance, where corrections can hardly be made, together with the possession of no greater assurance for the integrity of the records than may be found at home, and the propriety of at once establishing an American Herd Book, will be apparent.

A work of this kind has long been agitated by variou gentlemen connected with cattle breeding in America but no one has hitherto ventured the experiment, although earnestly called for by a numerous body of breeders.

Its demand then being conceded, it remains to be seen whether the public will sustain an effort to accomplish it It is a labor involving industry, research and discrimination; and in its proper execution, demanding no ordinary degree of firmness and decision in resisting undue admissions within its pages. It may, perhaps, be deemed an act of presumption in the undersigned to assume this responsibility; but he can only answer that *some one* must undertake it, if it be undertaken at all; and having been a considerable breeder of Short Horns for many years, and more or less conversant with most of the principal herds of this country, he considers his observation and experience, together with a familiar acquaintance with the volumes of the English Herd Book, somewhat of a guaranty for the performance. Be it remembered however, that the task is not assumed without mature reflection, and after the repeated solicitations of several distinguished breeders in different sections of the United States; and if pursued, the co-operation of skilful and experienced individuals will be rendered. But for the integrity of its execution, the undersigned will be solely responsible.

As this work is not proposed in the anticipation of private gain, so neither will it be expected to involve pecuniary loss. It is therefore necessary to ascertain the extent of encouragement which will be given to it before proceeding; and for that purpose the undersigned respectfully asks the publication of this notice by the agricultural press generally in the United States and the Canadian Provinces, for which, together with a copy of the paper containing it, directed to him, he will present the proprietor with a copy of the work, if prosecuted.

He also requests all who approve the plan to write him, *post paid*, if by mail, previous to the first day of July next, stating the number of animals they propose to register, together with the number of copies they will take. If a sufficient number of responses are made to encourage the undertaking, the work will proceed; if not, it will be given up. The determination of going on with it, will be announced through the agricultural papers as early as September next, and those proposing to patronize the work will then be notified to forward their respective registers of cattle immediately, together with the necessary evidence of their correctness, that it may be issued as early as the spring of 1845.

As it is not expected that the sales of the book will more than pay for the printing and publication, a small charge for admission will be required, say from twenty-five to fifty cents for each animal, as the number may determine.

Well executed portraits of animals, the plates being furnished by the owners, will be inserted with the register.

The *full* pedigree of each animal will be given, running back through its whole extent in the English Herd Book, if thus furnished, together with its reference numbers, so as to render the American Herd Book a *perfect* record of every animal's genealogy.

An index containing the name and residence of every breeder whose cattle are registered, will be inserted.

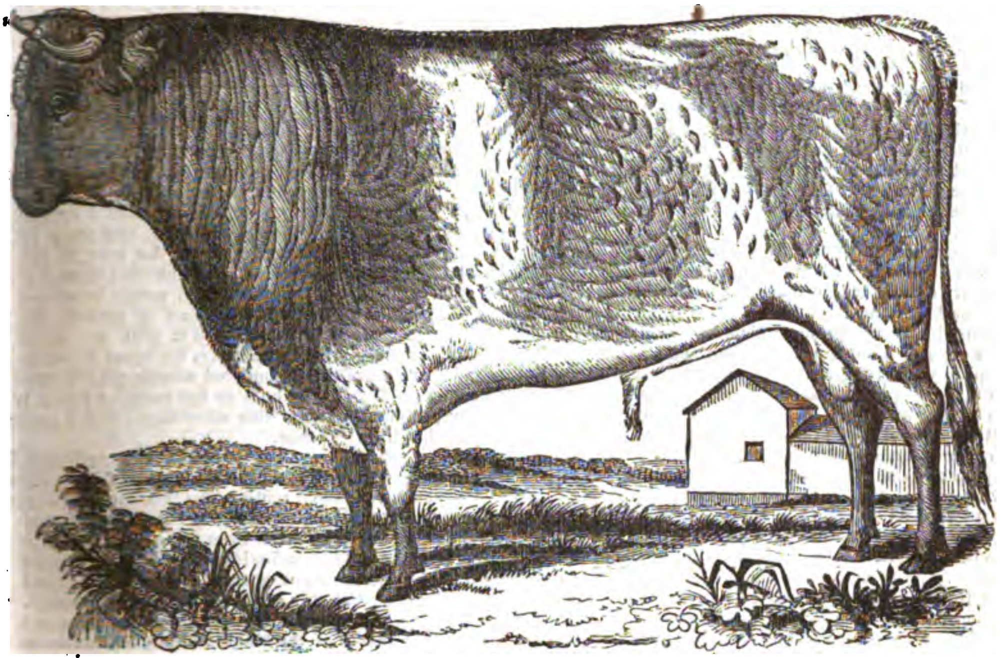
Another index will contain the name of every animal and the page on which it is recorded.

The work will be prefaced with a full and accurate history of the Short Horn breed of cattle, drawn up from the best English authorities, together with a particular account of their extraordinary productions both in the dairy and at the shambles.

It will be executed as near as possible, in the style of the English Herd Book, well bound, and delivered to subscribers at a price not exceeding three dollars a copy, either at New-York, Albany, or Buffalo, at their option.

LEWIS F. ALLEN.

Black Rock, N. Y., April, 1844.



THE FULL BLOODED SHORT-HORN DURHAM BULL REMUS.

THIS noble animal of which the above (drawn from the original by Walton, and engraved by R. H. Pease,) is a fair likeness, but by no means flattered, is from the celebrated herd of Adam Fergusson, Esq. of Woodhill, Canada West; and is descended on the one side from the imported stock of Gen. Van Rensselaer, (the late Patroon) of Albany. He was exhibited at the State Fair in Rochester, in September last; but being then owned in Canada, was not entered for a premium. He was purchased by E. Mack, C. L. Grant and W. G. Goddard, of Ithaca, Tompkins county, with the sole view of contributing to the improvement of the stock in that section of the state, where he is still owned.

REMUS is a dappled roan. He is a large animal, weighing about 22 cwt.; clean limbed, well proportioned, and in all his points will compare favorably with any animal in the state. The following is his pedigree, as communicated by Mr. Fergusson:

"GENTLEMEN—I am happy to learn that the roan bull REMUS, has fallen into your hands, as I have every reason to think that he will give you satisfaction. Mr. Davis has a herd of splendid young stock from him, and the farmers around Mr. Davis have all been very much pleased with his service. I annex his pedigree:

REMUS, a roan bull (a twin) calved June 14th, 1839—sire Champion; dam Beauty. 1. *Champion* was got by Sir Walter, out of Dairy Spot. 2. *Sir Walter** was bred by James Chrisp, of Northumberland, England; sire by Bachelor, (1616,) dam Sprightly, by Barmton, (1677,) grand-dam by Waverly, (2819,) great grand-dam by a son of Washington, (674.)

2d. *Beauty** also bred by Mr. Chrisp, got by Snowball, (2647,) dam by Lawnsleeves, (365.)

3d. *Dairy Spot*, bred by Stephen Van Rensselaer, got by General Jackson, son of old Washington, dam Beauty, out of Red Lady, by Washington; grand dam Pansey, by Washington.

Washington and Parsey were both imported from England by the old Patroon.

I certify the above to be true and correct, to the best of my knowledge and belief. ADAM FERGUSSON.

Rochester, 22d Sept."

FATTENING CATTLE ON POTATOES.

In answer to L. D. on fattening cattle with potatoes, I would say, that I have fed cattle on potatoes for over thirty years, and where they get plenty of potatoes, I seldom saw them drink water, even when it was close by them all the time. This season I fed two three year old ¾ Durham heifers on potatoes and pumpkins; a bushel of potatoes to the two in the morning, as many pumpkins as they would eat at noon, and a bushel of potatoes at night, with clover hay, what they wanted through the day and night. One of them suckled a calf until five months old—the white calf that took the second premium at Rochester—she was put dry in October; the other was put dry in October also. I fed them 68 days. The one weighed 802 lbs., the other 857 lbs. One had 80 lbs tallow; the other 103 lbs., exclusive of kidney—the one that did not suckle the calf having most. They very seldom tasted water, although they had the offer of it every day. They were not tied up, but run loose in a yard amongst 100 sheep. I never saw finer beef than they made.

JOHN JOHNSTON.

Near Geneva, 6th March, 1844.

BREEDING.

MESSRS. EDITORS—The following circumstance was related to me by Mr. Calvin Ward of West Richmond, N. Y. The names of the parties concerned I neglected to put down. In relation, he said that one of his acquaintances in the choice of two stud horses, one suited him every way except the color. The *color* of the one that struck his fancy was a *cream*.

In order to obtain a cream-colored colt from the bay horse out of his bay mare, he tried the following experiment: The cream horse was first used to tease the mare, which occupied some time. After putting blinders on the mare, the cream horse was taken out of the way, and the bay horse used to cover the mare, and not seen by her, but immediately returned to the stable, and the other led right in front of her, and was exposed to her view for some time. The result of the experiment was, in due process of time, the mare foaled a perfect cream colt, to the admiration and satisfaction of the owner, and his being the first one out of the many of the bay horse-getting of that color. S. W. J.

Sir Walter and *Beauty* were both imported from England by Mr. Fergusson. *Mayduke*, owned by L. F. Allen, Esq. of Buffalo, and to whom was awarded the first premium at the late Fair in Rochester, was got by Sir Walter and bred by Mr. Fergusson

THE PUMPKIN CROP.

Messrs. Editors.—The pumpkin may be justly called one of the best articles the farmer raises. There are many different varieties of this vegetable, but we think there is none equal to the old-fashioned, yellow, field pumpkin, for yield and goodness. For producing rich milk, it is one of the very best articles that can be given cows. Fed raw to hogs, they are useful by increasing the appetite. They will fatten young fall beef, and give fatting oxen a better start in the fall than either potatoes or turneps.

The cultivation of the pumpkin is thought by many farmers a secondary affair. Hence the idea that they can be grown only in extraordinary seasons, when everything is favorable. But that this crop can be successfully grown with corn, we have abundant evidence—having never raised them separately but one season. The pumpkin will grow, and generally succeed well in any soil that will produce the corn crop successfully. They like a rich, warm soil, with plenty of stable manure to feed on, and will stand drouth as well as any crop. But there are some difficulties to be overcome in getting the crop up and out of the way of insects, (bugs, &c.) We have generally planted them at the time of planting corn; but there is an objection to this early planting, and that is, they may be cut off by a late frost. This was the case the two last seasons—frosts occurring about the first of June. After the young plants are up, and the danger from frosts is past, then comes the "tug of war" with the bugs. The little striped bugs come in swarms, and will in a short time, if left to themselves, destroy the crop. But in this case, "prevention is better than cure," and to prevent their attacks we sprinkle the plants, as soon as up, with plaster, and find the "varmints" do not like to meddle with anything that is whited with this substance. In case the plaster is washed off by rain, we sprinkle again, and continue to do so as often as is necessary till the plants are out of the way of these "pestifirous critters." Our crop the past season was planted with corn, and had just got finely up, when, on the night of the first of June, they, with the corn, were cut down by frost. The corn started again, but the pumpkins were a "dead set" at that business. We had a few seeds left, and a few days after the frost we stuck them down between the hills of corn. They came up well, and we took care to keep them covered with plaster, so that the bugs did not trouble them much. The space covered by the vines could not have been much over an acre, yet we gathered from it six large cart-bodies heaping full. To escape late frosts, we think the farmer would do well to delay planting till about the first of June, in this climate. The spaces at which they should be planted is important, as the vines extend a good distance. If planted with corn, we think every alternate hill in every third row will be thick enough—the vines will then cover the ground. Care should be taken not to obstruct the vines after they begin to run. If weeds spring up, pull them out by hand, or cut them out with a hoe. We have been in the habit of raising pretty large crops of pumpkins. Seven or eight years ago, the *seed* which we saved from one crop measured *ten bushels*—which we sold to Mr. Leman Stone, the seedsman, at a dollar and a half a bushel. The seed saved from the last crop was two bushels, which sold readily at two dollars a bushel.

Now if any of your readears can tell a tougher pumpkin story than this, which, by the way, is no less *true* than *tough*, I shall be glad to hear it. L. D——d.

Derby, Conn. Jan. 22, 1844.

THE CUT-WORM.

Messrs. Editors—I see in the October No. of the Cultivator a writer says, that a "burdock leaf wound around the stem of a cabbage will prevent the *cut-worm* from destroying the plant." But the writer seems to think every farmer is not fortunate enough to have that plant on his ground. Where *burdock* cannot be obtained, perpaps a hickory leaf can, and that I think will answer every perpose. I have seen a hickory leaf repeatedly used, and never knew it fail to preserve the plant. If the leaf is put on narrow, and the plant set low, the worm will sometimes crawl up and cut off the plant above the leaf; but it is not common. Jacob Hitchcock.

Dwight Mission, March 20, 1844.

TO DESTROY NUT GRASS, &c.

Messrs. Editors—I see that a subscriber asks for information how to kill nut grass. If he means by it, that which has proved so great a curse on the coast of Louisiana, I would suggest as an experiment that a small plot of ground, say a square perch, be taken, and sow on it at the rate of 40 or 50 bushels of salt to the acre, and mark its effect, if it has that desired. I think that thousands of acres on both sides of the Mississippi would be reclaimed and be made even more fertile than at present. This much I can venture to assert: that it will not only kill that or any other grass that appears for some distance below the surface of the ground, but whether it will extend its salutary effects to the bulb or not must be proved by the experiment. It has this advantage: that it can be tried at but little expense.

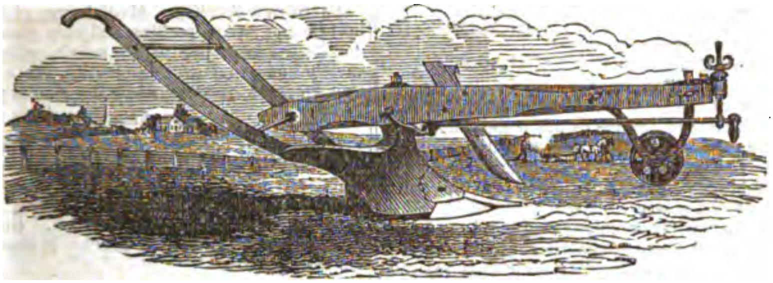
Acclimating Cattle.—Whilst I am scribbling, I might suggest to a Southerner who requests information in last year's vol. about acclimating the improved breeds of cattle, that my opinion of the great difficulty that occurs, does not arise so much from the change of food or climate as the state of irritation and fever that they are kept in by the incessant attacks of the horse flies and mosquitoes, so that they can get no rest by day or night. Now I think that may be obviated by sponging them in a steep of the leaves of the black-walnut, tomato vine, or many other strong and pungent leaves, or a solution of soot might answer, as any man in the south knows how repugnant the smell of soot is to the insect tribe, particularly to the mosquito. Mago.

Elementary Instruction in Chemical Analysis, by Dr. C. R. Fresenius, *chemical assistant in the Laboratory of the University of Giessen, with a preface by Professor* Liebig, *&c., published in New York by D. Appleton & Co.,* 8 *vo. pp.* 284.

This work comes before the public with the sanction of Professor Liebig, whose scientific labors in behalf of Agriculture are spreading far and wide, and doing much good. Since his attention has been turned in that direction, we find that other chemists, in Europe and in this country, are devoting themselves to the improvement of agriculture by means of the science of Chemistry. We wish them success, and hope they will continue their labors, until they awaken the whole agricultural community to the importance and dignity of the art they practice, and the necessity of improving it by the union of practical skill and scientific knowledge.

The work before us, however, is not strictly agricultural, though it has an indirect bearing on the subject. If, for instance, we want to analyze the soil of a field, an earthy substance found on a farm, or a metallic substance from beneath the surface, it directs the practical chemist how to proceed; how to prepare, and how to apply his tests. To the student of chemistry it is a treasure, and one of the best works of the kind that has of late issued from the press.

A neighboring farmer was lately expressing a wish that we had some chemist in this part of the State who would undertake the analysis of soils. I referred to Dr. Torrey, Dr. Chilton, and Issachar Cozzens, of New York, who were fully competent to the undertaking. But at present, the applications would be so few as to afford an insufficient compensation. If, however, the wish of my neighbor was more general, and the applications of farmers for the analysis of soils were sufficiently numerous, the expense could be reduced, and make it an object for a chemist to apply himself to the subject. The American Institute, in the city of New York, might designate a chemist for the purpose. Or if an agricultural school should be established, a professor of chemistry should be appointed, embracing mineralogy, geology, &c., in his course. To the student or the professor, the work of Dr. Fresenius would be highly valuable in the analysis of soils or other substances. A Practical Farmer.



THE BOSTON CENTRE-DRAUGHT PLOW.

Prouty & Mears' Self-Sharpening Patent, with new Gearing.

The advantages secured by the new gearing attached to this plow, are many and great. By drawing from back of the standard, the beam is secured from breaking; the plow is kept more firmly into her work, and a remarkable degree of steadiness is communicated, greatly increasing the power of the beam; while the facility of taking more or less land, and raising or lowering the point of draught to the greatest exactitude and without altering the back bends of the beam, by means of the elegant arrangement at the head of the beam, is truly surprising. The wheel, larger, and running on the outside of the beam, enables the plowman to carry over the last or clearing furrow with the greatest ease and precision, the wheel then passing up the open furrow on the left, quite independent of the single furrow-slice, from which the wheel, when placed under the beam, is continually running off.

The Boston Centre-Draught Plow, with the new gearing, may now be considered the "Ne plus ultra;" for as it is conceded on all hands, that *spade labor is the perfection of good husbandry*, the plow which comes nearest to that criterion must be the best for all purposes. The above engraving is the portrait of a plow that has been found capable of breaking up two acres and a half of sod ground in a day, with a team of three mules abreast; to turn it from a two horse plow to a three horse a breast plow, or *vice versa*, requiring the labor of a few minutes only. [See advertisement.] J. P.

Delaware, April, 1844.

SALTING AND CURING HAY.

Messrs. Editors—In the January number of the Cultivator, I find some remarks of yours on salting hay for stock, which are something different from my views of the subject. I suppose the difficulty with Mr. Cartwright was, that he depended too much on the salt, and that his hay was so much heated by being housed too damp, that it proved injurious to his horses; and that salt had little or no agency in its injurious effects.

Your statement, that salt may be properly used to prevent damp hay from being damaged, does not agree with my experience on the subject; for as far as I have observed, the salt increases the dampness, and should be sparingly used on wet hay as well as dry. Most farmers in the hurry of the hay making season, are apt to house too much of their hay in a green, damp state, and use salt so profusely as to injure it, and the stock that consumes it. Stock need but little salt in winter, and more than to make their food palatable, must have a contrary effect, and be eaten from necessity rather than choice.

My practice is to cure my hay properly and put two quarts of fine salt to a ton, taking care to have the lumps well pulverized. Curing hay in the cock, is the only right way, though most farmers are slow to believe it, and many have condemned the practice, because they have not patience to wait long enough. I know of no other way to cure clover without serious loss.

The above was written before I read a communication from R. L. Pell of Ulster county in your March number, and had not his theories in other respects reminded me of the observations you made on readers of agricultural papers in the February number, I might not have troubled you with this communication, but have adopted his plans in future. As it is, I think I shall let farmer A. try them first. Ten dollars worth of grass seed to an acre, would look large to farmers that do not usually sow over two; and using "straw, chaff, and refuse hay, to make compost, because it contains substances required in the animal economy to form muscle, blood, horns, hoofs, &c." would hardly answer for stock farmers. If Mr. Pell has made any considerable quantity of hay in that way, and fed that exclusively any considerable time to his stock, and not lost them, I think they must be of a different temperature from my neighbor's cow, that was killed by eating salted cucumbers, or my pigs that shared the same fate by drinking a pail full of swill with one pint of salt in it. Yours, &c. Daniel S. Curtis.

Canaan, N. Y., March 6, 1844.

TRANSFERRING BEES.

Messrs. Editors—It is with pleasure that I comply with your request, in giving a description of an easy mode of transferring bees. I do it any time of the day, although it is best when most bees are abroad. If there are any bees on the outside of the hive, sweep them off with a wing or feather. "Then take it from the stand and reverse it upon the ground; spread a sheet upon it with a string or hook fastened to it in the centre over the centre of the hive." Then place the empty hive where the old one stood, to receive the returning bees. "Then lay a double blanket or carpet, or some thick cloth so as to make it dark within; the corners are then to be thrown on the top out of the way of the hammer, which is now to be applied," (lightly but rapid,) "first upon one side and then upon another; they roar loud when the hammering commences, but in less than a minute their noise will abate, when the cloths should be raised by the string two or three inches, which they will immediately answer by their roaring in consequence of having more room; the hammering to be continued; the cloth to be raised slowly; and when it is raised six or eight inches in the centre, it can with perfect safety be raised from one corner of the hive, so as to see the motion and speed of the bees in leaving the combs and running up into the cloth. The raising of the cloth must be slow and gentle, governed as much as possible to the accommodation of the bees; in ten minutes time the cloth in the centre should be about two feet from the hive, by which time probably the bees will all be in the cloth; the hammering, however, is to be continued until they have all, or nearly all, left the hive, when the top cloth is to be carefully taken off, the sheet raised from the hive by the string or hook and spread open, the bees uppermost;" directly in front of the empty hive, the bees will soon take possession of it; guide the queen, if she can be be found, and disturb the bees gently with a feather. If there be any bees left in the old hive they will soon leave the combs by blowing in; sweep them off and put the hive where the bees cannot find it. The bees will work with renewed activity as if they had not been disturbed.

J. Wells.

Ulster Co., N. Y., April 9th, 1844.

In cultivating the earth, the condition of man's success is his industry upon it.

In raising domestic animals, the condition of his success is kindness and benevolence to them.

The Garden and the Orchard.

CULTIVATION OF FRUIT.—No. V.

THE PEAR.

The varieties of the pear are propagated by budding and grafting. The compactness of the wood renders the latter very successful. The stocks are raised either from seeds or suckers. But suckers do not always form good roots, and should only be employed when seedlings cannot be had. Seedlings are greatly improved by transplanting at one or two years of age; cutting off the lower extremity of the tap root, at the time causes them to throw out lateral ones, and renders their final removal from the nursery more easy and safe.

As a general rule, pears should be grafted or budded on pear stocks. On the apple, thorn and quince, their fruitfulness is much increased, but the duration of the life of the tree is greatly diminished. The same cause which produces an accumulation of the elaborated juices in the branches, and consequently an increase of flower buds, and of fruit, also prevents the proper diffusion of the sap and secretions, and shortens the life of the tree. There are however several advantages of employing such stocks in certain cases.

One of the most important of these is the production of dwarfs. These are chiefly desirable in small gardens and on very limited grounds. The quince stock is commonly used for this purpose. But as the quince is very liable to be destroyed by the borer, an improvement to remedy this evil has been introduced lately into practice. The quince is first grafted on a pear stock, and the year after the pear is grafted on the quince shoot thus produced, about an inch above the previous insertion. The wood of the quince is thus made to form a portion of the trunk, by which the circulation is obstructed, and increased productiveness and diminished growth produced. A method, adopted by French gardeners, of training these dwarfs so as still further to increase their fruitfulness and diminish the space they occupy, as well as to add strikingly to the neatness of their appearance, is what is termed *quenouille* training. A single stem is suffered to run to a height of about seven feet, leaving branches at regular distances from bottom to top, about eighteen inches lông. These are brought into a pendent position by bending them downwards as they grow, and confining them to this position by shreds of bass until they become fixed. The tree will throw out many more shoots than are necessary; these must be pruned off, leaving only the most vigorous. The circulation is impeded and their luxuriance checked, and consequently the production of fruit increased. Trees thus trained, need not occupy a tenth part of the space allotted to common standards.

Some varieties, too, are much improved in quality by grafting on the quince. This is the case with the Duchesse d'Angouleme and some others of great excellence, which are said to be of only second-rate quality when on pear stocks.

Pear trees, on account of their upright, pyramidal growth, require much less space than apples. Twenty feet distance is sufficient in all cases.

The following are some of the best varieties of the pear, which have either originated in this country, or have been proved here and found adapted to the climate.

SUMMER FRUIT.

Amire Joannet. Fruit quite small, good but not first rate; a great bearer, ripening often two weeks before wheat harvest. Chiefly valuable for its early maturity. The *Primitive* or *Little musk*, is smaller, inferior in flavor, and about a week later, but in other respects resembles the Amire Joannet.

Madeleine. A week or two later than the preceding; of good size, and delicious melting flesh and fine flavor. A sub-variety, slightly inferior in quality, has less of the peculiar greenish color of the skin, and is destitute of the pleasant and just perceptible degree of acid which mark the true variety.

Skinless. Ripens the early part of 8th month, (Aug.) fruit medial size, sweet, juicy and good, hardly first rate, but its good qualities remain unchanged through all seasons, and it is a great and constant bearer.

Dearborn's Seedling. Medial size, of fine and delicate texture and flavor, melting and very good. It ripens the middle and latter part of 8th month, with the *Julienne*, a variety not equal to it in quality, but excelling in the abundance of its crops while the tree is yet very young.

AUTUMN FRUIT.

Washington. Ripens soon after Dearborn's Seedling, of medial size, of sweet and delicious flavor. Decidedly a first rate fruit.

Summer Bon Chretien (or *September.*) Fruit large and beautiful, very sweet, juicy and rich. Considered by many as equal to the best of pears. It ripens nearly with the Washington.

Seckel. Well known as a fruit of unequalled richness of flavor, and though small, and the tree of slow growth, it should be in every collection.

Urbaniste. Large, excellent, ripening late in autumn, too sour for some palates, but of decided excellence.

Virgalieu. Known as the *St. Michael* of New-England, the *Butter pear* of Pennsylvania, and by more than twenty other names. It is erroneously called the Virgoulouse by some writers, but the latter name belongs to quite a distinct fruit. In most parts of New-York it is well known as a fruit of great excellence.

WINTER FRUIT.

Little attention has been given in this country to the cultivation of winter pears, and their quality and adaptation not thoroughly ascertained. The *Passe Colmar, Easter Beurre,* and some others, however, have been found very fine. But much care is required in ripening, otherwise they prove worthless. They are to be kept in a cool place till near the time of maturity, and then brought into a warm room, with a temperature as high as 70 deg. Fah. when they soon acquire a fine flavor. Late autumn and winter pears of first quality have been rejected by some cultivators as unfit for eating, from the simple fact that they were allowed to ripen in the cold.

The effects of temperature and other external influences, on many varieties of the pear, render their quality exceedingly variable with the seasons. The *Frederick de Wurtemburg* has fruited for a few years past in Western New-York, and was generally considered fully equal if not superior to any foreign variety; but the past season proving unusually wet and cold, the fruit, though fine in appearance, was found to be tasteless and worthless. But when taken from the tree and ripened in a warm room, the quality proved excellent. This expedient, however, will not always answer, as in case of the *Bezi de la Motte* and some others, which are sometimes delicious, but usually of no value whatever. Several instances were given by the late Robert Manning in Hovey's Magazine, of pears which one year were melting and high flavored, and the next so insipid as to be at once rejected as perfectly worthless.

Those varieties which continue unchanged in their excellence, through all weathers and seasons, as the *Madeleine, Skinless, Summer Bon Chretien, Seckel, Virgalieu,* and others, possess not only eminent advantages, but give more promise of general adaptation to the varying circumstances of the different localities of the country.

The pear tree is of longer life than most other fruit trees. In the Genesee Farmer, vol. 3, p. 38, is a notice of a tree probably 200 years old. The celebrated tree probably still standing at the corner of Third Avenue and Thirteenth street, New-York, in a bearing state, was planted by Governor Stuyvesant more than 200 years ago. The only formidable *disease* to which the pear is subject, is the *Fire Blight.* This generally makes its appearance during the early part of summer. The branches affected by it suddenly turn black and die. If the disease is not checked, it frequently, but not always, extends and destroys the whole tree. It has been ascribed to different causes. Observations prove that, at least in some instances, it is prodnced by a small insect, (*Scolytus pyri* of Peck,) which eats a small circular ring round the branch beneath the outer bark, and thus destroys it. The insect where discovered, has been some inches below the affected part. But sometimes no insect can be found. The writer has carefully stripped diseased branches, and even whole trees of their bark, and on the closest examination has detected nothing. This absence of external injury has led to another opinion, that fire blight is caused by a too rapid growth producing a superabundant flow of sap in the branches, and consequent surfeit. In proof of this, the fact is adduced that the most rapid growing trees are most subject to this kind of blight. But as such a cause would be an anomaly in vegetable physiology, it is far more probable that it is produced by injury from the cold of winter, which would of course chiefly affect the largest and most succulent growth.[*] But whatever may be the cause, nearly all agree in the remedy. Professor Peck, who first described the insect, which he considered as the only cause, directed that the affected branches be immediately cut off at some distance below, and burnt, to destroy the insect. John Lowell states, that by steadily pursuing the system of cutting off the limbs many inches below the apparent injury, and burning them, the *insects have been extirpated from his estate*. This remedy has succeeded perfectly in other instances. It has succeeded also where the disease was evidently not caused by an insect. But it must be immediately applied. All half-way efforts will be useless. J. J. T.

CULTURE OF THE STRAWBERRY.

The production of this delicious and healthy fruit is so easy, and where grown for sale, so profitable, that it is surprising it is not found in every farmer's garden, where a small space devoted to it would ensure a supply of fruit for a long time. Any soil suitable for other vegetables, will produce strawberries, but the best soil is a deep friable loam. The best time for transplanting is in the autumn after the vines have ceased bearing, but they will succeed if planted early in the spring. Dr. Bayne, in that excellent Journal, "Hovey's Magazine of Horticulture," gives the following directions for the culture of this fruit, which can scarcely fail of success; though we may add, that if the soil is suitable, and the plants are kept clear of weeds, and the runners stopped, there will usually be little doubt about the bearing, whatever may be the mode or distance of planting."

"For the reception of the plants select a loamy or sandy soil; spade in a thick layer of strong unfermented manure, and thoroughly pulverize the earth; mark off the ground in rows three feet asunder, then select the strongest plants, and set them 12 inches from plant to plant in the rows. Permit the runners to take possession of every alternate space; observing to eradicate weeds and grass throughout the season. The runners from the other space must be carefully destroyed throughout this time. By this arrangement of the plants, you will have your patch in beds three feet wide, leaving a vacant space or alley three feet wide for the gatherers to walk in. After the fruit season is over, the alleys or spaces unoccupied by the plants, may now be thoroughly worked for the reception of bearing plants for the next year. The plants of the previous year must be spaded under, taking care to leave sufficient plants in the original rows, for the production of bearing vines for the next crop. By this simple mode of reversing the beds, a patch upon the same ground may be continued productive for many years."

In speaking of the finest and most productive varieties, Dr. Bayne adds:—"I would recommend Hovey's Seedling, Female Hudson Bay, Large Lima, Bishop's Orange, Bayne's Prolific, as being splendid varieties, and abundantly prolific. I believe every flower on the above varieties are female, and if planted separately, will fail to yield abundantly; but if planted in proximity with the Melon, or Southborough Seedling, every flower will be impregnated, and will produce enormous crops."

On the sexual difference of the flowers of the strawberry, first brought into notice by Mr. Longworth of Ohio, and received with much favor, as accounting for the fertile and sterile beds of this plant; the conductor of the Magazine dissents from the believers in such sexual difference, and in some comments on the paper of Dr. Bayne, states his opinions at large. We leave room for only the following extracts; and the remark, that in planting strawberry beds, the intermixture of what are called male and female flowers, can do no no hurt, and will ensure fertility.

"That there may be *fertile* and *sterile* beds is not denied; but the cause of their sterile character is to be sought, not in a naturally defective organization of the blossom, but rather in the mode of cultivation applied to the plants. It is well known that all flowers have a tendency to become double, and when this takes place, it is also known that the stamens are transformed into petals. Now somewhat such a change undoubtedly takes place in the strawberry, when under a high state of cultivation, or forced by too much nourishment to extend its runners too far. Repletion is fatal to the perfection of the blossom, though it may produce apparently a vigorous growth. * * * * Such has been the management of many beds of our seedling. We know of repeated instances where the beds of *last year*, owing to their entire unproductiveness, were given up as unworthy of any care, which the past season, produced immense crops, though overrun with weeds, and this, too, without being in the vicinity of any other kind. Many such experiments have proved conclusively, that cultivation alone creates fertile or sterile plants."

We think Mr. Hovey has stated the case rather too strongly. Cultivation no doubt does much, but we cannot think does every thing. We have had in a small meadow devoted to fruit, and which until last year has not been plowed for a long time, two patches of the common field strawberry, both of which blossomed freely every year, but while one of them always bore freely, the other never produced a solitary berry. In this case there was no mixture of the flowers, and all were sterile; while the patch of mixed blossoms was productive. The cultivation with both patches was precisely the same; and therefore this result must be attributed to some other cause.

RYE INJURIOUS TO ORCHARDS.

MESSRS. EDITORS—In 1839, I plowed in a twenty acre field of rye for manure, when it was about developing the tassel, with good success. I would not have it understood that the grain was sowed for that purpose, as there are many substances less expensive, that might be used to greater advantage, but to save a young orchard, growing in the same lot, from *destruction*. During my absence, my man through mistake, sowed rye instead of wheat; and on my return, I was obliged to turn it under, having once injured an orchard so materially by cropping it one year with rye, that it did not bear fruit in 5 years after, and still feels the effect of the injury.

Pelham, Ulster Co., Feb. 19, 1844. R. L. PELL.

APPLES.

MESSRS. EDITORS—The object of this communication is to suggest some reasons why this species of fruit should receive increased attention from our farming population. More care needs to be bestowed upon the raising of the *choice kinds* of apples. The demand for these is generally far beyond the supply. They are needed both for consumption at home, and shipment abroad. Choice apples, hand picked and properly barreled, meet a ready sale, and at fair prices, whether needed for domestic use or for exportation to Europe. The greatest facilities for such exportations are now afforded by steam ships, packets, and other carriers of freight, and it is well known that in European countries, particularly England, American apples are more thought of, and command higher prices than those of transatlantic growth, and prices which do not fail to yield to the shipper, due returns of profit. Hence it is easy to see that the choice article need only to be transported in good order and condition to our commercial emporiums, to attract immediate attention and command a ready sale. And indeed, it need only be known, that farmers have on hand these choice kinds of apples, fit either for family use or for shipment to foreign ports, and applicants will soon make their appearance, and the full value be obtained for the article. But while good apples are thus readily disposed of at fair prices, and are therefore claiming increased attention from every farmer who has a proper regard for his own interests and the wants of the public, common ones also are quite sure to meet with a ready sale and at fair prices. Larger quantities of these should be raised, for larger quantities are needed. In this section of the State, it is not difficult to make contracts for the article, sometimes to be delivered when called for and even to be taken from the trees. Here then is inducement for the care of the farmer, and besides these apples are found as profitable as potatoes for feeding out to stock; and orchards properly planted and well trimmed, will yield good crops of potatoes and other products. I append to this article, "Six reasons for planting an orchard," presenting the subject in a different light, and commending it even to the moral feelings as well the judgment and common sense of every farmer. A. OF THE NORTH.

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[*] The opinion that it is caused by the fruit rotting on the branches is sufficiently disproved by the fact that trees which have never borne are liable to it. For an instance of this, see Genesee Farmer, vol. 3, p. 273.

SIX REASONS FOR PLANTING AN ORCHARD.

"1. Would you leave an inheritance to your children? plant an orchard. No other investment of money and labor will in the long run, pay so well.

2. Would you make home pleasant—the abode of the social virtues—plant an orchard. Nothing better promotes among neighbors a feeling of kindness and good will, than a treat of good fruit often repeated.

3. Would you remove from your children, the strongest temptation to steal—plant an orchard. If children cannot obtain fruit at home, they are very apt to steal it; and when they have learned to steal fruit, they are in a fair way to learn to steal horses.

4. Would you cultivate a constant feeling of thankfulness towards the great giver of all good—plant an orchard. By having constantly before you one of the greatest blessings given to man, you must be hardened indeed if you are not influenced by a spirit of humility and thankfulness.

5. Would you have your children love their home—respect their parents while living, and venerate their memory when dead—in all their wanderings look back upon the home of their youth as a sacred spot—an oasis in the great wilderness of the world—then plant an orchard.

6. In short, if you wish to avail yourselves of the blessings of a bountiful Providence, which are within your reach, you must plant an orchard. And when you do it, see that you plant good fruit. Don't plant crab apple trees, nor wild plums, nor Indian peaches. The best are the cheapest."

ON GRAFTING.

MESSRS. EDITORS—As the season for grafting approaches, it may be useful to communicate to your numerous readers a very simple suggestion for ensuring the life and vigorous growth of the scion, and consequently the rapid renovation of trees and orchards. The rule is this. Always cut off the stock to be engrafted not more than one inch above a strong lateral shoot.

This shoot should be left growing until the following spring, when the grafts will have acquired strength enough to dispense with its aid. The observation of several years has shown the success of this simple method, and a little reflection will show its conformity with the physiology of trees, and the mode of their growth.

The sap, as is well known, rises in an imperfect state through the solid wood of the tree. In this state it contributes nothing to its growth. But when it has been *elaborated* in the leaves, it descends between the bark and the wood to form the new growth. The yearly increase is shown by the annual circle of new wood thus formed. Hence the importance of having a vigorous *leafy* branch rising from the head of the stock which will *send down* from its leaves a full supply of the thick elaborated sap, to *nourish* the *young scions* and to heal and cover the wound upon the stock.

This principle is prettily illustrated in the ordinary pruning of trees. Where a stump is left the sap scantily exudes around the bark, and the efforts of nature barely suffice to heal the edges of the wound leaving the woody part bare. But if the limb is cut off close down to the bark from which it springs, the wound being then, as I may say, within the full current of the descending elaborated sap, is soon wholly covered and disappears.

These facts respecting the nature of the circulation
trees and plants will also explain why the grape cann
be engrafted with success until the leaves are partia
expanded. The first flow of the watery sap which ri
through the wood is excessive, and prevents the unior
the graft with the vine. But when the opening lea
expose a surface for the evaporation of the superflu
water, the sap is elaborated and fitted to form a union
tween the old and new wood.

The above suggestion may from its simplicity app
unworthy of illustration so particular. But the proc
of bleeding is also very simple, yet it is connected w
all that is wonderful in the laws of the circulation of
blood. The value of an operation is rather enhanced
its simplicity; and it is always a pleasing as well a
useful exercise of the mind to trace the connection
tween the beautiful truths of natural science, and ma
of the most easy and ordinary practical operations.
theory of one operation, well understood, will ren
many others intelligible and interesting. This rule m
have been observed in an imperfect and accidental w
but I have no where seen it clearly stated, and the obs
vation of engrafted orchards will show that it is not de
nitely understood. On the contrary, grafters generally
lect a clear place to cut off the stock, either for convenien
in working, or from the mistaken idea that the scions
nourished only by the rising sap, and that laterals wo
weaken their growth; while the actual result is, that th
are prevented from dying under these circumstances, o
by an effort of nature to heal the wound upon the stoc
and an active growth takes place much more slowly th
when the side branch is left. E.

FLOWERS.

We hope our fair friends will not, at this season, ove
look the delightful employment of cultivating flowe
Every one may have a few, and the taste once acquire
it will not readily be relinquished. A woman destitu
of a love for flowers, seems to us a mistake of natur
The delicate, the fragile, and the beautiful, should ha
sympathies with all in nature that possesses the same qu
ities. The time spent on their cultivation is in no sen
of the word wasted. They contribute to our pleasure
they add to our knowledge of nature; they unfold to
the mysteries of the beautiful, and tend to humanize a
elevate the mind. To us a woman never appea
more truly in her sphere, than when she divid
her time between her domestic avocations, a
the culture of flowers. If our fair friends wish to ha
the flush of health on their cheeks, and the rich rose-le
tint on their lips, let them spend an hour or two each da
in the open air, inhaling the fragrance, while employe
in training and cultivating their flowers.

OLD PEACH STONES.

A writer in the Massachusetts Plowman relates a re
markable case of the retention of the vegetative principl
in peach stones. Some forty or fifty years ago, ther
stood beside an old well, two or three peach trees. Tw
years since, the well, which had much fallen down an
was covered with briars, was removed: when to the as
tonishment of the owner, ten or twelve peach trees cam
up where the well had stood. He thinks the stones (o
seeds,) from which these trees came, were produced a
least thirty years ago.

SALT FOR ASPARAGUS.

Our correspondent "Jonathan," says—"The application of salt on Asparagus, must be made with caution, as he once much injured a fine bed by the *experiment*."

BEST WAY TO KILL CATERPILLARS ON FRUIT TREES.—With a swab fastened on the end of a pole, and dipped into *strong lie*, swab out the nest. The lie will kill all that it wets. C. R.

EXTRAORDINARY SHEEP.—A shearling (yearling) Leicester weather has lately been killed in England which weighed 46 lbs. per quarter, and two others of the same breed and age that weighed 42 lbs. per quarter each.

Domestic Economy.

CHEESE MAKING.

A subscriber who makes a large quantity of cheese, has requested to be informed how some of the celebrated English cheese is made. After having looked over all the principal papers on the subject within our reach, we have concluded we cannot give the information sought, in a better form, than by presenting an extract from the "Report of a Gloucestershire Vale Farm," published by the "British Society for the Diffusion of Useful Knowledge," in the third volume of "Husbandry." The occupant of the farm is Mr. Drinkwater S. Hayward, whose management generally, we should think from the Report, is of the best character.

Management of the Dairy.—It is acknowledged by every one at all acquainted with the subject, that the quality of cheese does not depend upon the superior richness of the soil or the fineness of the herbage; for cheese of the first quality is often made from land of inferior description, and from herbage of a coarse nature. Nor does the quality of the cheese depend on the breed of the cows, for cheese of the best quality is made from the milk of cows of all the different breeds in the country; we think it principally depends on the management of the cows as to their food, &c. of the milk in converting it into cheese, and of the cheese, till it is fit for market.

The following circumstances are injurious to the quality of cheese; allowing the cows to get rank or ill-flavored *grass or hay*, these conveying a bad flavor to the milk *and cheese*; allowing the cows to run and heat themselves; driving them far to be milked, which makes the milk froth much in milking; carrying the milk from the place of milking to the dairy; and allowing the milk to remain long after it is milked, before it is set with the rennet.

The greatest dependence is upon the dairy maid; and the chief art of making cheese of the finest quality, lies in her management. The superintendence of the dairy invariably devolves upon the farmer's wife. Mrs. Hayward attends to every minute circumstance in this department, and the following, is a report of the information she has obligingly furnished respecting the whole economy of the dairy of this farm.

The management of a dairy should be conducted with the greatest regularity. Every operation should be performed precisely at the proper time. Either hastening or delaying the execution of it, will cause cheese of an inferior quality to be made of milk from which the best may be obtained. A dairy maid is selected for skill, cleanliness, and strict attention to her business. Her work commences at four o'clock in the morning, and continues without intermission till bed time.

The dairy house should be kept at a temperature of between 50 and 60 deg.; and the dryer it is, the better, as both the milk and cream retain their sweetness much longer in a dry than in a damp air. Every time therefore, the dairy is washed, it is dried as quickly as possible.

The milkings should be as near as possible at equal divisions of the day, commencing at about four o'clock in the morning and three in the afternoon. The milking should be finished in an hour. The dairy maid sees that the milkers do their duty, and that all the cows are milked clean; for the milk that comes last is richest; and, besides, if the cows are not clean milked, there will be a gradual diminution of the milk, perceptible daily; for these reasons, the greatest care is taken that the cows are clean milked.

The cheese tub being put in its place in the dairy, the ladder is put across it, and a large thin canvass cloth covers the whole tub and ladder, to catch any of the milk that may drop from the pail, and to prevent dirt from falling into the tub. Above this, and upon the ladder, is placed a hair cloth sieve, through which the milk is strained. If the milk should not be of the temperature of 85 deg., a portion of it is put into a deep tin kept for the purpose, and placed in a furnace of hot water in the wash house, by which means the whole is warmed to the proper degree. It is of the utmost moment to attend to this, for if the milk is not warm enough when the rennet is put into it, the cheese will be 'tender,' and will bulge out in the edge, which spoils its appearance, and a great quantity of sediment of small curd will be found in the whey, which is so much of the curd lost. If, on the other hand, the milk is too warm, it will cause the cheese to 'heave' or ferment, which injures both its appearance and quality. When the milk is sufficiently warm, the coloring matter, (if any is used) and the rennet are put into it, after which, the tub is covered with a woolen cloth for at least an hour. Rennet or runnet is made from the stomachs of calves, here called 'vells.' Mrs. Hayward never uses them till they are twelve months old; for if they are not old, the rennet made from them causes the cheese to 'heave' and become full of 'eyes' or holes. She prepares the rennet from them by adding to every six vells, two gallons of brine and two lemons. The lemons do away with any disagreeable smell, and give the rennet sweetness and agreeable flavor. Twenty or thirty gallons of it are made at a time, as it is found to be much better when made in large quantities. It should never be used till it has stood for at least two months.

When the curd is sufficiently firm for breaking, it is gently and slowly cut with a three bladed knife down to the bottom of the tub, (the knife being about fourteen inches long,) both ways, or at right angles and around the sides of the tub. The cuts should be about an inch apart. When it has stood five or ten minutes, to allow it to sink a little, and the whey to come out as clear as possible, some of the whey is dipped out of it with a bowl, and the curd is cut a second time with the three bladed knife, very slowly to begin with; for if the cutting is done hurriedly, a great quantity of sediment of very small curd will pass through the seive and be found in the whey, and there will also be an increase in the quantity of whey butter, which should have been in the cheese, and the value of the butter thus obtained will not compensate for the loss of credit the cheese will sustain from the abstraction of the butter from it. The cutting being therefore performed very slowly at first, and with the strokes of the knife at considerable distance from each other, is gradually quickened, and the strokes are taken nearer and nearer every time. At last, one hand, with the skimming dish, keeps the whole in motion, turning up the lumps suspended in the whey, while the other, with the knife, is in constant motion, cutting them as small as possible; and this operation is continued till no more lumps are brought to the surface, and the whole mass is reduced to one degree of fineness. This process may occupy a quarter of an hour.

The curd is now allowed to stand a quarter of an hour, and being thus sufficiently settled, the whey is taken from it with the bowl, and poured through a very fine hair sieve, placed over the whey leads. When the greatest part of the whey has been separated from it, the dairy maid, folding over a portion of it, and beginning at one corner, goes around the tub, cutting the curd into lumps, and laying them on the principal mass, by which operation the mass is carried all round the tub, and most of the remaining whey escapes between the cut fragments as they lie and press upon each other. From time to time the whey is taken from the tub, and put through the seive into the whey leads.

The curd is then put into vats (hoops) and pressed down with the hands; the vats being covered with cheese cloths about one yard and a quarter long, of fine canvass, are placed in the press for half an hour, when they are taken out and the curd cut into thin slices, and put into a mill fixed on the top of the tub, which tears it into very small crumbs, as small as vetches. This mill, which is of Mr. Hayward's construction, is a great improvement in the making of cheese, not only as it saves the dairy maid the most laborious part of the process, that of squeezing and rubbing the curd into small crumbs with her hands, but as it allows the fat to remain in the cheese which the hands squeeze out.

In its pulverized state it is customary with most dairy maids to scald the curd with hot whey; but Mrs. Hayward considers cheese richer when made without scalding the broken curd, this washing the fat out of it. She therefore, without scalding it, puts it into the vats and presses it closely together with the hand in filling them. In making the double Gloucester cheese, particular care is taken to press any remaining whey from the curd as the vats are being filled, and they are filled as compactly as can be done with the hand, being rounded up in the middle, but just so much so as that the whole can be pressed into the vats. Cheese cloths are then spread over the vats, and a little hot water is thrown over the cheese cloths, which tends to harden the outside of the cheese and prevent it from cracking. The curd is now turned out of the vats into the cloths, and the vats being dipped in the whey to wash away any crumbs of curd that may cling to them, the curd inverted, and with the cloth around it, is again put into them. The cloths are then folded over and tucked in, and the vats, as they are filled, and put into the press one upon another. The bottoms of the vats are smooth and a little rounded so as to answer the purpose of cheese boards, which, therefore, are only wanted for the uppermost vats, or when the other vats are not quite full. The vats are allowed to remain under the press about two hours, when they are taken out and dry cloths are applied, which with double Gloucester cheeses, should be repeated some time in the day.

Salting, and Salting Presses.—The vats, when the clean cloths are given, as just mentioned, are changed from the single press to the one next to it, and placed in it, one upon another, as before. They remain in this press till the cheeses are salted, when those made in the evening, take the place in the press of those made in the morning, and those made in the evening, are in their turn displaced by those made the following morning; the cheeses of the last making, being always placed lowest in the press, and those of the other makings, rising in it according to the priority of making.* The same order is observed in the other two presses, the last, or newest making in each, being lowest, and each making have next above it that which was made last before it. The cheeses pass through the three presses in this order, advancing a step in their progress at each 'meal' or making, till, at last, in four or five days, they come out of the presses and are put on the shelves. They are generally salted at the end of twenty-four hours after they are made, though this is done by some at the end of twelve hours. The salting should never be begun, till the skin is all closed, for if there be any crack in the skin of the cheese at the time of salting, it will never close afterwards. The salting is performed by rubbing with the hand both the sides and the edge of the cheese with finely powdered salt. The cheese, after this, is returned to the vats and put under the press, care being always taken according to what has been said, to put the newest cheese lowest in the press, and the oldest uppermost. The salting is repeated three times with the single, and four times with the double Gloucester, twenty-four hours being allowed to intervene between each salting. After the second salting, the cheeses are returned to the vats without the cloths, that the marks of the cloth may be effaced, and the cheese may get a smoothness of surface and 'keenness of edge,' which is a peculiarity of Gloucestershire cheese. The double Gloucester remain in the presses five days, and the single, four; but in damp weather, they should remain longer. The quantity of salt generally used, is about three pounds and a half, to a hundred weight of cheese. The size of the double Gloucester cheeses is commonly about five to the hundred, or twenty pounds each, and that of the single, about eight to the hundred, or twelve and a half pounds each.

The Cheese room.—When the cheeses are taken from the salting presses, they are put on the shelf in the dairy for a day or two, where they are turned once in twelve hours. They are then taken to the cheese loft to make way for the new ones. In the cheese room, either on the floor or on the 'cheese rack,' they are turned once every day; and in general, in a month from the time they were taken out of the vat, they are ready for cleaning, which is done by scraping them with a common knife. The cheese, if intended for the London market, as is generally the case, is rubbed, after being cleaned, with a paint of Indian red or Spanish brown, or a mixture o both and small beer. It is rubbed on with a woolle cloth. After being painted, it is turned over twice week, and oftener if the weather is damp; and as soon the state of the paint will permit, the edge of the chees and about an inch of each side, is rubbed hard with cloth, at least once a week.

Characteristics of the true Gloucester.—The marks true Gloucester cheeses, are 'the blue coat' which aris through the paint on their sides, and which is a su sign of their richness and sweetness; the yellow, gold hue of their edges, a smooth, close and wax-like textur a very mild and rich flavor; not crumbling when cut i to thin slices, nor parting when toasted, with the oi matter they contain, but softening, without burning. cheese has been soured in the making, either from bei too long in hand, or from want of attention in scaldi the utensils, nothing will cause it to assume the blue co If the curd is salted when ground down before being p into the vats, the salt has the effect of giving a skin each of the particles of curd it comes in contact wit which prevents them from intimately uniting; and though the curd may be pressed together and make go cheese, yet it never becomes a smooth, close, solid ma like that which is salted after it is made; but is of a loo texture, and crumbles when cut; and although it may equally fat, yet in toasting, the fat melts out of it, and t cheesy part burns. The skin of the cheese, too, is n tough and solid, but hard and brittle, and when examin ed, seems to be formed of many irregular portions.

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* From this, we infer that a beam press is used, into which several cheeses may be put at once, the older ones which require the greatest pressure being put nearest the fulcrum.

PRESERVING EGGS.

At one of the Farmers' Meetings in Boston last win ter, Col. Thayer gave his mode of preserving eggs, a follows: Take a quart of salt and three quarts of lim and add water till the whole, stirred up and dissolved, of the consistency of cream; then put in the eggs.

The Mass. Plowman gives the following from a She burne correspondent:

To one peck of lime put one pound of alum, and mak a solution as for white washing. Put the tip end of t egg down to prevent the yolk adhering to the side, the fill up the vessel that contains the eggs with the solutio to cover them completely. In a few days the lime wi become dry, then fill the cask with sea water, or bri of the same strength, to be kept moist.

A correspondent of the Prairie Farmer, says a lady his acquaintance colors wool and woolen goods, blu with *purslane*, a common garden weed—that the la assured him it was equal in every respect to the best i digo blue.

HARD MILKERS.

It is well known that some cows milk so hard that t labor is so severe as to exceed the value of the mi when obtained. We have seen several notices of la on this subject, in the papers, from different writers, a different methods recommended of obviating the evi One has proposed the introduction of a keen narrow bl ded knife, to enlarge the opening of the teat, and sa the practice has been entirely successful. Another sa he made some pine plugs and crowded into the teat hole and let them remain about two weeks, except when mil ing, and afterwards had no trouble with the cow. A other recommends the insertion of a small quill, for t double purpose of enlarging the opening and drawing o the milk without using the hand; the quill to be with drawn at each milking.

Now we should fear the result of this tampering wit the teat, the more so as a few years since we knew a val uable cow, not a hard milker, that lost her bag from a inflammation caused by the introduction of a quill for th purpose of drawing off the milk, by an ease-loving bo milker. The operation was repeated but a few times yet the result was fatal to the udder. Using a knife w should apprehend, would allow the milk in most cases t flow out as fast as collected; and should expect from th 'pine plug' either a similar result, or an inflammation.

FRUIT TREES.

THE subscribers are now ready to receive orders for superior Trees, viz: Apples, Plums, Pears, Cherries, Peaches, &c. &c., from their new nursery. Trees are all warranted in a healthy condition, and true to their sorts. Orders are entered on the order book, to be forwarded as soon as practicable in the fall. Orders respectfully solicited, and will receive prompt attention. **WILSON, THORBURN & TELLER.**

☞ A liberal discount made to those who purchase to sell again, or by wholesale.

Orders left with **WILLIAM THORBURN**, Seed and Agricultural Repository, No. 38 Broadway, Albany, will be promptly attended to. *Albany, April* 1, 1844.—2t.

POUDRETTE—A NEW ARTICLE.

IMPROVEMENTS of such a nature have been made in the manufacture of POUDRETTE, by the *Lodi Manufacturing Company*, near the City of New-York, as to warrant the opinion that it is the *cheapest and best Manure* now known and in use. By experiments which have been made, it has been proved that its *fructifying powers have been greatly increased, its operation upon vegetable matter quickened.* It will obviate the effects of *severe drought*, and will retain its fertilizing qualities much longer than any Poudrette heretofore made. It will ripen Corn in 65 days fit for use. The price will be reduced the following season as follows: At the Factory it will be sold in bulk at the rate of 25 cents per bushel. It will be delivered at any wharf or place in the City of New-York, *free of cartage and other expense*, at the rate of $2 for one barrel, which contains 4 bushels; $3,50 for 2 barrels; $5 for 3 barrels, and $10,50 for 7 barrels, and at the rate of $1,50 per barrel for any greater quantity. Persons wishing the article will please give notice in due season, as the orders will be fulfilled in the order of time received. The Company was incorporated in February, 1840, for 30 years by the Legislature of New-Jersey. No liability to stockholders beyond their subscription of $100 per share. A *few shares of what* is called the "*Reserved Stock*," remain to be be *subscribed* for, which the Company guarantee shall pay a *dividend of 30* bushels of Poudrette a year on each share, as authorized by the Charter. A pamphlet containing instructions for its use, and all other necessary information, is in preparation, and will be sent *gratis*, to any person applying for it, post-paid. Agents have been or will be appointed in most of the important places in the Northern and Eastern States, to whom persons may give orders. Where there is no agent, please direct to "*The President of the Lodi Manufacturing Company*, No. 43 Liberty-street, New-York," and it shall receive immediate attention. Please refer to the Letter of Mr. Kentish, in the March number of the CULTIVATOR. New-York, Feb. 15, 1844.

FIELD SEED STORE.

THE subscriber continues to keep constantly on hand at his long established Seed Store, a supply of the best quality and kinds of Field Seeds, viz:

Red Clover, of the large and small growth,
Timothy, *Red Top*, or *Herd's Grass*, *Orchard Grass*,
Lucerne, or *French Clover*, *White Clover*,
Trefoil, *Kentucky Blue Grass*, &c. &c.

Also, the different varieties of Wheat, as White Flint, Red Chaff, Mediterranean, and English—for sale in lots to suit purchasers at moderate prices, by **ISRAEL RUSSELL**,
Feb. 1, 1844.—mar. oct. 26 Front-street, New-York

N. B. The following description of some superior English Wheat sown in the month of October last, the product of which will be for sale at the above Store, is given by a respectable English farmer in the State of New-Jersey, who sowed about eleven bushels, a sample of which can yet be seen. "It is called the Uxbridge White Wheat, and is the most noted Wheat they have in England, it being of fine quality, always commands a high price, as the flour is used by the biscuit bakers in London. It is great for yielding, and puts out a much larger ear than any wheat I have seen in this country. I saw when in England, three years ago, on my brother's farm in one field, 13 acres, that yielded 40 bushels and upwards to the acre. It grows very strong, and is not liable to be laid by heavy rains. I will warrant it free from any soil whatever. I did not see in the eleven bushels, a particle but Wheat; and I have sown it on Clover seed, on purpose that there shall be nothing but Wheat; and I will put nothing in the barn with it, so as to put it beyond the possibility of a doubt of its having any thing in it or getting mixed with other Wheat, which through carelessness is often the case. I have grown a great deal of it myself in England, and know from experience that for yield and quality, there is no Wheat to compete with it. Its general weight is from 64 to 67 lbs. per bushel. It is smooth chaff, and easy to thresh, which is not always the case with smooth chaff Wheat."

PROUTY & MEAR'S PATENT CENTRE-DRAUGHT SELF-SHARPENING PLOWS,

FITTED up with new gear complete of six different sizes. Also, *Prouty & Mear's Sub-soil Plows*, of three sizes, viz: No 1, for one horse, $8; No. 2, for two horses, $10; No. 3, for three or four horses, $12. For sale wholesale and retail, by

D. O. PROUTY,
Seed and Implement Warehouse, No. 176 Market-st.
Philadelphia, March 18, 1844.—2m.

ALBANY SEED STORE AND AGRICULTURAL WARE-HOUSE—No. 38, BROADWAY.

THE proprietor is now receiving from his seed growers, a full and complete assortment of American Garden Seeds, all of which are selected with care, being grown from the best varieties of vegetables to be found in the country; also European Seeds, Plants and Flower Seeds from the best establishments in Europe and America.

Fruit Trees of all the choicest kinds furnished to order at the lowest market prices, and warranted true as represented. Agricultural and Horticultural Implements of American and European manufacture. Also, the New England Ploughs, Cultivator Ploughs, Root Slicers, Corn-Shellers, Straw-Cutters, &c. Those who wish to purchase or examine are respectfully invited to call Albany, March 15.—2t. W. THORBURN, Seedsman.

BAILEY & RICH'S SMUT MACHINE.

MANUFACTURED and for sale by J. T. E. & C. RICH, Shoreham, Vt. Patented in 1841, much improved in 1843.

These Machines are made wholly of iron and steel, very compact, efficient, simple in construction, and durable. They are so made, that a strong current of air is forced into the centre of the machine, and passing out sideways through cracks in the inner and outer cylinders, expels the dust as fast as created, and prevents it from mingling again with the grain, as it does in other mills, so as to often blacken the kernels.

They will clean from 15 to 25 bushels per hour. Warranted to suit upon 3 months trial. Shoreham, Feb. 16, 1844.—3t

DURHAM BULLS, DUKE OF WELLINGTON AND METEOR.

AS frequent applications are made by gentlemen at a distance for the use of these animals, to prevent applications by letter this notice is given.

These animals will be let to cows at $10 each; the money in all cases, to be sent with the cows, and paid to the subscriber. Wellington was bred by Thomas Bates, Esq., of England, and out of his prize cow, Oxford, celebrated as a milker. Meteor bred by Mr. Geo. Vail, of Troy, and out of his imported heifer, Duchess, and got by Wellington. Duchess was also bred by Mr. Bates, and got by his celebrated prize bull Duke of Northumberland. These animals are on Mr. Vail's farm, about two miles from Troy, and will be allowed to serve a few cows out of his own herd. Pasture for a short time may be had for cows sent, at the usual prices. Apply to the subscriber on the farm.
April 1, 1844.—3t. A. CLOCKIE.

FINE FARMS FOR SALE.

THOSE very superior Farms situated near Galway Corners, in the county of Saratoga, collectively known as the Earl Stimson Farm, will be sold cheap and on terms most accommodating to the purchasers as to credit. The property consists of about 340 acres, is so situated as to be conveniently divided into three or four farms, all having the necessary buildings, and will be sold together or in parcels, to suit purchasers. Each farm is properly divided into pasture, tilled and wood land, and is in the highest state of cultivation, fenced in the best manner and with the most durable materials. The property comprises among other buildings, a large and convenient hotel, which is a favorite resort of families in the summer on account of the superior healthiness and beauty of the country. The farming buildings of all kinds are most extensive and convenient for all the purposes of agriculture and the raising of stock. The premises also include a country store, a most eligible location for a country merchant, having been occupied as such for about forty years. It is within two hours drive of Ballston, Saratoga, and Schenectady. The farm is well known among leading agriculturists, and in the agricultural periodicals, as the Pattern Farm. For terms, &c., apply to J. OAKLEY,
Oct. 1.—tf. No. 75 Nassau street, New-York.

S. CORNELL'S DISTRICT SCHOOL GLOBE.

A BEAUTIFUL and cheap instrument, 5 inches in diameter, accompanied with a card of lessons illustrating the form of the earth, day and night, inclination of the axis of the earth to its orbit, change of seasons, difference of time in different parts of the earth, and the difference in the length of the day.

Owing to the peculiar construction of this globe, and the accompanying lessons, it is better adapted to elementary illustrations in geography, than any other now in use; and its cheapness renders it admissable to every school. It should be in every school and every family.

Manufactured by Silas Cornell, Rochester, State of N. Y., and retailed at $1,50. A liberal discount allowed to dealers. April 1.—4t.

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☞ ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.

AGRICULTURAL IMPLEMENTS, &c.

THE undersigned are Agents in this city to sell the following celebrated machines, viz:

Hussey's Premium Corn and Cob Crusher.
Dickey's " Fanning Mill.
Platt's " Portable Grist Mill.

And proprietors of Warren's Premium Portable Horse Power and Thrashing Machine. Also for sale,

Hovey's Premium Straw Cutter, (Spiral knives.)
Warren's " - "
Hull's Stalk Cutter.

Terms cash.—Liberal deductions made to dealers from retail prices.

L. BOSTWICK & CO.,
146 Front street, New York.
my1.—1t.

HUSSEY'S REAPING MACHINES,

GREATLY improved, warranted to cut twenty acres of wheat in a day. The same machine, by a change in some of its parts, will cut hemp; this was satisfactorily proved last year in Kentucky.

Hussey's Corn and Cob Crushers, lately much improved. Price from 25 to 45 dollars, with a set of extra grinders.

Hussey's Corn Shelling and Husking Machines, all manufactured and kept for sale by the subscriber, in Baltimore, Maryland. All other agricultural implements made to order. Baltimore possesses ample facilities for shipping to all ports of the United States.

OBED HUSSEY.

P. S. The Reaping Machines tried against McCormack's, last year, near Richmond, Va., and reported upon unfavorably by a committee, was an experiment machine, made to sell at a low price. The machines ordered of me by Hon. William H. Roane, one of the committee, (who subsequently changed his opinion, as noticed in the last Cultivator) is my ordinary machine, so well known as *Hussey's Reaping Machine*, now advertised; this machine was tried against McCormack's repeatedly in the same harvest, with decided advantage, but no report was made of any trial except when my inferior machine was used.

O. H.

NOTICE.

GENTLEMEN wishing to find a place with a farmer in th country, for their sons, where they can have an opportunity of making themselves acquainted with practical as we as theoretical agriculture, may hear of such a place by enqu ring of the editor of this paper.

TO GENTLEMEN FARMERS.

A YOUNG Scotchman (unmarried) is desirous of obtainin a situation as overseer on a farm. He has received a lib ral education, and for several years has devoted his whole a tention to the attainment of all the improvements and detai of modern husbandry, now practiced with so much success Scotland. He is also conversant with the management cattle.

His credentials are of the highest order, and from individ als known to the advertiser. Salary not so much an object employment in a healthy situation and a comfortable home.

Apply to Watts Sherman, Esq. City Bank, Albany, or to D A. T. Watson, Jr., New York city. 2t

PROUTY & MEARS'

Patent Centre Draught Self-Sharpening Plows,

OF various sizes and prices, from $4,50 to $13 each, with extra point and share. Wheels will be attached when quired. These plows are now believed to be the most perfe plows in use. They are strong, and can be kept in repair at small expense. Among the premiums which have been recei ed for these plows the following may be named: at Worces $100; Boston $20, and a gold medal; New-York a gold meda from the Philadelphia Agricultural Society $10; at Wilmin ton, Dela., first premium; at Govanstown, Md., silver cup; Prince George, Md., silver spoon. Also Subsoil Plows at 6, 10 and 12 dollars each. For sale wholesale and retail at t Seed and Implement Ware-house, No. 176, Market-st., Phi delphia, by 9m. D. O. PROUTY.

GREAT SALE OF ELECTORAL SAXON SHEEP.

THE undersigned will sell at vendue the two flocks of Pu *Electoral Saxon Sheep*, belonging to the estate of the la Henry D. Grove, as follows:

1. That at Grainger, Medina co., Ohio, consisting of abo 400 sheep, on the farm now occupied by them, on the 30th *September next*.

2. The home flock, at his late residence in Hoosick, Ren selaer county, N. Y., consisting of about 350 sheep, on the 15 of *October next*.

A rare opportunity is offered to those who may be anxiou improve the quality of their flocks. The following is the o nion of the distinguished manufacturer who has usually pu chased Mr. Grove's wool, of the character of these flocks:

"The purest blood in this country was introduced by the la Mr. Grove in his own flocks, the wool from which I have be familiar with since their importation in 1827. In point of fin ness and admirable felting qualities, this wool is unsurpass by any flock in this country, and the fleeces average about ha a pound each more than any other I am acquainted with equal fineness.

SAM'L LAWRENCE.

Lowel, April 9, 1844."

Terms of sale, cash.—Reference, Sam'l Lawrence, or eith of the subscribers.

Buskirk's Bridge, April 20, 1844.

ELIZA W. GROVE,
W. JOSLIN,
S. A. COOK.
my1.—5t.

IMPROVED CATTLE, SHEEP, SWINE, &c.

WITH a view of facilitating the diffusion of Improv Breeds of Cattle—of superior fruit-trees and seeds f field-crops, and of improved farming utensils, a register w be kept at the Hall of the State Agricultural Society, in t Old State-House, Albany, for the purpose of recording t names and residences of persons having any articles of t above character to dispose of. Farmers, stock-breeders, fru growers and mechanics, who desire to buy or sell improv articles of any kind needed in farming, can have their reques registered by addressing the subscriber, post-paid—no char being made for the service. It is desirable that the directio shall be, in all cases, as specific as possible in reference prices, qualities, &c.

The frequent requests for information from persons desiro of improving their stock of cattle, sheep and swine, as wel their crops of wheat and other grains and fruits, induce t belief that a registry of this kind will be found measurab useful in promoting the objects of the State Agricultural Soc ety—as it often happens that farmers are induced to try exp riments when improved breeds and seeds can be convenient obtained.

Various improved breeds of cattle, sheep, swine and fowl are now registered; as are also sundry improved varieties c wheat—well worthy of attention from farmers desirous of be tering the condition of their stock and crops.

Agricultural, and other journals friendly to the objects of thi notice, are requested to give it an insertion.

HENRY O'REILLY, *Rec. Sec. State Ag. Soc.*

FROM THE STEAM PRESS OF C. VAN BENTHUYSEN & C

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES

VOL. I. ALBANY, JUNE, 1844. No. 6.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, PROPRIETOR.

ONE DOLLAR A YEAR.

Seven copies for $5,00—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage.

☞ Complete sets of the *First Series* of "THE CULTIVATOR," consisting of ten vols., quarto, are for sale at the office, and may be ordered through the Agents of the paper throughout the country Price, stitched,—vols. 1, 2, 3 and 4, 50 cents each—vols. 5, 6, 7, 8, 9 and 10, $1,00 each—for the whole set, $8,00.

OFFICE IN NEW-YORK CITY, AT

M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,

where single numbers, or complete sets of the back volumes, can always be obtained.

☞ This paper is subject to newspaper postage only, being one cent within the state or within 100 miles of Albany, and 1½ cent for any greater distance.

THE FARMER'S MUSEUM,

(*Each no. containing* 16 *pages,*)

Is made up of selections from this paper, and published monthly at 50 cents a year—Fourteen copies for $5,00—Thirty copies for $10.

THE CULTIVATOR.

MONTHLY NOTICES.

Communications have been received since our last, from L. Durand, Richmond, C., R. S. Borden, P. V. C. Miller, C. M. A. J., J. M. Johnson, J. G. B., H. R. Robey, Female Reader, A. B. C., P. F. Cady, Wm. Jenison, R. L. Pell, Doubleyou.

Our thanks are returned to L. DURAND, Derby, Ct., for half a dozen ears of Durand Corn, a handsome 8 rowed yellow variety, which we have distributed among our friends.

To BIXBY & WHITING, publishers, Lowell, for a copy of the second edition of Dr. Dana's Prize Essay on Manures, which can be had at the bookstores—price 12½ cents.

To Hon. H. L. ELLSWORTH, Com. Patents, for a copy of his Annual Report, a notice of which will be found in another part of this paper.

To Prof. HALL, of this city, for a copy of his Address before the Society of Natural History of the Auburn Theological Seminary.

To T. FANNING, Ed. Agriculturist, Nashville, Tenn., for the "Outlines of the system of Education proposed to be adopted in Franklin College, at Elm Craig."

To J. S. SKINNER, Esq., for a copy of his edition of Clayton & Youatt's Cattle Doctor.

To A. L. KENNEDY, Esq., for a copy of the Report of a committee to the Delaware Institute of Sciences on the great rain storm and flood, which occurred in that county, Aug. 5, 1843. This is a very interesting memoir, and the Institute have performed a worthy service in collecting and placing upon record a history of this most extraordinary and destructive storm. The damage sustained in Delaware county alone, is estimated at $250,000.

THE CULTIVATOR FOR PREMIUMS AND GRATUITOUS DISTRIBUTION.—We have been favored this year with an unusual number of orders for The Cultivator for gratuitous distribution and for premiums. Among others, JAMES SLOAN, Esq. of North Carolina, takes 100 copies of the Cultivator, and Hon. J. J. M'KAY, of the same State, 50 of the Cultivator, and 100 of the Museum—The Hampshire, Hampden and Franklin Ag. Society of Mass., 40 of the Cultivator and 20 of the Museum—Newcastle (Del.) Ag. Society, 20 copies of the Cultivator—Brooke and Ohio Counties (Va.) Society, 15—Charlotte Co. Society, New Brunswick, 15—Winnebago Co. Society, Ill., 12—Seneca Co. O., 12—Cortland Co. N. Y. 24—Rensselaer, 16.

MAPLE SUGAR AND MOLASSES.—We have received from Mr. F. M. WAIT, of Windsor, Vt., some specimens of maple sugar and molasses, both of which are superior to any we have seen, excepting the sugar made by Mr. Woodworth, which took the premium at Rochester last year, which was made as described on page 22 of our present vol. That of Mr. Woodworth was, however, *refined*, whereas the only deviation from the usual process, in the manufacture of Mr. Wait's, we are informed, is "strict care that *all* the vessels used are kept *perfectly sweet and clean.*" If nothing more than this is required to make maple sugar equal to the beautiful sample sent us, it is certainly an object well worthy of attention—especially when it is considered that this quality would readily bring in market nearly *double* the price of the common article. The sample sent is very white, pure, and of very agreeable taste. The molasses is also very fine, and we think would be generally preferred to any other kind.

PROTECTION AGAINST THE BEE MOTH.—We have been shown a "bee-protector," so called, invented and patented by Thos. D. Howell, of Chandlersville, Muskingum Co. Ohio. It is a curious contrivance. The bees, in entering the hive, pass over a thin piece of board, so balanced on a pivot that the weight of the bee depresses the end next the hive and gives him a chance to enter. It requires a weight equal to that of the bee, to depress the board so that admission may be gained. The moth being lighter than the bee, (it is said, by three-fourths,) it is stated, cannot get into the hive. When it shall have been fully and fairly tried, we should be glad to learn how it works.

FREAK OF NATURE.—Mr. L. A. MORRELL has left at the rooms of the State Agricultural Society, old State Hall, a horn which grew on the *ear* of a Saxon ewe. It is about two and a half inches in length, and three-fourths of an inch in diameter at the base. It was taken off with the ear on which it grew attached to it, thus showing plainly its origin.

PORTABLE GRIST MILL.—Messrs. Sinclair & Co. of Baltimore, have recently got up a grist mill, which is very highly spoken of by a correspondent of the Marlboro (Md.) Gazette. "It can," says the writer, "be worked by *hand* or horse-power; with two men, it will grind at least three bushels per hour, and with four horses it will grind more than any water-power mill, with one pair of burrs, in the country. The work is done in a splendid manner. The grain can be either simply chopped, or ground into small hominy, or coarse meal, or made into meal as fine as flour need be. This is done merely by turning a screw. So easily can it be moved, that two men can take it about with as much ease as they can move a corn-sheller or wheat fan. The burrs are of cast iron, and will grind from three to five hundred bushels before they become too smooth for use, when any farm hand can take them out and replace them with others, which cost $3,50 per pair. There is no other part of the machine that will not last an age. The cost is only $40."

"Credit."—The paragraph alluded to by the Am. Ag. was taken from some paper, where it appeared without credit. It appeared originally we believe in the Western Farmer's Almanac. We could easily fill a column with a list of articles which are going the rounds of the papers, copied from the Cultivator without credit. Take for instance the following, from papers now on our table: The article on Poultry in the *Ulster Huguenot*, should have been credited to the Cultivator—also, Soaking Corn, in the *Kent News;* the *six* articles on the first page of the *Mercer Co. Farmer* for April; the *five* articles under the Ag. head in the Peterboro Chronicle of April 30; the article on Lucern, in the S. C. Temp. Advocate of April 25, and *two* other articles in the same paper; History of the Mercer Potatoe and Culture of Tea in America, in the Zanesville Gazette of May 15; six articles in the Ag. department of the Spirit of the Times of May 18; *three* articles in the Goshen Clarion of May 23, &c. &c. These omissions to give the proper credit, are undoubtedly accidental, and we have seldom alluded to them. Greater care in this respect is, however, desirable; and we hope those who are in the habit of copying from the Culrivator, will remember to give credit to whom credit is due.

Frost.—There was a hard frost in this vicinity on the night of the 21st of May. Ice was formed on some water which stood in barrels, to the thickness of an eighth of an inch, and in some places the ground was frozen. Beans, and other tender plants, were killed—corn and potatoes that were above ground, were cut down, but not killed. We have just learned from a gentleman from Madison county, in this State, that the damage in that section was quite heavy. That the ground was frozen to the depth of two to three inches, and that great fears were entertained that the fruit is killed.

New Mode of Churning.—We saw in the street the other day, a churn which worked itself. It was moved by a weight, which, after having been wound up, would keep the machine in motion till it had run down. A machine sufficiently large to admit of the weight being wound up to the height of nine feet, would run about half an hour. It was invented in Saratoga county, (N. Y.) but we did not learn the inventor's name.

The Wheat Crop.—Accounts from every section of our country afford the prospect of a most abundant wheat crop this season. A letter from Lewis Ellsworth, Esq. Dupage county, Illinois, dated May 14, says:—"The prospect of a heavy harvest was never so good. The amount sown exceeds that of last year by at least one quarter, and from present appearances the yield will exceed per acre that of any previous crop. Our spring has been rather cold and very wet, consequently corn-planting is late."

Amusements for Farmers' Boys.—Being lately at the residence of one of our most intelligent farmers, our attention was attracted to the door of a small room in an out-building, which was labelled "——office." On inquiry, we learned that this was a room given up to the boys. Entering, we found it fitted up with miniature implements of husbandry, seeds, of different kinds, a few plants, and branches of ever-green; the walls decorated with portraits of celebrated horses, cattle, sheep, swine, and poultry; while on some shelves, were some geological specimens, and several juvenile books of a character calculated to inspire a taste for rural life, and at the same time to teach correct modes of husbandry, horticulture, &c., the whole arranged in agreeable order. It struck us as an excellent plan, and we would suggest its general adoption. It furnishes the means of both amusement and instruction. How infinitely better it is to allow boys an opportunity of spending a part of their time in thus cultivating a taste for the investigation of those subjects by which their knowledge of nature and the world around them is increased, than in mixing with rude company and becoming contaminated with their vices.

Northern Light.—From a prospectus of this work, we learn that several important alterations and improvements are proposed for the coming year. It will be printed in the royal octavo form, similar to the Cultivator, instead of the quarto, as heretofore, on fine white paper, with entire new type, will be stitched, and enclosed in a neat handsome cover, each number containing sixteen pages. Its columns will be filled with a judicious blending of Literature and Science. Interesting selections will be made, though its contents will be chiefly original. Mr. A. B. Street, the present talented and accomplished editor, is to be assisted by Dr. T. Romeyn Beck, favorably known for his former contributions, Professor Hall, a distinguished geologist and man of general science, S. S. Randall, Esq., Deputy Superintendent of Common Schools in this State, with other contributors. The talent thus engaged cannot fail to recommend the Northern Light to the favorable notice of the public. The first number of the new series, will appear in the second week in June, and will be succeeded by others on the first and fifteenth of each month. Terms, a dollar a year in *advance*.

Farming Implements.—Inventors and manufacturers of improved farming implements may find it to their advantage to send models or specimens to the Hall of the New-York State Agricultural Society, in the old State-House, Albany. The Agricultural Hall adjoins the rooms devoted to the Geological collection—is visited by many persons from all quarters in passing through Albany—and articles placed there for exhibition may prove extensively beneficial to the manufacturers as well as to the farming community. Any such articles may be directed to Henry O'Reilly, Recording Secretary of the State Agricultural Society, Albany. ☞ The Agricultural papers in this and other States, are requested to promote the object by copying this notice.

Premium on Cotton.—The Chamber of Commerce of Apalachicola, have awarded a premium of a tea set to Col. A. M'Donald of Eufalla, Ala., for the best 20 bales of cotton sold in that market last season. The cotton was sold afterwards at 10½ cts. per lb. The premium for the best 50 bales was awarded to Capt. Thornton of ——.

The Michigan Farmer.—This is published at Jackson, semi-monthly, at $1,00 a year, by D. D. T. Moore. It deserves a liberal support, which we doubt not is accorded to it by the intelligent farmers of Michigan.

Charcoal.—Our correspondent at Columbus, (Ga.) J. G. W., will find in the back numbers of the Cultivator, which have been sent according to his directions, all the information we can give him on the use of charcoal as a manure. Several experiments were made with charcoal last year, and we should be glad to learn the result—particularly should be glad to hear the results of the trials made of it, by our correspondent, Za. Drummond, Esq. of Virginia.

Warren's Horse Power.—W. F. B. of Bushville, Ga. will find the information he wants, respecting the price of this machine, in an advertisement in this paper. We do not know the cost of shipping it to Savannah.

"J. H. M." Adams Co., Pa.—The charge for inserting your advertisement three times, would be $6,00.

S. W., Whalen's Store.—If we can find a person who will answer your purpose, you shall hear from us.

Correction.—The paragraph about "Blind Teeth in Man," proves to be all a mistake. Mr. Johnson assures us that he wrote "young *mare*," instead of "man."

Ginger Beer.—One pint of molasses and two spoonsfuls of ginger put into a pail to be half filled with boiling water; when well stirred together, fill the pail with cold water, leaving room for one pint of yeast, which must not be put in until lukewarm. Place it on a warm hearth for the night, and bottle it in the morning.—*Selected.*

FOOD FOR WORK-HORSES—TREATMENT FOR "HEAVES."

Mr. E. H. **Northrup**, of Shoreham, Vt., inquires "What is the best mode of feeding the roadster and work-horse?" "Is there any cure for heaves?"

We do not find the disease here called "heaves," described by that name in the English works. The diseases described under the terms *chronic cough*, *thick wind*, *broken wind*, *wheeze*, *roaring*, &c., we are inclined to think are in this country frequently confounded under the term "heaves." They are all, in a greater or less degree, affections of the lungs. The best food for horses so affected, is that which is nutricious, rather succulent, and condensed into a small compass. Dry food, entirely, especially a large quantity of poor or dusty hay, is very bad for them. Vegetables, such as potatoes, ruta-baga, carrots, &c. are very good. The preference is by some persons given to carrots, but we have tested the good effects of potatoes in such cases, and would recommend their use where carrots cannot well be had. The horse's stomach should not be crowded, and he should be only moderately exercised, especially soon after eating. We have known horses that were said to have the heaves, or to be broken-winded, perform a great deal of labor, with proper feeding and use, for several years; but a radical cure is not to be expected.

In reference to the inquiry about feeding, we remark, that the practice of "chaffing" or cutting the fodder and mixing with it the grain, (the latter in a ground state,) is highly approved, and is every year coming to be more adopted. Hay and straw may be cut together, if desired, and if the horse is not hard worked, a great saving may in this way be made.

Youatt, in his Treatise on the Horse, says—"Chaff may be composed of equal quantities of clover, or meadow hay, and wheaten, oaten, or barley straw, cut into pieces of a quarter or half an inch in length, and mingled well together; the allowance of oats or beans, is afterwards added and mixed with the chaff."

He advises the bruising or grinding of the beans and oats. In this country, Indian corn might be properly substituted for beans. Mr. Youatt says the prejudice which some have evinced against bruising the oats is, "so far as the farmer's horse and the wagon-horse is concerned, altogether unfounded. Horses of quicker draught, except they are naturally disposed to scour, will thrive better with bruised, than with whole oats; for a greater quantity of nutriment will be extracted from the food, and it will always be easy to apportion the quantity of straw or beans to the effect of the mixtnre on the bowels of the horse. The principal alteration that should be made on the horse of harder and more rapid work, such as the stage-coach horse, &c., is to increase the quantity of hay and diminish that of straw. Two trusses of hay may be cut with one of straw. * * * For the agricultural and cart-horse, eight pounds of oats and two of beans should be added to every twenty pounds of chaff: and thirty-four or thirty-six pounds of the mixture will be sufficient for any moderate sized horse, with fair or even hard work. The dray and wagon-horse, may require forty pounds. Hay in the rack at night is supposed to be omitted altogether. * * *

"Horses are very fond of this provender. The majority of them, after having been accustomed to it, will leave the best oats given to them alone, for the sake of the mingled chaff and corn. We would, however, caution the farmer not to set apart too much damaged hay for the manufacture of the chaff. The horse may be thus induced to eat that which he would otherwise refuse; but if the nourishing property of the hay has been impaired, or it has acquired an injurious principle, the horse will either lose condition, or become diseased. More injury is done by the eating of damaged hay or musty oats than is generally imagined. There will be sufficient saving in the diminished cost of the provender by the intronuction of the straw, and in the improved condition of the horse, without poisoning him with the refuse of the farm.

"While the mixture of chaff with the corn prevents the corn from being too rapidly devoured, and a portion of it swallowed whole, and therefore the stomach is not too loaded with that on which, as containing the most nutriment, its chief digestive power should be exerted, yet, on the whole, a great deal of time is gained by this mode of feeding, and more is left for rest. When a horse comes in wearied at the close of the day it occupies, after he has eaten his corn, two or three hours to clear his rack. On the system of manger-feeding, the chaff being already cut into small pieces, and the beans and oats bruised, he is able fully to satisfy his appetite in an hour and a half. Two additional hours are therefore devoted to rest. This is a circumstance deserving of much consideration even in the farmer's stable, and of immense consequence to the postmaster, the stage-coach proprietor, and the owner of every hard worked horse."

We have known several establishments where a considerable number of horses were kept entirely for the road, and fed wholly on cut hay with corn-meal mixed with it. A sufficient quantity of hay is thrown into a large trough, wetted a little, and the due proportion of meal mixed, and stirred well together. Corn and cob-meal does well.

In answer to the question of our correspondent, "What food will fatten a horse quickest?" we reply, good sweet clover hay, free from dust, cured with all the heads and leaves on, with boiled potatoes and meal, or instead of the meal boiled oats, will fatten a horse very rapidly; and where the object was merly to *fatten* him, we would use this food.

DEFECT IN POTATOES.

At the Agricultural Meeting at the old State Hall on Thursday evening, April 25th, the subject for discussion was the defect which occurred in potatoes last year. Remarks were elicited from various gentlemen, and the subject seemed very much to engage the attention of all present. Dr. Lee observed that the defect which was complained of here last year, had prevailed in parts of Europe for several years, and he referred to the theory of some writers there, that the defect was occasioned by the degeneracy of varieties from age. The facts brought out at the meeting, did not seem to support the idea that the defect here, could properly be attributed to that cause, inasmuch as it did not appear to prevail most with the oldest varieties. The most hardy kinds, it seems, have been least affected, and the least hardy, as the Mercer, (or Chenango,) Foxite, &c., the most. It was nearly the unanimous opinion of those who spoke on the subject, that the unusual prevalence of the defect, (or as some called it "*disease*,") last year, was caused by the very warm and wet weather, following a severe and long continued drouth. This idea was supported by many statements that potatoes which were planted on dry soil, and so early that they reached maturity before the great change alluded to in the season came on, were scarcely affected at all, whereas the same varieties planted later and being in an immature state when the change took place, were nearly worthless when harvested, or had become so during the winter.

Dr. Emmons made some remarks on the nature of the defect. He had taken some pains to examine it, and he considered it quite analagous to *gangrene* in animals—he was satisfied it was not a fungus. He should suppose it would render potatoes unwholesome for animals, and he had heard of several cases where it was believed they had occasioned the death of cattle; but he knew a man who had given them in large quantities to hogs, and had not yet discovered any bad consequences from it to them.

It was the general opinion of the meeting that it is best to plant potatoes as early in the season as the ground is in suitable condition. The yield, it was thought, was generally better, and they were less liable to blight, or defect of any kind.

Cucumbers.—A writer in the London Gardener's Chronicle, says he has entirely discarded the old mode ot allowing cucumbers to run on the surface of the ground. He trains them to trellises, and finds that he has not half the trouble with them that is required by the old plan, and that the plants continue much longer in bearing, when so treated.

MINERAL MANURES.

Of all the manures termed mineral, those that come under the denomination of *sulphates*, or those in which the mineral base is combined with sulphuric acid, are perhaps the most important. Of these, the sulphate of magnesia, (Epsom salts,) sulphates of potash and soda, and sulphates of lime or gypsum, are the most common and useful.

The action of the sulphates is most conspicuous on the cultivated grasses, leguminous plants and the roots; on grains they do not produce results as decisive, though occasionally instances of great benefit from their use may be adduced. The chemical analysis of plants, carried on so successfully by the German experimenters, by determining the constituents of the several cultivated plants, has shown which of the mineral manures are the most necessary for each; and the results thus arrived at, are the more satisfactory, as they are found in the main to perfectly agree with those obtained in practice. To show this, we here append a table, for which we are indebted to Johnston's Chemistry. It shows the constitution of the ash of several grasses and clovers, so far as relates to the sulphates. One hundred parts of the ash of each was examined.

Sulphates.	*Rye grass.*	*Red Clover.*	*White Clover.*	*Lucerne.*	*Sainfoin.*
Potash, ········	8·81	19·95	31·06	13·40	20·07
Soda, ·········	3 94	5·29	5·79	6·15	4·37
Lime, ·········	7·34	27·80	23·38	48·31	21·95
Magnesia, ·····	0·90	3·33	3·05	3·48	2·88
Sulphuric Acid,	3·53	4·47	3·53	4·04	3·41

Great as is the effect of the sulphate of lime on white clover, farmers we think will generally agree that it is exceeded by the action on red clover, a result to be expected from the table;- and still greater is the effect on lucerne, as some limited experiments made by us have demonstrated. This too, the analysis would indicate. The sulphates of potash we have never used, but the European journals declare the results of experiments on plants to conform to the analysis, and that as a dressing for white clover, it is superior to the sulphate of lime. Another useful hint may be taken from this table, which is, that a quantity of the sulphates which would be sufficient for one kind of plant, would be insufficient for another. Thus compare rye grass and clover, and it will be seen that a top dressing which would cause the first to thrive, would scarcely be felt by the latter. So far as regards the common grasses, rye grass, herds grass, timothy, &c. the nitrates are more efficient in promoting their growth than the sulphates, while for the clovers and their kindred plants, the sulphates are to be preferred.

If, as Prof. Johnston supposes, the value of the sulphates is to be mainly attributed to the sulphuric acid they contain, it would be important in forming an estimate of their respective values as a manure to ascertain the several proportions of sulphuric acid. This may be seen in the following table, in the first column of which the proportion of acid is shown, and in the second, the quantity of each that a gallon of water at the ordinary temperature will dissolve. Thus 100 lbs. of burned gypsum contain as much sulphuric acid as

126 lbs. common gypsum,	Gypsum burned 1-6th lb. to the gall
128 " sulph. of potash,	" unburn. 1-4th "
104 " " soda dry,	Sul. of potash, 1-2 "
235 " " " crys.	" of soda dry, 1-2 "
180 " " magnesia.	" crys. 3 1-2 "
	" of magnesia, 4 "

These tables prove that the sulphate of lime is much the cheapest and best application of the sulphates, admitting that the value depends on the acid alone; and if we adopt the opinion of Liebig that its principal value is found in its being an absorbent of ammonia, the result will not be essentially different. Its effect too, will be the most durable; as the small quantity soluble in a given quantity of water, will prevent its speedy solution and disappearance in the soil. Where, however, plants are obliged to rely mainly on dews instead of rains for their moisture, a dressing of sulphate of soda or magnesia would be preferable, as more readily soluble. The better way then of applying the sulphates of soda or potash, would be in solution, very weak, and sprinkled over the growing crop from a water cart. Prof. Johnston thinks 100 lbs. per acre would be sufficient.

Considerable difference of opinion has existed among farmers as to the best time for the application of sulphate of lime to the soil or crops. We have found the most benefit when applied directly to the plants, but whether applied to the soil or to the crop, we have rarely if ever found it fail. We prefer using it after the plants are well advanced, and this opinion would seem to receive countenance from the experiments instituted by Prof. Korte to test this point. The plant was clover, and it was found that the produce of different parts of the same field was in the following proportions:

Undressed, ...	100 lbs.
Top dressed, 30th of March, ...	132 "
" 13th of April, ...	140 "
" 27th of April, ...	156 "

This result would seem to confirm the opinion of Peschier, that gypsum on the leaves of plants is converted into a carbonate, by the absorption of the sulphuric acid.

TURNEPS.

Turneps are better adapted to light, than heavy soils. Sandy soils that are too light for potatoes, will frequently give a good crop of turneps, by the application of a top-dressing of ashes and some compost manure.

As a crop for winter feeding, the turnep is valuable, both for sheep and cattle. The common English flat turnep, may be sown as late as the latter part of July or the first of August, in this latitude, and will give a good yield. This kind does pretty well for feeding the fore part of the winter, but becomes soft and corky by January, and is not worth much. Other kinds keep better. The Yellow Aberdeen and the Swedish or Ruta Baga are probably as profitable for late feeding as any. The Ruta Baga should be sown in June, (as early as the 20th) to ensure the greatest yield. Much depends on the quality of the seed, and care should be taken to get that produced by the best shaped roots, and the more particular has been the selection, and the longer it has been continued, the better will be the seed, and the truer the roots. The same principle applies in this case as in animals—*selection* is the grand source of improvement. The turnep comes to the greatest perfection in rather northern latitudes; hence it is quite an object to obtain seed from those regions. The English and Scotch are usually very particular in selecting their turneps for seed, and on this account their seed is generally preferable.

The Ruta Baga keeps well, and with proper care will be good till May. It is considered a good root for sheep and young stock, but is not so well liked for milch cows on account of its tendency to impart a flavor to the butter. On this account, carrots or beets are preferred for cows.

The yield of the turnep crop, varies according to the quality of the soil, cultivation, &c., from 400 to 800 bushels per acre. The flat turnep may be sown after a crop of hay has been taken off the ground, and if well cultivated, will do well.

We prefer the *drill* mode of sowing turneps. It is the most exact—the roots are made to occupy the ground better—there is a better chance of working among them to keep down the weeds—there is a saving of seed, and a general saving of labor and expense, besides getting generally a better yield.

There are various machines for sowing seed. There is one made in the vicinity of Boston at a cost of only about five dollars, that answers *well* for sowing turneps, onions and seeds of that size. Others may be had of larger size, at ten to fifteen dollars.

For the Ruta Baga, the rows may be two feet or more apart, so as to give room for working the spaces with a small harrow or cultivator. By planting two rows pretty close together, say a foot apart, the other spaces may be left three feet apart, which will give ample room for the use of the cultivator, and the crop will not, probably, be diminished in yield.

Sprinkling gooseberry and currant bushes with soap-suds, is recommended to prevent mildew.

CANE FLY OF GRENADA.

Through the politeness of JOSEPH I. DILL, Esq. of Bermuda, we have received from the Agricultural Society of the Island of Grenada, drawings of an insect called the "cane fly," which from 1831 to 1836, was the cause of great damage to the planters of that Island by its attacks on the sugar cane.

From the drawings and description, we have little hesitation in pronouncing the insect an *aphis*, a numerous tribe of parasitic animals, of which almost every plant has a peculiar species. We had not before heard of one belonging to the cane, and should be glad to learn whether it has been known in the sugar districts of this country. Its sudden appearance and exit at Grenada, as will be seen from the following communication, is very singular:

The insect was first discovered soon after the hurricane of 1831, and made its appearance on the windward coast, or St. Andrew's parish; it was therefore generally supposed to have been introduced by means of the hurricane, but it is not quite certain that it had not existed in the Island previous to that time, for a disease appeared among the canes on Telescope estate, some years before, but that was partial and created little inquiry, as the damage sustained was but trifling.

Its disappearance in the early part of 1836, is enveloped in as much mystery as its appearance; during all that time, every means was tried to destroy it, but without success; the cane leaves were washed with a mixture of soot, quick lime, lees from the distilleries, and all sorts of ashes were applied; tarred boards were used as traps, immense numbers were destroyed, but they continued to increase and spread.

At first, its ravages were confined to the vicinity of the St. Andrew's great river on the sea coast, and the estates in that immediate neighborhood suffered most throughout; some of them to the extent of three quarters of their usual crops, some two-thirds, and others one-half; for instance, estates averaging a crop of 300 hogsheads, were reduced to 60 or 80—gradually lessening as the insects increased from 1831 to 1834-5, when it was at its worst; estates in the interior suffered much less than on the sea coast. Cane cultivation being almost continuous from the above river in the direction of St. Patrick's, the insects spread rapidly, but where it was interrupted by brush or provision grounds, their progress was comparatively retarded. I am not prepared to state the extent of the damage sustained from St. Patrick's round to the lee side of the Island, but I believe it to have been much less than in the district above alluded to; a few were seen as far Beausjour, about 6 miles from St. George's.

From St. Andrew's towards St. David's, the cane cultivation is more interrupted, their progress was slow, and but little damage sustained; they did not reach Sesesse estate, which was their extreme point in that direction, until the year 1835, and not until the canes were sufficiently advanced in growth to defy their ravages. As before stated, early in the following year they disappeared simultaneously throughout the Island.

General remarks.—The insect commenced its ravages so soon as the young canes began to shoot, depositing its eggs on the backs of the canes as thick as possible. The plant immediately sickened, changed color to yellow, and from that to black; the leaves became covered with a glutinous substance, and the young canes either died, or their vegetation was so materially checked as to prevent their ever arriving at maturity; consequently the small quantity of sugar made from them was of very bad quality. Whole fields were thus completely blighted. On walking among the canes, the insects would rise in clouds.

During the prevalence of these insects in Grenada, I managed an estate in St. David's parish. In August, 1835. I went to England for the benefit of my health, and carefully preserved in a box prepared for the purpose, some infected plants, and I succeeded in conveying them alive to London, with the insects on their leaves in every stage, from the egg to the matured living fly. I placed them in the hands of the merchants in whose employ I then was, and whose estates, particularly in St. Andrew's parish, had suffered to the extent of many hundred hogsheads of sugar. I went away to the country myself, and my time was completely occupied, so that I know not what was the result of their inquiries, if any, relative to the insects; but I subsequently heard that my box and plants had been sent to the Entomological Society, London.

A GRENADA PLANTER.

HAY MAKING.

We think it best to cut grass for hay, as near as possible to the time when it is in fullest bloom. Of course, if it is cut when most of it is in this state, some may be a little past, and some may not have quite reached full bloom. We know there has heretofore been some difference of opinion as to the stage grass should be in when it is cut, but we believe the experience of the best farmers is in agreement with the position above assumed. Those who are in the habit of curing herbs, cut them when in this stage, because it is known that they contain at that time the most of that peculiar principle from which they derive their efficacy and value. The saccharine or sugar principle, which constitutes one of the chief sources of nutriment in herbage, is found in the greatest quantity at the period of bloom. It may sometimes be expedient to cut grass before it has reached this state; particularly where it falls down, and is in danger of souring or rotting. When this happens, it should be cut, whatever state it may be in, because if it remains on the ground it will spoil, and the fermentation which takes place, will destroy the roots. Another great advantage in cutting grass before the seed forms, is that the roots are not so much exhausted, and the after growth is much more vigorous.

In some parts of the country, it is the practice to mow the grass and let it lie untouched on the ground, "thro' sunshine and shower," for several days before it is stacked or put in the barn. It is quite common to begin Monday and continue to mow till Saturday, when with hand-rakes and horse-rakes, all turn in, take it up and stack it; and this is done too, without much regard to the state of the weather at the time it is raked, or to what it may have been after it was cut. The appearance of the animals which are fed on hay thus managed, is evidence enough of its worthlessness.

After grass is cut and partly dried, it ought never to be exposed to dew or wet. The best way is to spread out the mown grass evenly, as soon as the wet has dried off from the spaces between the swathes, and before the dew falls in the evening, rake it and put it in cock. Where the crop is heavy, considerable time will be gained in making, by this plan. If it is only wilted when it is put in cock, it will in a short time undergo a *sweat*, which will much facilitate its making when it is again opened to the sun. Many good farmers believe that it will make more in two days, if it is kept in cock twelve hours, than it will make in three days without being put in cock.

In making clover hay, we are decidedly in favor of not exposing it much to the sun after it is first wilted. We speak from experience, having practiced various modes, and we are certain that it may be made with less labor, and that it is of far superior quality, when cured in cock, than in any other way. When the swathes are a little wilted, pitch them into cocks—laying it up in such a manner that it will stand the weather, which is easily done by the exercise of a little care. Examine the hay from day to day to see how the process of curing advances, and when it seems to be so well made that with what it will dry in handling, it will do to put in the barn or stack, turn over the cocks, loosen up the bottoms a little with a fork, and proceed to load it. Clover hay thus cured, is not likely to heat in the mow or stack, and from having every leaf and head saved, will be found to be very nutritious and much relished by all animals. In fact, we believe that clover hay, properly cured, will make more flesh, milk, or butter, than any other hay, pound for pound. The prejudice against clover, has arisen from the bad manner of curing it. Knocked about as it frequently is, wet and dried by turns, it loses its leaves and heads, and becomes little else than a mass of tasteless stems, which no animal will eat.

DICTIONARY OF TERMS USED IN Agriculture and its kindred Sciences.*

NICKING.—This is the name of an operation performed on the tail of a horse, to cause him to carry it in a more elevated position. It consists in cutting the tendons in several places on the underside of the tail, by the aid of a keen pointed knife, and then keeping the tail elevated by means of pulleys, &c. until it has healed. As the practice can scarcely fail to injure the strength of the animal, and as besides it is cruel and barbarous as well as useless, the practice should be exploded by all breeders or owners of this noble animal.

NIGHT SOIL.—The excrement produced in privies and cess-pools, a mixture of fæces and urine, has received this name, since its power as a fertilizer, has, under various names or forms of preparation, brought it into extensive use as a manure. Berzelius found 1,000 parts of night soil to contain

Water,......................	934 parts.
Urea (peculiar animal matter,)	30.10
Sulphate of potash,...........	3.71
" soda,.............	3.16
Phosphate of soda,...........	2.94
Muriate of soda,.............	4.45
Phosphate of ammonia,.......	1.65
Muriate of ammonia,.........	1.50
Acid matter,...... ..... Acetate of ammonia,.... Animal matter and urea,..	17.14
Earthy phosphates and fluate of lime,.....................	1.00
Mucus,.....................	0.32
Silica, (earth of flint,)........	0.03
	1,000.

On the continent of Europe, under the name of Flemish manure, from the country where it first came into general use, it has for many years been highly prized, and procured, wherever possible, without regard to expense. Its disagreeable and offensive nature, directed the attention of scientific men to the means of disinfecting it; and various means have been resorted to in preparing it for use. In China, night soil is mixed with rich marls, made into thin cakes, and constitutes a regular article of traffic. In Germany and France, it is mixed with lime, charcoal, peat, or other substances, dried thoroughly into a dark colored powder, and under the name of *poudrette*, sold to agriculturists and gardeners. In the U. States, the manufacture of poudrette is carried on extensively in New-York and Philadelphia, and the manufacture will doubtless extend to all the populous cities and villages of the country. There is scarce a crop that is not materially benefitted by the use of night soil as a manure. It seems to be equally excellent for grain or roots; indeed we should naturally infer from its origin, that it would be valuable for all plants intended as food for men or animals. From some experiments made in England, it appeared that while the simple soil gave but 12 bushels of wheat per acre, when heavily dressed with night soil, the yield was 37 bushels per acre. Of potatoes, where the product of the simple soil was only 120 bushels per acre, a heavy manuring of night soil produced 650 bushels per acre. Used in the same quantity, it fully equalled bone dust, and was far superior to any other. On common farms it is not to be expected that this manure can be prepared in as scientific a manner as where regular manufactories exist; but there can be no good reason given why this source of fertility should be so much overlooked or neglected. Where out buildings are properly constructed, there is little more difficulty in preparing and removing this substance, than in disposing of any other. Charcoal, gypsum, ashes, peat, or even common loam, well incorporated with night soil, and dried or not, as the farmer pleases, can be used with little offence to the most delicate and fastidious. Such composts will be found the most effective of fertilizers, and the result on many plants, will prove truly astonishing.

NITRATES.—A combination of nitric acid with an alkali, forms a salt called a nitrate. Of these, those called nitrate of *potash* or saltpetre; and nitrate of *soda*, or cubic petre, are the only ones worthy of notice; and these, it is evident, occupy a prominent place among the agents that influence the growth of plants. Nitrate of potash, or saltpetre in its crude state, is principally brought from the East Indies, although large quantities are produced in Persia, Egypt, &c., and it can be manufactured in all countries with greater or less facility. In its pure state, it is composed of nitric acid 52 parts, and potash 48 parts. Nitrate of soda is composed of nitric acid 62.1 parts, and soda 37.9 parts. It is principally obtained from Peru, where it is found in the desert district, some 3,000 fee above the Pacific Ocean, in immense quantities, and of which, a most interesting account was given in a lat No. of Prof. Silliman's Journal of Science.

The use of the nitrates for the purpose of agriculture can scarcely be claimed as a modern improvement, sinc Virgil, FitzHerbert, Evelyn, and many later writers, hav spoken of its use and value. It is probable that the valu of these saltsarises from the amount of nitrogen they contain, since when nitrogen is evolved, it combines wit oxygen, and thus forms nitric acid, which is the base of these salts. When powdered, and strewn upon the soil a decomposition takes place, and the nitrogen appears t be made available to the plants, while the alkaline matter enters into new combinations in the formation of silicates, &c., essential to the growth of plants. There ar indeed a few plants into which saltpetre enters as a constituent of the plant itself. Such is the horse radish, sunflower, nightshade, &c., but with the exception of barley, in which nitrate of soda exists in small quantitie neither of the nitrates has been detected in any of th cultivated crops of the farmer. It would seem then, th it is not as a direct article of food to plants, that the nitrates produce their result when applied.

The nitrates are most valuable as manures, when applied to light soils of gravel or sand; and an amount o about 100 lbs. per acre is found to be the most effectiv dressing. On wet, or heavy clay soils, it produces litt effect; in this respect, resembling the action of gypsu or sulphate of lime. Experience shows that it produc the best effect when made fine, and used in moist weather. On clover, wheat, and grasses and grains generall its operation is admirable, but in this country, whe gypsum can be obtained at rates so low, compared wi the nitrates, it is not probable they will ever come in use extensively. Where the nitrates are used, the gra or grass assumes that peculiar rich, deep green color, n observed, unless where manure containing nitrogen ammonia in considerable quantities has been used. Tho who wish to investigate the subject farther, will fi abundant means of doing it in the Chemico-Agricultur works of Liebig and Johnston.

NITROGEN.—A gas, which constitutes 79-100ths o our atmospheric air, and which is formed by the decomposition of a great variety of substances, is called at th present time, nitrogen, though formerly known as azot from its destructiveness to life. In the air, it exists as chemical compound with oxygen, but when combin with this substance, it forms nitric oxide, nitric acid, & Combined with hydrogen, it forms ammonia, one of th most essential elements of vegetation. It enters into th formation of animal matter with the exception of fat an bone, forms a part of most vegetable alkalies; and thoug in its gaseous state, fatal to animal life, the experimen of Majendie, confirmed in a most remarkable manner b the chemical researches of Liebig, prove that animal cannot exist for any length of time on food destitute o nitrogen. Nitrogen has long been considered as one o the simple elements, but the experiments of Farada would seem to render it probable that it is, after all, compound. In the parts acted by various agents in th nutrition of plants, nitrogen exercises a most importan one, as the action of the nitrates when applied to soils o crops, demonstrates. Indeed, it seems to be very satis factorily established, that the value of manures is to be estimated principally by the quantity of nitrogen they contain or are capable of furnishing for the use of plants.

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* The publication of this Dictionary of Agricultural Terms was commenced in the 7th vol. of the old series of the Cultivator, and continued in that and the succeeding volumes to the termination of the letter M. It was written by our late associate, Mr. Gaylord, and the portion we now give, concludes the series written by him.

NUTRITION.—The value of different substances for nutrition, or for promoting the growth of animals or plants, varies materially, and as all cultivation has for its end this principal object, the proper understanding of its nature, and the best means of effecting it, has long been a subject of anxious research. It must be acknowledged however, there are many points connected with this most important function of nature, still involved in mystery; while these researches have thrown considerable light on the general questions involved in the inquiry. The substances that nature employs to promote growth and sustain life, are termed *food*, whether employed for the nutrition of plants or animals; and if the latter cannot exist on the materials that support the former, it does not render less important the action of the former.

The original elements of nutrition appear to be but few in number; and there appears to be a regular gradation in the perfection of organization and combination of the materials required for nutrition, from the most imperfectly organized vegetable, to the highest limit of organization, as existing in man. Each plant or animal in the scale, feeds on materials prepared by the one placed below him; and which appears to have given to the elements a new combination for this express purpose. From this beautiful provision of nature, there is no deviation, except such as is forced and unnatural. Materials once organized, and endowed with life, never lose the power of contributing to life in a much greater degree than those not so endowed; hence the necessity of some medium between animals and unorganized matter, a medium filled by the vegetable. Man compels all organized matter to contribute to his sustenance; he alone appears to be omniverous; yet man finds some substances better adapted to his nutrition than others, and frequently pays the penalty of disregarding the admonitions of nature on this point. It is a singular fact, that of all the substances used for the purposes of nutrition, there is but one and only one intended for this purpose and for nothing else, and that one is milk. A knowledge of this, has greatly aided the researches into the practical value of different substances for food, as it was reasonable to suppose that those containing the same elements as milk, or which by the action of the stomach could be converted into such, would be the most valuable; a result fully justified by experiment and observation.

Of meat, the most nutritive parts are the muscular, or the dark colored meats, while the white meats, fat, gelatinous parts, &c. contain much less that is suitable for nourishment. This result seems to be owing to such parts containing less nitrogen, or the principle termed osmazome, and hence are unsuitable for those whose digestion is impaired or defective. Of meats, lean beef contains the most nutritive matter, and is for the purposes of food, of course superior to all others. Of plants, wheat contains the most nutritive matter, containing, according to the reports of Percy and Vauquelin, 80 lbs. in 100. It is true the same chemists rated beans higher than wheat, as they did peas; but later investigations do not seem to have sustained them in their decision, although in all cases peas and beans have ranked next to wheat. Butcher's meat, on an average of the common kinds, gives about 35 lbs. in 100 of nutritive matter; and potatoes only about 25 lbs. in 100. "Thus 1 lb. of good bread is equal in nutritive power to 2¾ lbs. of the best potatoes, and rather more than equal to 2 lbs. of meat; while 75 lbs. of bread and 30 of meat are equal to 300 lbs. of potatoes." (Johnson on Food.) There is one thing, however, that must not be overlooked in all discussions on nutrition, and that is, that when substances containing the most nutritive matter are taken exclusively, more is used than is required, as the material of distention as well as nutrition is required in all substances taken as food. To the healthy action of the stomach, without which the functions of nutrition must be imperfectly performed, it is indispensable that bulk should be combined with the nutritive matter in proper proportion, and it is this that in no small degree constitutes, so far as convenience and health is concerned, the actual value of any given article of food. A man or an animal will indeed live for a time on those substances alone, that contain the most nutriment; but experiments prove that they will not retain as good health or do as well as when a portion of more bulky and less nutritive food is combined with the richest. Thus a horse will not do as well on wheat, as on oats, because the bulk of the latter is better proportioned to the nutritive matter required for vigorous health than in the former. Indian corn too, one of the richest of all articles in nutriment, should always be given to animals in connection with cut straw or chaff of some kind, or no small portion of its value is lost, and the animal not unfrequently injured. We know of some excellent observing farmers, who prefer mixing one-third oats with the corn they give their fattening pigs as food, and would prefer the oats even at the same price as corn, rather than feed the latter alone. Farmers complain that barley does not agree with horses as food. The reason is they do not in feeding, take into account the greater amount of nutriment contained in barley over oats, which make the common standard of feed so far as bulk is concerned, and hence the horse, as when fed with wheat, becomes fevery and ill.

A comparison of the several kinds of vegetable food, generally used for the purposes of nutrition, cannot but be useful, as showing the farmer what quantity of one, may be substituted for another. The following table, given in Burger, from Petris' work on the "care and keeping of sheep," may be considered as a list of equivalents. It will show that while of some an animal could scarcely eat enough to support life, of others the nutriment would greatly exceed what the wants of the animal demanded.

100 lbs. sweet, well cured meadow hay, containing 50 lbs. of nutritious matter, are equal to

90 lbs. clover hay,	100 lbs. of which contain	55½ lbs. nutritive matter.
90 lbs. tender vetch hay,	do	55½ lbs. do
90 lbs. tender lentil hay,	do	55½ lbs. do
360 lbs. wheat straw,	do	14 lbs. do
500 lbs. corn straw,	do	10 lbs. do
180 lbs. barley straw,	do	27½ lbs. do
200 lbs. oat straw,	do	25 lbs. do
200 lbs. pea straw,	do	25 lbs. do
190 lbs. millet straw,	do	26½ lbs. do
200 lbs. horse bean straw,	do	25 lbs. do
180 lbs. chaff,	do	27½ lbs. do
200 lbs. potatoes,	do	25 lbs. do
200 lbs. cabbage turneps,	do	25 lbs. do
200 lbs. yellow turneps,	do	25 lbs. do
400 lbs. white turneps,	do	12½ lbs. do
300 lbs. beets,	do	16¾ lbs. do
500 lbs. white cabbage,	do	10 lbs. do
82 lbs. Indian corn,	do	95 lbs. do
82 lbs. wheat,	do	95 lbs. do
55 lbs. rye,	do	90 lbs. do
61 lbs. barley,	do	82 lbs. do
64 lbs. buckwheat,	do	78 lbs. do
71 lbs. oats,	do	70 lbs. do
54 lbs. peas,	do	93 lbs. do
54 lbs. horse beans,	do	93 lbs. do
83 lbs. wheat chaff,	do	60 lbs. do
105 lbs. wheat bran,	do	48 lbs. do
109 lbs. rye bran,	do	46 lbs. do

To keep in equally good condition, it appears from various experiments, says C. W. Johnson, that a horse will consume as much food, besides grain,

As........................	8 sheep,
A cow as much as............	12 "
A fattening ox as much as.....	10 "
A 3 year old heifer as much as	8 "
A 2 " "	6 "
A 1 " "	4 "
A calf as much as............	2 "

CURE FOR SORE TEATS.—Archibald Jones, Esq. of Frankfort, Me., writes to us that a good remedy for sore teats is to make an application to them of molasses at the time of milking. This confirms what other friends have communicated on this subject.—*Boston Cultivator.*

CONDENSED CORRESPONDENCE.

Early Importation of Merino Sheep.—In speaking of the importation of Merino sheep by Mr. Jarvis, in the April number of the Cultivator, we alluded to an importation made into Massachusetts by Mr. Seth Adams, now of Zanesville, O. We have since received a letter from Mr. A. giving an account of his importation, in which he says:—"I imported in the brig Reward, Capt. Hooper, which left Diepe in August, 1801, and arrived in Boston in October following, a Merino ram and ewe. These I believe were the first pair of Merinos imported to the United States. The Agricultural Society of Mass. having offered a premium of $50 for the importation of a pair of sheep of a superior breed, Col. D. Humphreys of Connecticut, imported a flock of Merinos, (say 100,) and sent some of them to Massachusetts, and he, or some one for him, applied to the Society for the premium. Knowing, from report, that his sheep did not arrive before the spring season *after* the arrival of mine, I applied at the same time for the premium, and after having examined the sheep and wool, and comparing with those of Col. H., the Society awarded to me the premium, and awarded to Col. H. a gold medal for having imported a larger number. My sheep were from the flock brought from Spain by Bonaparte, and distributed through France to improve the flocks of that kingdom."

Pigeon Weed or Red Root.—"C. M. A. J." of Tompkins County, says—"The plan adopted by the farmers in this section of country, is by plowing in the fall, the usual time of sowing wheat; again in the spring, when the ground can be used for summer crops of any description, and I will guarantee, yea more, I will stake my reputation upon it, that all that makes its appearance in the fall and spring, will *never* do so again. This method is considered with us, the most economical and effectual of any yet discovered, of *eradicating the evil. Try it, and you will know.*"

Farming Capital.—From a communication by Mr. L. Durand, we make the following extracts:—"I think it correct to say, that a liberal expenditure of capital in farming, will ultimately pay better than when laid out in any other business. The difference between capital laid out in farming, and that laid out in manufacturing, is, that all which is expended in the latter beyond the actual profits of the goods manufactured, is a dead loss, while that which is laid out on the farm, under good management, causes it to improve and increase in value from year to year. In manufacturing, the interest on the capital may be received within six months or a year. In farming, it may not be so, but it will be sure to give its return in a series of years. Another item which has been much neglected by farmers, is that of purchasing *good implements* to carry on their farming operations. In this country, where manual labor is high, a farmer should obtain as many labor-saving implements as can be used to advantage. Although these implements may cost more at first than common ones do, they will find their account in it at last. Get the best implements to be had, even if you have to go out of the State for them, and you will thus be able to perform more work in a better manner, besides saving much labor, and preventing a great deal of *fretting* and ill temper. Try it and see."

Names of Animals.—A correspondent with the signature of "Junius," has sent us a long communication censuring what he calls the "misguided tastes of many of our breeders of fine stock in selecting names for their animals." We think his remarks entitled to some consideration, but can only find room for the following extract:

"It seems to be a desirable object with many, to select refined, genteel and pleasing names for their favorite animals, at the expense of modesty and etiquette. To me, it has been a source of mortification, to see old and cherished names of my own family, and respected acquaintances and neighbors, applied to soulless brutes. Go into any school-house in the land, and you will see bright looking boys and girls, with countenances flashing with the soul of genius and thought, answering to the same names that are applied to the inmates of the stables, cattle-yards and pig-sties. Not long since, I was called on to give a name to a bright eyed little cousin of mine. Feeling the responsibility of my trust, I had recourse to the 'old family bible.' After looking over a long line of ancestry, I found a name that sent a thrill of pleasure through my nerves: it was *Emma*. The present to accompany the name was bought; but imagine my surprise, in looking over my paper for that month, I found a statement that Mr. —— had a poor broken backed cow (sacriligiously) called Emma, that gave a great quantity of milk, from which was made 3 pounds of butter per day. To use a tailor's expression, I was completely '*sewed up.*' But to confess the truth, the tenderest point of all, is this; the name of the fair enchantress of my dreams, is *Julia*—for my especial *benefit*, Mr. —— has a mammoth Durham cow, which he calls by the same name! What an association! Now my Julia is beautiful and accomplished, speaks French, and plays the piano and guitar, &c.—she is a scion from one of the first families in the state. Hear Mr. ——'s description of his Julia. 'Julia is six years old—a thorough-bred Durham from the stock of Mr. ——. She combines more good points than I ever saw in any other animal. She is broad in the hips, long and straight on the back, thin in the neck, well cut up under the jaw, round in the barrel, fine in the twist, has a prodigious udder, is deep and broad in the bosom, evincing good constitution, &c.'

"The idea of giving notoriety to an animal, by means of a fine name, is, I think, indicative that the owner has a '*strong cross*' of vandalism. When animals attain the organic perfection of man, when they are endowed with a soul to reason and will to execute, then they may be considered entitled to the names, titles, and property of our species."

Bees.—To stop bees from fighting and robbing one another, break the comb of the robbers so that the honey will run down among them, and they will go to work at home. I had two hives of bees destroyed this month by being robbed, and should have had another robbed, if I had not received the above information. R. S. Borden.

Fruit.—Mr. George Olmstead, of East-Hartford, Conn., informs us that Mr. Horace Williams of that town, gathered from five trees last fall, 160 bushels of apples, of the *Belle le Bonne* variety, which sold in market at 42 cents to $1,50 per bushel. Mr. W. thinks that he realized from the above trees, at least $100, equal in value to 200 bushels of Northern Indian corn, one year ago.

Saline Manures.—Mr. Feuchtwanger informs us that he is prepared to sell the super-sulphate of soda at half a cent per pound. This substance, when mixed with manure, or other animal substances, will be decomposed, and a sulphate of ammonia formed. He has also the crude and refined sulphate of ammonia, at 6 and 8 cents per lb., also, nitrate of soda by the bag at 5 cts. per lb. Mr. F. informs us that his compound chemical whale oil soap, is composed of the crude whale oil, potash, flour-sulphur, lime, and oil of camphor, and is a very valuable antidote for the coccus, rose-bug, curculio, &c., and it is said has been used with good effect in the orange groves of Florida.

Farming in Connecticut.—Our friend "Quercus," after stating some of the difficulties and perplexities attendant on commencing farming operations on a soil which had been worn out by bad management, says:—"So, the year has gone round—all the avails not counting 3 per cent on any respectable estimate of the value of our 300 acres! This is not a fancy sketch. I can even count dozens in no better condition, from my window, now; but nine out of ten are mortgaged. None of their managers take the Cultivator, you may be sure. But how do they live? They sell a little wood, and burn coal and live cheap, and buy nothing for money, and shoot foxes; starve their cattle and eat the carcass! But 'my man,' some bluff westerner would say, 'give away your land, (for I know it can't be sold,) get you a bit of our unexhausted soil, and begin again.' It is the easiest thing in the world to give advice to those of whose circumstances you have no knowledge. Still were no circumstances in the way, I should be loth to think and act upon the thought, that a proper degree of energy and skill and foresight, will not spread fertility like a mantle, all over these rocky hills and these mossy meadows. Beside there are attractions here—there are warm hill-sides in winter, and cool, rustling breezes in summer, and glorious old oak woods, and a hundred brawling brooks, that (you may laugh, if you have a mind to,) if the memory of their noisy prattle run's back to boyhood, call louder on a man, than the yellowest mint drops.

"At any rate, I will try what can be done to make my farm worthy of a history. If the resources which such men as Mr. Jas. Johnston have opened to view, be not *humbug*, if the system of changing crops, of multiplying manures, of more effectual tillage, of adequate protection to cattle, if careful feeding be not wholly impracticable, if the history of your most successful croppings be not fairy tales, and the *locum in quo* a fairy land, why, *something will be done here*. The progress of my trial, I shall open in scattered continuations of this history, neither exaggerating or concealing, in the hope that it may possibly be useful."

AGRICULTURE OF MICHIGAN.—Our correspondent "P." of Buffalo, says:—"In a recent trip through several counties in Michigan, I was agreeably surprised to find so great improvement in agriculture. Many farms in the older settled counties will compare favorably with the best improved farms on the line of the Erie canal; and the large surplus products they are sending off, particularly of wheat and flour, are a sure and very gratifying mark of great agricultural prosperity in the State The *rail road from* Pontiac, the county seat of Oakland, *though but* 26 miles in length and carrying only the *produce of that* county, brought to Detroit the last fall over 40,000 bbls. of flour, besides large quantities of other produce. The Central Rail Road running west from Detroit, was also crowded with freight cars the most of the season. Agricultural societies have sprung up in several places, and are producing a visible and happy effect among the farmers; and I observed a notice of a fair to be held in the spring, I think in Lenawee county, for the purpose of buying and selling stock and hiring help. Would not such fairs be specially useful in New England and New York? The soil in large portions of Michigan is admirably adapted to the culture of wheat, and 35 bushels per acre is not an uncommon crop among the farmers. There is, however, but little appearance of system, or of a proper rotation of crops, and the skinning practice prevails. The course pursued by many is to crop the land constantly for a few years, and then sell out and take up the line of march westward. Still Michigan, possessing generally a very rich soil, and water communication around it and through it equal to any State in the Union, and streams for an abundance of mill-sites in almost every county, is destined to attain a high rank in agriculture. The tide of immigration, arrested somewhat in past years by reason of an injudicious system of taxation, which is now in a measure abandoned, is beginning to roll in upon the State as formerly; large fruit-bearing orchards and thrifty nurseries appear here and there even in the newer counties, and a bold enterprise marks the general movements of the people. Success to thee, Michigan, in all that pertains to the culture of the soil and the mind; let your poultry-yards be graced with poland chickens, your piggeries with Berkshires and Woburns, and your fields with many more Durhams and Herefords, and you cannot but prosper."

PLASTER ON POTATOES.—Those who plowed green sward last fall for the purpose of planting potatoes this spring, will find that a spoonful of plaster, applied as soon as the potatoe comes up, will increase the harvest. Plaster seems to aid the potatoe on all kinds of land, though not equally. We have seen soils where a common spoonful of plaster proved as useful as a shovelful of manure.

If the land is in good order and the soil sufficiently mellow, the potato vines will need but very little hilling. The potatoes will make a bed for themselves in the rotting soil. We have raised at the rate of 400 bushels to the acre without hilling up enough to hide the plaster; it could be seen through the summer.—*Bost. Cult.*

COWS.

We make the following extract from an old volume of the Mass. Ag. Reports, both because an extended observation has convinced us that the quantities stated are in the main correct; and because it appears to furnish matter for some useful reflections:

"A milch cow of *medium quality* in this State, (Mass.) will give, it is supposed, 12 quarts of milk per day for 2 months after calving, and about 7 quarts per day on grass feed for the next four months, 4 quarts per day for the next two months, and perhaps 2 quarts per day for one month longer. Altogether, 1,500 quarts in a year.

It takes 9 quarts of milk to give a lb. of butter, and 4 quarts to yield a lb. of cheese. The skim milk and dairy whey of a cow, may be valued at $3 per annum.

Now a cow that gives 1,500 quarts of milk in a year, will produce

166 lbs. of butter, worth at 16 cts. per lb.	$26,56
Skim milk,	3,44
	$30,00

Or 1,500 quarts of milk will give at 4 quarts to the lb. of cheese,

375 lbs. which at 8 cts. per lb. will be,..	$30,00
Whey,	3,00
	$33,00

Nothing is said of the worth of the calf, as all the milk the cow gives is credited. A milch cow's keeping in the interior cannot be much short of $25."

That a majority of cows kept by our farmers for milk, do not give a greater quantity than that here named, will it is believed, be readily admitted. The prices, both of produce and keeping are higher than at present; but as they will neutralize each other, there is no necessity of taking them into the account. It must also be admitted, that there are many cows that greatly exceed the quantity of milk here stated, and some that yield more than double that amount.

That by attention to the breed of animals; to the rearing and selection of the stock from which the cows are to be chosen, to the choice of bulls from breeds of known milking qualities, and attention to the milking of the heifers, and proper feeding of them, cows in general could be brought up to standards in which the milk should be nearly or quite double the present ordinary quantity, we think there can be little doubt. It is because farmers have been contented with so low a standard, because with them "a cow is a cow," no matter what may be her milking properties, that the average amount of milk produced by them is so small.

It is not a very extraordinary cow that holds her milk for 10 months, that will give 8 quarts at a milking for two months, 6 quarts at a milking for the next four months, 3 quarts at a milking for the next 3 months, and 2 quarts per day for another month. Yet such a cow would yield 3,000 quarts of milk in a year, and of course the products of butter and cheese would be doubled. Admit that it was necessary to expend five dollars to procure materials for extra feed for this cow, bran, shorts, or grains, to be fed in mashes, (for it may be considered a fixed rule, that to keep cows in equally good condition, the greatest milker must receive the most food;) and with the exception of this expense, the profit of such a cow would be double that of an ordinary one.

The keeping of cows is much like the cultivation of land. If the crop does not reach a certain amount, there is a loss to the farmer, or the crop may precisely equal his expenses, the year leaving him as it found him; but all above this is a profit, and the more he can increase this balance, the greater his gain. So with a cow; if she does not give a certain quantity, she does not pay for her keeping, and the more such cows a man has, the worse off he is. On the contrary, all above a given yield is clear profit, and the farmer, or the dairyman, has every inducement to increase this amount as high as possible. This matter is one that commends itself to the consideration of every owner of stock, and particularly to the milk and dairyman.

New Publications.

"EUROPEAN AGRICULTURE AND RURAL ECONOMY."

The first number of this work, by Rev. HENRY COLMAN, has just been issued by A. D. Phelps, Boston. It is likewise published simultaneously in London. It is well printed, and is written in the peculiarly interesting and happy style of the author. The present number is in a degree miscellaneous, and can be considered scarcely more than an introduction to the general work, yet it embraces many valuable observations, and we think cannot fail to give satisfaction to its numerous patrons in this country. Among its contents, are chapters on the science of agriculture—English agriculture—English capital—general appearance of the country—hedges and inclosures—iron and sunken fences—the English parks—ornamental shrubs and flowers—climate of England—agricultural population—landlords, rents, and taxes—the farmers—the agricultural laborers—the allotment system.

Of the energy with which agricultural improvement is pursued at this time in England, and of the importance of agriculture, he thus writes:—

"England presents at this time a more brilliant example than any age or country has before witnessed of the application, I will not say of science, for that would not comprehend the idea which I wish to express, but the application of mind to agriculture. The practice of agriculture, and the philosophy of agriculture, are matters of universal interest. Men of all grades and conditions are laboring in this great cause, and are asking for the how, and the why, and the wherefore. The brightest intellects are directing their talents to agricultural inquiries; and the humblest in their humble but not inefficient way, are seconding their efforts. So many minds concentrating their rays upon the same point, they must be sure to illuminate it with an extraordinary brilliancy.

"Agriculture is now getting to be recognized as the commanding interest of the state; so it must ever be as lying at the foundation of all others. Few persons are apprised of their obligations to agriculture; and it is difficult to estimate the extent of these obligations. Every man's daily bread, his meat, his clothing, his shelter, his luxuries, all come from the earth. The foundation, or as the French would say, the *materiel* of all commerce and manufactures, is agriculture; and its moral influences are innumerable and most powerful."

In the chapter on "English capital," Mr. Colman says:

"Another marked distinction, already alluded to, between the condition of the proprietors of the soil here and with us, is in the amount of capital existing here. It is absolutely enormous; and almost distances the system of enumeration which we are taught at our common schools. Let me mention some facts which have been stated to me on credible authority; and let me premise that a pound sterling is about equal to five dollars United States currency. Under a law of the present government, here, levying a tax upon every man's income when it exceeds one hundred and fifty pounds sterling a year, persons liable to taxation are required to make a just return of their income under a heavy penalty. A confectioner, in London, returned, as his annual income, the sum of thirty thousand pounds sterling, or one hundred and fifty thousand dollars, or, six times as much as the salary of the President of the United States; which showed, at least, how skilful he was in compounding some of the sweets of life. A nobleman, it is said, has contracted with a master builder to erect for him, in London, four thousand—not forty—not four hundred—but four thousand houses of a good size for occupation. In some of the best parts of London, acres of land, vast squares, are occupied with large and elegant dwelling houses, paying heavy rents, in long rows, blocks, and crescents, and all belonging to some single individual. One nobleman, whose magnificent estate was left to him by his father, encumbered with a debt of some hundred thousand pounds, by *limiting*, as it is termed here, his own annual expenditure to thirty thousand pounds, has well-nigh extinguished this debt, and, in all human probability, will soon have his patrimonial estate free of encumbrance. The incomes of some of the rich men in the country, amount to twenty, twenty-five, fifty, one hundred thousand, two hundred thousand pounds sterling—even three hundred thousand pounds annually. It is very difficult for New England men even to conceive of such wealth. A farmer in Lincolnshire told me that the crop of wheat grown upon his farm one year was eighteen thousand bushels. The rent annually paid by one farmer in Northumberland, or the Lothians, exceeded seven thousand pounds, or, thirty-five thousand dollars. These facts, which have been stated to me by gentlemen in whose veracity I have entire confidence, and who certainly are incapable of attempting any "tricks upon travellers," show the enormous masses of wealth which are here accumulated."

Speaking of the state of "English agriculture," he says:

"The condition of practical agriculture in Great Britain, as far as I have had an opportunity of observing it, must be pronounced highly improved. Many parts of the country present an order, exactness, and neatness of cultivation greatly to be admired; but a sky is seldom without clouds, and there are parts of England where the appearance is any thing but laudable, and where there are few and very equivocal evidences of skill, industry, or thrift. We are often told in America that England is only a large garden, in which art and skill and labor have smoothed all the rough places, filled up the hollow places, and brought every thing into a beautiful and systematic harmony, and into the highest degree of productiveness. This is not wholly true; indeed, although there are many farms to be altogether admired for the degree of perfection to which their cultivation has been carried, yet there are not a few places where the indications of neglect and indolence and unskilfulness are but too apparent; and where, in an obvious contest for victory between the cultivated plant and the weeds, the latter triumph from their superiority both in force and numbers."

Of the condition of the laboring agricultural class, he says—"The condition of the laboring agricultural class is certainly, in many parts of England, exceedingly depressed; and though in frequent instances it may be called comfortable, in few that I have seen can it be considered prosperous. Their labor is not extraordinarily severe; they are by no means treated with unkindness, or, excepting through the misfortune of the ill-temper of their employer, with severity; they are decently clad, and there is a great amount of active benevolence everywhere at work to assist them, and to alleviate their distress in sickness and misfortune. But they are very poorly fed; with many exceptions, they are wretchedly lodged; their wages are inadequate to their comfortable support—and their situation affords little or no hope of improvement—at least, the power of making it better does not rest, where it should, with themselves."

"I am not at all disposed to quarrel with any of the institutions of this great and enlightened country—great and enlightened as a whole, beyond almost any precedent. I am not disposed, in any offensive form, to profess my own preferences for institutions to which birth and education may have strongly attached me, founded as they are on the great principles of universal liberty as the birthright of every man, and of social equality as conformable to nature, and the only relation in which men can stand to their Creator, or under which they would dare to approach him. But to my mind, it is obvious that no great improvement can take place in the character and condition of the laboring population while they remain a distinct and servile class without any power of rising above their condition. At present the most imaginative and sanguine see no probability of their rising above their condition, of being any thing but laborers, or of belonging to any other than a servile and dependent class. The low state of their wages absolutely forbids the accumulation of any property. They cannot own any of the soil which they cultivate. The houses which they occupy belong not to themselves, and they may at any time be turned out of them. They must ask leave to live, or they must take it by violence or plunder when they will not be suffered to live. Their only home is the grave, and even their repose here is not always secure."

We forbear to give further extracts at present, as the work deserves to be read in detail to be fully appreciated. The future numbers will embrace remarks on cultivation in general—live stock of every description—the breeding, rearing, and fattening of stock—the dairy—horticulture—rural architecture—agricultural schools and experimental farms—veterinary establishments, &c. &c. The present No. contains 100 pages, octavo, and it is expected the work will embrace 10 numbers of the same size—the price for which is $5. Published for the Author, by A. D. PHELPS, Boston.

The following extract from the Mark-Lane Express, shows the favorable reception which Mr. Colman's work has met in England:

"The readers of the *Farmer's Magazine*, who have already perused the Count de Gourcy's Agricultural Tour, will be forcibly struck with the marked difference of character of the two works, and which, in this very early state of the publication, shows that, whereas the Count was content with giving a pleasant narrative of what he saw—only, as it were, skimming the surface—Mr. Colman will go more profoundly and practically into his subject, and which induces us to augur well of the result. We were prepared to expect that he would treat the subject in rather an English manner; and with the exception of some few remarks, in which, we think, he does not make sufficient allowance for the different state of the social body as a whole, in England, as compared with the United States, we are right well pleased with what we have perused.

"The remarks which he makes on the relative state and position of the several classes of the agricultural body in England are not only interesting, but furnish matter for serious reflection, seeing that they are made in a spirit devoid of that prejudice which but too frequently displays itself in works of a similar character."

REPORT OF THE COMMISSIONER OF PATENTS.

This document of 335 pages, is one of the most valuable that has been issued. The Commissioner, Mr. H. L. ELLSWORTH, is entitled to great credit for his indefatigable zeal and industry in the collection and diffusion of useful facts, which cannot fail to be of great advantage to the country. The dissemination of valuable seeds, is of itself an object of great importance. Of these, Mr. Ellsworth has distributed no less than twelve thousand packages during the past year. He mentions a variety of *rice* now cultivated in high latitudes and even on the edge of the snows of the Himalaya mountains, from which circumstance he concludes there is every reason to believe that upland rice will flourish wherever Indian corn will ripen. Some seed has been ordered for this country, which Mr. E. hopes ere long to have ready for distribution. The *multicole rye* has been considerably diffused in this country, and we shall probably soon know what success has attended its cultivation.

Mr. Ellsworth speaks of the construction of houses of unburnt clay. Several experiments recently made in the United States and Canada, seem to prove the expediency of erecting houses of this description. With a good foundation of stone, there is no doubt of their durability. In Egypt, unburnt bricks have been found in arches, undecayed, that have stood the lapse of 2,000 years. Mr. E. has himself erected one of these houses near the capitol at Washington, which appears as handsome as the best brick houses. It is warm in winter and cool in summer, and where clay is abundant and timber scarce, he does not hesitate to recommend this mode of building.

A process for *preserving wood*, by Dr. Boucherie, of the French Academy, is spoken of, by which it is said, wood has been rendered so hard that the wheel of a rail-road car, leaves no trace after more than a year's use.

A machine for *ditching*, by which, with ten yoke of oxen and five hands, ten miles of ditch, 14 inches deep and [illegible] inches wide at the top, may be excavated in one day, at an expense not exceeding 3 cents per rod. A larger machine will excavate a ditch three feet deep.

Hosiery is now made in this country with astonishing rapidity, by the aid of the power-weaving loom—an American invention, not yet introduced into England. It is a full day's work to knit by hand two pair of drawers. A girl with the power-loom, will make twenty pairs in a day. A piece 28 inches long and one inch wide, can be knit in one minute.

Hooks and eyes. Thirty years ago the price was $1,50 per gross; now it is only 15 to 20 cents. At one establishment in New Britain, Conn., 80,000 to 100,000 pairs are made per day, and plated by a galvanic battery, or the cold silver process. The value of this article consumed in a year is stated to be $750,000.

Mr. Burden's improved *horse-shoes* are spoken of. At a factory recently erected by Mr. B. at Troy, *fifty tons* of these shoes are turned out per day. They are sold at the price of only five cents per pound, which brings a set of shoes at about twenty-five cents. It is believed that these shoes can be exported to Europe to good profit.

The improvements in the manufacture and making up of leather, have greatly reduced the price of shoes. Those who have not turned their attention to this matter may be surprised to learn that leather made water proof, will last a third longer than other kinds. The annual saving in the cost of this article in the United States, by this improvement, is estimated at not less than $16,000. A very simple composition of rosin, bees-wax, and tallow, applied warm to the soles and uppers, so as to thoroughly saturate the leather, is found very effectual for this purpose.

By the new process of *sugar making*, invented by Prof. Mapes, one establishment in the city of New-York produces from 15,000 to 20,000 pounds of sugar per day from common West India molasses. The sugar is generally superior in quality to that made from the cane in Louisiana. Molasses which has become *sour*, is often used with good effect.

The *electro-magnetic telegraph*, is spoken of as one of the great improvements of the age—one that is destined to exercise a great, and it is believed, a happy effect in the transmission of intelligence from one section of the country to another. Experiments already made in England and on the continent, leave no doubt of its practicability, and this will ere long be further tested on the rail-road route between Washington and Baltimore. The rapidity of communication by this means, is truly astonishing. The rate at which the electro-magnetic fluid passes, according to Mr. Wheatstone, is 288,000 miles, (equal to eleven and a half times around the globe,) in one second! We see the "streak" of lightning in the heavens, but it leaves no trace; the stream is passed in less than a twinkling of an eye, and is gone far beyond our sight. In the same manner, with equal swiftness, the electro-magnetic fluid, unerringly conveys the intelligence entrusted to its operation. The medium employed is simply a copper wire, insulated and extended on posts, at an expense not exceeding $150 per mile. The advantages of this mode of communication must be obvious both in war and peace. The most extreme points of the country can enjoy the earliest intelligence of the markets, and thus be prepared against speculation. Criminals will be deterred from the commission of crimes, under the hope of escape upon the "iron horse," for the mandate of justice, outrunning their flight, will greet their arrival at the first stopping-place.

The experiment of illuminating the streets of Paris with the electric spark, it is said have been quite successful.

The *culture of pumpkins on grass land*, is spoken of as a very advantageous mode. Holes were dug and filled with manure proper for vines, and the seeds planted. The vines did not begin to run till after the grass was mowed for hay. By the time the meadow was wanted for fall pasture, the squashes were ripe, taken from the vines and weighed. From two seeds planted, between six and seven hundred pounds of squashes were produced. It is computed that an acre planted by this mode, allowing about 90 hills to the acre, would produce about 18 tons of pumpkins or squashes.

DOWNING'S WORKS.

"The Fruits and Fruit Trees of America."—This new work of Mr. Downing, which has been for some time in press, is announced to appear about the first of this month.

We are glad to see a second edition of his "Landscape Gardening," and "Cottage Residences," has been so soon called for. The first part of "Cottage Residences" has already appeared; and it is announced by the author that Part II. which is in preparation, will contain hints and designs for the *interiors* and furniture of cottages, as well as additional designs for farm buildings.

The second edition of the "Landscape Gardening" will be out in a few weeks, some delay having been caused by the number of very beautiful *new* illustrations introduced into this edition. A considerable portion of the work has been re-written, and many additions and improvements have been made by the author, to render it as complete as possible.

Transactions of the New-York State Agricultural Society for 1843.

This volume is just published. It comprises 671 pages. Among the many interesting and valuable articles it contains, is a treatise on Insects injurious to field crops, orchards, gardens, and domestic animals, by the late Willis Gaylord, Esq.—an article on the Diseases and Insects most injurious to the Wheat crop, by John J. Thomas—Report of experiments in cultivating various kinds of Wheat, by Gen. Harmon of Monroe county—the Geological Survey of New-York, in its influence on the agricultural and other industrial interests of the State, by Professor Hall, &c. &c. Taken altogether, it is a volume highly creditable to the Society from which it emanates.

"Clater and Youatt's Cattle Doctor, *with numerous additions by* J. S. Skinner, *assistant Post-Master-General, &c.* Lea & Blanchard, Philadelphia.

This is one of the best works of the kind that has ever been published, and we do not hesitate to recommend it to every farmer. By consulting its pages he will be able to manage his stock in all cases better than would be done by the ignorant cow-leeches to whom the treatment of the diseases of our domestic animals is generally entrusted. Attention to the diseases of domestic animals is a subject very much, nay, *criminally neglected* in this country. In the language of Mr. Skinner, in the preface to his work, "To say nothing of the duty which common humanity enjoins on every one, to be prepared with common medicines, and directions for the use of them, which may enable him to extend prompt relief to speechless suffering; on the sordid score of self-interest alone, the most calculating, it may be supposed, will not hesitate to provide himself with a book which in teaching him to be his 'own Cattle Doctor,' may enable him to save the life even of the meanest animal on the estate."

To the original work of Clater and Youatt, Mr. Skinner has made extensive additions, and among these is a valuable Essay on the use and management of Oxen, and an interesting paper on Sheep Husbandry; he has also increased the value of the work by numerous illustrations which are not contained in the English work. The vol. (230 p. 12 mo.) is got up in good style, and sold at the low price of 50 cents.

CUTTING WHEAT EARLY.

From our own experience, and from the experiments made by others, particularly the ably conducted ones of Mr. Hannam of England, of which an account has been given in a former volume of the Cultivator, we have been convinced that farmers much more frequently err by allowing their wheat to stand too long before cutting, than by harvesting too early. We have never known an instance where loss was sustained from early cutting, but there is not a year passes in which more or less loss is not suffered by standing too long. Cut early, the berry is whiter, the skin thinner, and the flour better. The following, which we find in the Michigan Farmer, will add to the proofs already given in the Cultivator, tha our position is correct. It is part of a letter from Dr Eldridge:

"Amasa Andrews, Esq. of this town, harvested sixty acres of wheat last season, while it was so green and unripe, that every farmer in the neighborhood thought, and did not hesitate to declare him mad. He commenced cutting ten days before any other person thought of beginning, and finished before others had begun. The berry when cut was soft, and in that state known as "being in the milk." He has now threshed it; and being somewhat curious to learn the result of the experiment, I to-day went, in company with Mr. Andrews to the mill, and examined the wheat. I found it plump, with a peculiar transparency of the berry, I never before saw—which is to be attributed to the very thin coating of the bran. We weighed some and found it weighed just sixty-three lbs. to the measured bushel; and the experienced miller informed me, that it made *more flour* and *less bran* than any wheat he ever saw."

QUICK GERMINATION.

As a general rule, it will be found that a seed planted in such a manner as to ensure a quick germination, and a sufficient supply of nourishment afterwards, will give the most vigorous plants, and the most abundant returns to the cultivator. On this fact depends much of the benefit of manuring, and the difference also which results from the application of manures at different times. No seed requires to be buried deeper than is necessary to ensure moisture, and exclusion from light. If buried so deep that the nutritive matter of the seed is exhausted (and that alone forms the first and most important supply of food) before the shoot reaches the air, or the root the manure intended for its use, life may be continued, but in a state fatal to a good product. The experience of turnep growers, or those who sow small seeds to any extent will show the correctness of the above rules. If the manure is covered so deep that the roots must have a growth of weeks before they reach a proper supply of nourishment, the plants will be feeble, their growth slow, and a check will be given from which the plants rarely recover. If on the contrary the seeds are lightly covered and the manure fine and mixed with the earth in which the seeds are deposited, the growth will be rapid, and the impulse given at first is rarely lost in the growth of the plant. Bone manure has long been celebrated for the rapidity with which it brought forward crops to which it was applied. The fact that it was drilled in with the seeds, and therefore placed in contact with them, or in the position where its influence would be most sensibly felt in giving a rapid and vigorous germination, was for a while overlooked, and virtues were attributed to the substance, that in a great measure belonged to the method of using. The more thoroughly decomposed ordinary manure is, the quicker will its influence be felt on the young plant; and it is found that sown in drills with wheat or turneps, it is not inferior to bone dust in promoting a speedy and vigorous germination. The philosophical experiments of Davy showed that the most benefit would be derived from manures if used in a fresh or long state; and the decomposition of vegetable matters, or the preparation of compost was for a while abandoned, and the manure deposited as recommended by the philosopher. Experience soon showed, however, that while the soil was made better by the use of undecomposed materials, there were some crops to which the theory was not applicable; but that where a quick growth was indispensable, manure in the state that gives immediate nourishment was to be preferred. Thus in Great Britain the use of rotted or compost manure for turneps has again become almost universal; unless in those districts where good management has rendered the soil already so fertile and rich, that the immediate effect of the manure used is not required to the perfection of the crop sown. Farmers, therefore, in the preparation and use of their manures should be governed by the nature and condition of the soil to which it is to be applied; and the plant which it is intended to nourish.

FERMENTATION OF GRAIN.

We have received a communication signed "A. R. D.," asking for some information in regard to the fermentation of grain. He asks—"Will chemistry assist us here?" He then observes, "It seems that the heat is only one of the consequences resulting from chemical action, and is not absorbed *from* the atmosphere as many seem to suppose, because they have observed that it occurs mostly during hot weather. A high temperature is undoubtedly one of those circumstances, under which it goes forward most rapidly, because then the atmosphere will not take up the heat as fast as it is evolved, during the transformation. Under a low temperature the caloric escapes as fast as produced, and the fermentation stops, because one of the circumstances under which it will proceed, is wanting. But is it not going on even then, though but slowly?

"Liebig pronounces the whole process to be a species of combustion, and it is certainly very similar in its operation. In both cases, any substances undergoing combustion or fermentation, will cause other substances of the same nature to pass into the like condition, if brought in contact therewith. The same author tells us, that it is a common *error* to suppose that this operation goes on without any disturbing cause externally. But this must have been with the learned, for common people have thought it altogether produced by external causes, of which the hot weather was the most active. The above celebrated chemist declares that those substances which ferment most readily, remain unchanged as long as the cells or enclosing organs resist the action of the air. But as soon as the envelope gives way, and air is introduced, the juices absorb oxygen and the decomposition commences. First, we have the saccharine fermentation, second, the vinous, then the acetous, and lastly, the putrefactive. The first is necessary in the germination of seeds, and about the same temperature is required to sprout a seed in the earth, as will "heat" the contents of the granary. And thus we see why some farmers are subject to such grievous disappointments with respect to their seed. They thresh out their grain, store it, the saccharine fermentation takes place, and if sufficient moisture were present it would grow; but it is not, and thus the vital principle soon becomes extinct. And so we conclude that kiln-dried grain will not answer the purpose for seed, and that kiln-drying effects its object by expelling the moisture, so that one of the principal conditions of fermentation shall be wanting.

"Now here a question of great interest arises, as to the extent of the injury in each of the successive stages of fermentation, when the grain is intended for manufacturing purposes. If some practical man among your readers would give us the conclusions of his experience and observation, or institute some experiments in relation thereto, and communicate the results, he would perform a most acceptable service. Would the *grain* proceed farther than the first stage of fermentation at all? And would the quality of the flour be then materially injured? But when it is ground and barreled up, would not the vinous and the subsequent stages of transformation follow on, and so destroy the flour; for then that species of fermentation necessary to the preparation of bread would have been anticipated, and bread could not be made.

This disposition to "heat" or ferment, is also allowed to be greater or less in the various grains, according to the proportion of gluten or nitrogenous matter they contain. Can you not therefore, Mr. Editor, for our information, give us a list of analyses of our principal grains, wheat, corn, barley, buckwheat, &c., showing the gluten, starch, &c., of each in their several proportions, so that it can be seen which will be most exposed to fermentation, under the same circumstances of heat, moisture, and the other conditions. Might we not also, justly infer from the above fact, stated by Liebig, that the process would commence sooner in the state of flour, when the hulls and bran are removed, and proceed more rapidly than while it were yet enclosed in the envelope, and less facility given for the air to operate on the fermentative matters."

In conclusion it is asked, whether some cheap practical method could be devised for drying grain, so as to secure it against damage by fermentation? And whether it is supposed that a "few hundred bushels of grain, to the depth of 12 to 18 inches, spread on the floor of a small room, kept up to 100° Fahrenheit, by artificial heat, for several days in succession, would answer the purpose?"

EXPERIMENT IN FEEDING SHEEP.

J. W. Childers, M. P. in a late English publication, has given a detailed account of an experiment made in feeding two lots of sheep, one in a small yard and out shed to protect them from the weather, and the other in the usual manner in the open field. As it is conclusive on the advantages of protection in feeding, we have abridged it for the Cultivator.

On the first of January, Mr. C. took from his flock 40 wether hogs (yearlings) Liecesters, and divided them into two lots, one weighing 183 stone, 3 lbs., and the other 184 stone, 4 lbs., and in other respects there was as little difference as possible. The first lot was put into the yard, the second into the field; and each lot had exactly the same quantity of food given them, which was as follows:

1st. As many turneps as they could eat, which was about 27 stone per day for each lot.

2d. Ten lbs. of linseed cake, or half a lb. per sheep per day.

3d. Half a pint of barley per sheep per day.

4th. A little hay, and a constant supply of salt.

For the first three weeks both lots consumed the same amount of food, but in the fourth week, the lot in the shed eat less by 3 stone of turneps per day, and in the ninth week they fell off 2 stone more. Of linseed cake, there was also a falling off of 3 lbs. per day. The lot in the field consumed the same from first to last.

The result of the experiment was as follows:

20 *Shed Wethers.*	*Increase.*	20 *Field Wethers.*	*Increase.*
Jan. 1st, 183 st. 3 lbs.		184 st. 4 lbs.	
Feb. 1st, 205 st. 0 lbs.	21 st. 11 lbs.	199 st. 8 lbs.	15 st. 4 lbs.
Mar. 1st, 215 st. 10 lbs.	10 st. 10 lbs.	208 st. 2 lbs.	8 st. 8 lbs.
Apr. 1st, 239 st. 9 lbs	23 st 13 lbs.	220 st. 12 lbs.	12 st. 10 lbs.
Total increase,	56 st. 6 lbs		36 st. 8 lbs.

Thus the shed wethers, though consuming one-fifth less food, made above one-third greater progress; and the circumstances of the experiment were on the whole unfavorable to the winners, as the turneps being stored in a house for their use, were more wilted and dry, than those consumed in the field by the other lot. The shed floor was swept each day, and fresh straw given after each shower of rain."

AGRICULTURAL SOCIETIES.

Great Cattle Show at Worcester.—The Mass. Society for the Promotion of Agriculture, are to hold a State Cattle Show and Exhibition of Agricultural Implements at Worcester in October next. The trial of plows and other implements, is to be held on the 9th, and the show of stock, &c. on the 10th. The premiums are liberal, but we are sorry to see that those for stock are confined to such animals as shall have taken premiums from County Ag. Societies within the two previous years. Such a restriction in this State would prevent the exhibition of much of our best stock, and we should fear that it would have a similar effect, though in a less degree, in Massachusetts.

County Societies in New York.—The Rensselaer Co. Society hold their Fair for this year, at Troy, Oct. 2, 3.—The Chatauque Co. hold theirs at Jamestown, Sept. 25, 26. Among the premiums to be awarded, we notice are 25 copies of the Cultivator and the same number of the New Genesee Farmer.—The Dutchess Co. Fair is to be held at Washington, Sept. 12, 13, the week previous to the State Fair at Poughkeepsie.

Bucks Co., Pa.—At the meeting of this Society on the 18th April, an Address was delivered by Joshua Dungan, Esq. an experienced and successful farmer, which is published in the county papers. It is scientific and practical, full of sound suggestions which can hardly fail to have a most beneficial influence.

Foreign Intelligence.

The Weather and Crops in England.—The latest accounts represent the weather as generally favorable, and the grain crops promising. In the Highlands of Scotland, the spring was backward, owing to the late continuance of the great quantities of snow which fell in February.

English Farming.—J. J. Mechi Esq. gives, in the English *Farmer's Herald*, an account of his *improvements* on a farm of 130 acres in Essex. The whole improvements, including over *eighty miles* of drains, amounted to the sum of $23,400! The 132 acres cost him $14,400, making the total investment amount to $37,800—or a fraction over $290 per acre, and yet he esteemed this a better investment than to place his funds in the public stocks.

Guano.—Within a short time, experiments have been made in England with guano found in the Hebrides, and other Scottish islands, and also with the same substance found on the coast of Africa. We have seen no statement showing the comparative value of the Scottish; but in the late English papers we notice the results of various analyses, from which it appears that Peruvian guano contains from 86 to 88 parts in 100 of available matter, and the African 76—or, compared one with the other, as 7 to 8. Comparing cost and value, when delivered in England, however, the African is said to be 23 per cent cheaper than the Peruvian. In England, guano is estimated five times stronger than night-soil, four times stronger than dove-cote manure, "a deadly enemy to the wire-worm and fly, and a preventive of mildew and red rust." We doubt whether experiments in this country have supported this high estimate of its value. Attention is now being directed to the islands in the gulf of St. Lawrence, the coasts of Labrador and Newfoundland, &c., for this substance.

Sawdust as Manure.—The Highland and Agricultural Society of Scotland has lately published a paper on the use of saw-dust as manure. It is highly recommended as litter for byres, cattle-sheds, pig-styes, &c., and answers well both for keeping the animals clean, and for absorbing the urine. We have often used saw-dust for this purpose, and can recommend it as one of the best articles to be had. We have also used, and seen it used, for ameliorating clayey and tenacious soils, with good effect. In some sections this substance may be obtained in abundance, and instead of being wasted as it generally is, it would be found, if used in the manner above mentioned, highly valuable.

Large Sheep.—Two sheep, said to be of the Devon breed, were lately killed at Exeter, (Eng.) one of which weighed 71½, and the other 73 pounds per quarter.

Short Horns.—An eminent stock-breeder from Belgium has lately purchased of Mr. Maynard, and others, near Darlington, fifty head of short-horn bulls and heifers. Nine Durham bulls were lately sold at the Veterinary School of Alfort, in France. The highest price paid was 3000 francs—(about $720,) and the lowest 1280 francs, (about $255.)

Pea-Straw.—At a lecture of the Rev. Mr. Sidney, at Acle, Norfolk, the Rev. gentleman drew attention to the waste of bean and pea-straw. It was cut too late. He gave the analysis of each as to nitrogen and gluten, which showed that 74 lbs of pea-straw, and probably of bean-straw also, equalled in nutriment 100 lbs. of common hay—a fact most important for farmers here, and well known in Scotland.

Linseed for Calves.—Boil 1 pint in a gallon of water; you need not soak it in water first. Give your calves from 1 pint to 1 quart of the jelly daily, according to their age. Give 1 pint to horses along with their chaff, &c. twice a day. It will not improve the milk, if given as food to cows.—*Gardener's Chronicle.*

Guano from the Islands of the North Sea.—Experiments are being made in England and Scotland, with the dung of sea-birds, procured from the islands to the north of Scotland. Its effects are not yet known. It can hardly be expected that it will be as powerful as the Guano from the Pacific, because it seldom rains where the latter is procured, and it might reasonably be supposed to possess more strength, than that which had been exposed to soaking rains. But it is yet thought doubtful whether Guano is really the dung of birds.

Stall Feeding.—Every one will admit the superior value of artificial grasses, who has made a fair trial of the difference between feeding cattle upon them cut green and given within doors, and on the other hand in turning cattle out upon a common pasture. A trial of this kind was once made in Scotland, and it was found that 27 head of cattle were as well kept upon the same quantity of ground in one method, as 18 in the other. Added to this, there is an immense saving in the making of manure, which process, the most important one of any, may be going on during the whole summer, instead of having what dung falls, scattered abroad, and dried up in the heat of the sun.—*Rawstorne's Remarks on Lancashire Farming.*

Manures are to farming what blood is to the animal frame; divested of their aid vegetation languishes, as the abstraction of the other leads to dissolution. Of all manures that are in use, commend your friends I pray you, to that from the farm-yard. Much goes to waste about every steading, that, being otherwise carefully used, with a trifling amount of labor might be made available in superseding the use of artificial or foreign manures.—*Ayr. Ag.*

Points of a Good Milch Cow.—The following is from a report of the Guernsey Agricultural Society. *Points.*—1. Purity of breed and qualities of the dam for yielding rich and yellow butter. 2. Small head, large and bright eyes, small muzzle, small ears, orange-color within. 3. Straight back from the shoulders to the tail, and chest wide. 4. A fine and loose skin, with soft and short hair. 5. Sides well rounded, flank small between the side and haunch, tail fine. 6. Fore legs straight and well proportioned, hind legs broad above the knee, fine and clean below; hoofs small; legs should not cross in walking. 7. Udder large, and the teats large and springing from the four corners of the udder; milk-vein large and well defined.

Cheese.—A return of the quantities of cheese imported into the several ports of Great Britain in each month of the year 1843, distinguishing the European, United States, and Colonial produce, has been printed on the motion of Mr. Colvile the member for Derbyshire. The aggregate importations from all parts during the year ending January 5, 1844, amounted to 179,389 cwt. From various countries in Europe, there were imported during the year, 136,898 cwt. From the United States of America (whence very rich fine flavored cheeses are now being constantly imported,) 48,312 cwt.; and from the British possessions abroad, only 79 cwt.—*English Farmer's Journal.*

CULTURE OF MILLET.

June is a good time to sow millet. It will do well sown any time in the month. It makes, when well cured, excellent fodder. One of the general advantages of this crop, is, that if the hay-crop is likely to come in light, this may be grown as a substitute. Half a bushel of seed, broadcast to the acre, is a proper quantity, though only a peck is sometimes sown on rich ground. It may, if desired, be sown in drills, and if designed for seed, this is the best way. A common turnep-drill will sow the seed well. It will yield bountifully, and the seed, when ground into meal, is excellent for fattening animals. Rather light ground is best for it—it will indeed do well on land that is too light for grass. in 1841, Mr. G. Jones received a premium from the Tompkins County Agricultural Society, for having raised on two acres, five and a half tons of millet-fodder, and sixty-three bushels of seed. It was new land—the wood and timber from which was taken off in the month of April, and twenty quarts of seed sown to the acre the 8th of June succeeding.

MR. PELL'S FARMING.

We give the following letter from Mr. PELL, with pleasure, and shall be glad to receive the results of the experiments, spoken of in his private note as now in progress, for publication. Notwithstanding the favorable results which Mr. P. thinks he obtained from the use of one bushel of clover seed to the acre, and a bushel of salt to a ton of hay, we cannot but think that a reduction of at least one half these quantities might have been made without a decrease in the product of hay in the one case, and with a decided benefit to his cattle in the other. To compel animals to eat a larger portion of salt than nature requires, cannot but be injurious. While we by no means question the statements of Mr. P. in relation to his experiments, we cannot doubt but that there must have been other favorable circumstances concurring, aside from the use of charcoal, to produce the extraordinary yield of wheat alluded to.

LUTHER TUCKER, ESQ.—In overlooking the May number of the Cultivator this morning, I was surprised to find several communications had been sent you for publication by different individuals, questioning the utility of a few experiments I had tried, found advantageous, and made public, solely that others might be benefitted. "Long Island" attributes my success in wheat culture to the use of lime, and says, "Let the experiment of lime and charcoal be made side by side, and given to the world."

I would refer "Long Island" to an article of mine *published* in the December number of the Cultivator, *page 197*. The land which produced at the rate of 78¾ bushels of wheat to the acre, was manured with pulverized charcoal dust, lime not being used in that experiment. By analysis the soil contained gypsum and a little common salt, soluble in water—a very little phosphate of lime, carbonate of lime, and silicate of potash, soluble in muriatic acid. So that further than what was naturally in the soil, no addition of lime was made. This spring on the 23d of April a head of clover fully developed, was plucked near the same piece. Near it, I limed four acres, at the rate of 200 bushels of oyster shell lime to the acre, and the yield was not 25 bushels per acre.

Next in order, page 153, I find Mr. J. Johnston of Geneva, has taken up his "pen to show" that my "opinions are wrong," and some of my "practices are actually cruel." I have pursued the same mode for two years, sowing half a bushel of timothy seed, and one bushel of clover seed to the acre; likewise have cut my grass, housed it on the same day, and salted it with one bushel of fine salt to the ton. In the winters of '43 and '44, I fed 12 head of cattle and three horses on hay so cured, and I flatter myself they would be considered creditable to any farmer, by either Mr. Johnston or Mr. Curtis.

I have within the last two years, tried Mr. Johnston's method of sowing five pounds of clover seed on a small gore of land, and contiguous to it one bushel. From the latter I cut three tons, and from the former one ton of hay to the acre—measured when cured. Mr. Johnston "thinks I am one of those farmers that tell men to do so and so, but who neither helps to do it, nor sees that it is done." I will confess that I do not often help to do the work, but generally see that it is well done.

Page 161, I find a letter signed Daniel S. Curtis, who says, speaking of himself—"My practice is to cure my hay *properly*, and put 2 quarts of fine salt to a ton, taking care to have the lumps well pulverized. Curing hay in the cock is the *only right way.*" Mr. Curtis further says—"Ten dollars worth of grass seed to the acre, would look large to farmers that do not usually sow over two." Where I sowed by the old rule 5 pounds to the acre as before mentioned, I cut one ton of hay, worth in this vicinity $12, and in the other instance from a bushel sown, timothy included in both cases, the yield was three tons, worth $36.

In my communication I did not say my plan was the only way, but merely mentioned the fact that others might receive advantage from it, not supposing for a moment that farmers who had never sown more than 5 lbs. to the acre would condemn an experiment before they had tried it themselves.

Mr. Curtis speaks disparagingly of straw, chaff and refuse hay as compost, and as if I strongly recommended it. If he will take the trouble to refer to my letter dated Jan. 21st, '44, on seeding grass lands, &c., he will find I merely say it is supposed by chemists, that the plan of keeping a large stock of horned cattle for the express purpose of manuring a farm, is an erroneous one, on account of the various substances taken from the food to support the animal economy, and ask the simple question,—If, instead of keeping stock for that purpose, the farmer should convert his straw, chaff and refuse hay, into manure in a compost heap, he would not save without the least loss every requisite for the ensuing crop? It is well known that in Virginia and other parts of the country, a great number of cattle are kept expressly for that purpose. Mr. Curtis surmises if I have fed any length of time on hay cured as aforementioned, and not lost my stock, "they must be of a different temperature from his neighbor's cow." I imagine they are of the same temperament and habits as his neighbor's stock, and assure him that for two years their chief food has been hay so preserved, which they have always eaten with apparent satisfaction, and my man says he has never observed that they ever drank an unusual quantum of water. As to quantity of hay cured on my place, year before last and last year I cut the grass from fifty acres, and cured it as aforesaid, and intend intend to continue the same plan, being satisfied that I derive great advantage from it. My cattle are still "punished by the cruel practice," as I pursue the English mode of soiling, and do not permit them to change their fodder, until corn and rye sown broad cast, is fit to cut in turn with clover, to afford a change of diet. I am very respectfully yours, R. L. PELL.

Pelham, Ulster Co., May 17, 1844.

FARM LANDS OF PENNSYLVANIA.

A Pennsylvania correspondent, Mr. P. Peterson, who dates, "Four miles East of Pittsburg," says:

"I will take the liberty of recommending to the Orange County farmers, and to any others, the western part of the State of Pennsylvania, it fitting the very objects which they desire.

1st. The land is cheap and good.

2d. The climate is remarkably healthy.

3d. It is a desirable part of the country.

4th. Schools both private and public are as plenty as bad farmers.

5th. There are churches of every denomination and for 100 miles square will number with any other part of the union.

6th. Farming implements, cows, horses, hogs, oxen, wagons and furniture can be had cheaper than any other place within my knowledge. If you don't believe me, come and see for yourselves.

The land in this section of the country is generally improved, and in consequence of the reverse of times, many farmers and other persons owning lands have become involved, which obliges them in many cases to sell their improved farms, and seek for others further west unimproved and at less prices.

In Washington county, Penn., (which joins lines with the state of Virginia,) the land is of an excellent quality, and generally limestone land, abounding with coal. The price will vary from fifteen to forty dollars per acre, according to the improvements and situation.

In Fayette county the land is generally good, of a black mould and abounds with coal. The price will vary from ten to thirty dollars; building not so good as Washington co. In Westmoreland co. the land is good, but varies very much in quality. Price, $10 to $25.

In Alleghany county, south and west of the Alleghany river, the land is rolling and of a good quality, coal in abundance, and some lime stone. Price varies very much, owing to the necessity of the seller; for a good farm improved, say $20 to $30 per acre. On the north side of the Alleghany river the land is not so good. Can be had for from $3 to $20 per acre, according to the improvements.

In Beaver county the land is rolling, good, and can be had at moderate prices. From $12 to $15 per acre for a pretty good farm, common buildings."

SAXON RAM—(*Copied from Youatt.*)

SHEEP HUSBANDRY.

At the fifth Agricultural Meeting, held in this city, the subject of sheep husbandry was under discussion. We give, from our notes, the remarks of Dr. **BEEKMAN** of Columbia county, President of the State Ag. Socity.

Dr. **BEEKMAN**, in reply to the call made upon him by Mr. Nott, proceeded to give his views on sheep husbandry—views deduced from his management of considerable flocks, in connection with other farming, for a series of years. In giving his views on those subjects, said the President, the last speaker commenced by observing that in some things he might be pronounced heterodox; but he has given us a clear and succinct history of his practice, and in most of his remarks I thought him orthodox. His heterodoxy, if I may apply that term to a difference in practice on these matters, may, in my opinion, be found in two or three points. First, he turns his sheep into woody pastures—I mine into open ones; because I had learned that one blade of grass grown in the sun has the nutrition in it of five grown in the shade. Second, he keeps his buck with the sheep during the entire year—I mine only during the month of December; because my experience has taught me that lambs coming in May give the least trouble, and to me are the most profitable. I have endeavored to obtain them at an earlier season; but although I have tried warm sheds and succulent food, success has not induced me to repeat the effort—on the contrary, the practice has been attended with unnecessary expense, and some losses in lambs. But the qualities of our sheep, and of course their constitutions, are different; his are the South-down, which are hardy—mine the Saxon, which are of more tender constitutions. Third, he shears his sheep early—I mine late. And, while on the subject of shearing, permit me to say that is of great importance to the farmer to employ none but the best shearers; for if he does, they will leave twice as much wool on the sheep as will pay for the shearing. I have made several experiments towards ascertaining this fact—both in having some of my own re-sheared, and causing others to do it; and in several instances they have been enabled to obtain, at a second shearing, from four to eight ounces of additional wool.

My sheep, (said Mr. B.,) while running in the pastures in summer, are sorted as to size, sex and condition. I find it an advantage for them to be uniform in all these, and to have the flocks as small as is consistent with their number and the size of the yards and farm. Our farmers will find it much to their profit to keep as many sheep without crowding as their farms can well support. Even the grain farms are much benefitted by this practice, and experience has taught that by this practice they can raise more grain in consequence, as sheep manure is of great service in enriching their farms. This truth has been strikingly illustrated in my neighborhood, where a farmer who was slow to adopt this practice, ultimately became aware of its correctness, and a test of ten years' experience has taught him that upon the same tract of land in that time he has nearly doubled his product, as he has certainly his estate. On a grain farm tolerably adapted to grass, it is perfectly easy to keep one sheep per acre; and upon what is called a grass farm, where the raising of grain is a secondary object, two sheep can be kept per acre. When shelter is provided for them in winter, which ought always to be the case, I find that one hundred sheep, if they are moderately littered, will make forty loads of manure. No quality of it can be finer; and a poor, worn-out clay pasture lot, not too profusely covered with it and summer fallowed, will give, the succeeding season, a good crop of wheat. I find if I put on too much of this kind of manure to the acre, it yields too much straw in proportion to the grain. It is likewise most excellent to renovate old meadows, and as a manure ranks much higher than common barn-yard. The summer run of sheep, likewise, is essentially beneficial to a succeeding crop of grain on a fallow; and no farmer who has in view his own profit and the improvement of his farm, can so easily effect his purpose with any other kind of stock. I have already recommended sheep to be sheltered in winter. I must say that it is not only useful against storms, but against cold and the winds. To guard effectually against these, as soon as the snow falls, I have it thrown up and piled against the side ot the hovels, as high as it can easily be done, as I find it renders the shed much warmer. For sheep in poor condition, warmth in winter is essential; and if they can be entirely sheltered from all the winds, it will prevent much mortality among them. Fat sheep do not feel the cold so sensibly, but all will run for shelter in a storm, if it can be obtained. Another subject as regards sheep husbandry I will touch upon, and that is, watering them in winter when fed on hay. An opinion used formerly to prevail, that sheep did not require to be watered in the winter—that if they could get at snow it would be sufficient. This, I am satisfied by the best of all possible authorities (experience,) is wrong. They require it twice a day, as regularly as any other animal. I will relate this fact. I confined about one hundred wethers in a lot, where they were to be kept for the winter; they had shelter and hay for food, but could not obtain water, except as it fell in rains. I noticed, after being so confined a few weeks, that they lessened in flesh. In a week's time more I again visited them, and saw that they were gradually growing thinner. I ordered a better quality of hay, although the first was at least of ordinary quality. I spoke to my shepherd about it, and he took from the flock a few of the poorest, and had them brought to the barn, where they could be both fed and watered; these gave him no more trouble, but it still did not occur to me that the main flock were suffering from want of water, as there was abundance of snow. Another person, who saw them shortly after this, happened to make the suggestion that it might be want of water that was the cause of the mischief. I at once took up the thought, and directed that an opening be made to the brook, whence they could be daily watered. It was so done, and I could in a few weeks' time observe that the flock had improved, and for that winter I had no more trouble with them. Since then I have had the fact repeatedly brought to my notice by others, and no truth can ever be more satisfactorily established. I make these few remarks in relation to a part of my practice in sheep husbandry. It is a subject sufficiently extensive to admit much more being said upon it; but, for the present, I forbear, as I do not wish to occupy too much time. I will only further say, that there is a common remark when a foolish act is done by an individual, that he is as "silly as a sheep." My observation of the habits of sheep has induced me to believe that they have powers beyond instinct, and have more intelligence than they are usually credited with. Dr. B. continued his remarks on several other points, and explained satisfactorily his process of farming for the improvement of his lands, while thus rearing a flock which now amounts to eight hundred sheep.

WHEAT CULTURE IN THE SOUTHERN COUNTIES.

At the third Ag. Meeting held in this city, under the auspices of the State Ag. Society, DR. LEE, of Erie Co., said:

Mr. President: The question for investigation this evening, I believe to be this: "Is it practicable, and if so, will it be profitable, to grow wheat south of the limestone strata that extend west to lake Erie, through the central portion of this State?"

The soil in the region alluded to, is based on shale and free-stone rocks, and lacking lime, its sulphates and phosphates, it is but poorly adapted to wheat culture.

Practically then, the question to be solved is this: How much lime, sulphur and phosphorus must be added to the shale and free-stone soils in the southern tier of counties, to make them good wheat lands, and what will be the expense per acre?

If we take 100 lbs. of ripe wheat, including root, stem and head, and burn it in the open air, about 97 per cent of its weight will be converted into vapor and gas, and escape into the atmosphere. The ash, or 3 per cent left, will, on analysis, show the earthy elements necessary to produce this grain. Liebig and Johnston both quote the following analysis, made by Sprengel, as entitled to confidence:

	Wheat Ash.
Potash,	0.6
Soda,	0.8
Lime,	6.8
Magnesia,	0.9
Silica (flint,)	81.6
Alumina, and oxide of iron,	2.6
Phosphoric acid,	4.8
Sulphuric "	1.0
Chlorine,	0.9—100.00

When it is recollected that there is never more than three or four per cent of the above earthy substances in wheat, and that silica (sand) composes 81.6 per cent of even that small portion, it will not I trust, be deemed incredible, if I express the opinion that by the aid of a little practical science, good wheat may be grown profitably in any county in the state.

This plant has been raised in a great variety of artificial soils, where each ingredient was carefully weighed, both before and after the plant was taken from the earth. By careful analysis, what the soil had lost, and what the plant had gained, was susceptible of demonstration. A very large portion of the elements of all cultivated plants comes from the atmosphere. The precise amount depending alike on the composition of the soil and the nature of the particular plant upon which the experiment was made.

I regard it as a fact of great practical importance that wood ashes, even leached ashes, so abundant in the southern tier of counties, contain all the earthy elements of this invaluable bread-bearing plant. Compare the following table, showing the constituents of beech ash, with that of wheat ash. This is also taken from Sprengel:

	Beech Ash.
Silica (sand,)	5.52
Alumina (basis of clay,)	2.33
Oxide of iron,	3.77
" manganese,	3.85
Lime,	25.00
Potash,	22.11
Soda,	3.32
Sulphuric acid,	7.65
Phosphoric "	5.62
Chlorine,	1.84
Carbonic acid,	14.00—100.00

Maple, birch and other wood, contain the same minerals.

Note the 25 per cent of lime in the above analysis, being larger than that of potash. Our primitive forests have been for centuries drawing the above earthy constituents of wheat from the soil. And instead of carefully preserving this indispensable *raw material* of good wheaten bread, thousands of bushels of leached ashes have been thrown away! Being but slowly decomposed by the vital action of plants, ashes are an enduring fertilizer when compared with stable manure. Mixed with quick lime, their good effects are more speedily obtained. Lime will render alumina either in the soil or in leached ashes, soluble in water, so that it can enter the minute pores of roots. Clay in the soil is always combined with a large portion of silica, and before it has been exhausted by continuous cropping, it holds in combination considerable potash and soda. Lime, by combining with alumina, the basis of clay, liberates these alkalies and silica, which uniting chemically, form soluble silicates of potash and soda. These also enter into the circulating nourishment of plants, and are decomposed in the stems of grasses and cereals. The silica goes to make vegetable bone, to keep the plant upright, while the potash and soda go back to the earth to dissolve as before, another portion of *sand*, to be also absorbed, and transformed into *bone*. It is in this way that a few ashes applied to a sandy soil, will enable grass and grain to take up the 81 per cent of flint found in their ashes. Lime will do the same thing on clay soils, for the simple reason that they generally do not lack potash, soda and magnesia.

The quantity of lime and ashes to be applied to an acre, will depend entirely on their cost at the place where they are to be used. A few bushels will be of essential service; but a larger dose will be better.

I come now to speak of the organic elements of the wheat plant, which as I have already intimated, form ninety-six or seven per cent of its substance. Water and its constituents, oxygen and hydrogen, carbon and nitrogen, are the four elementary ingredients of all cultivated plants, beside their minerals. As there is no lack of water or of its elements, oxygen and hydrogen, our attention will be confined to obtaining a full supply of carbon and nitrogen. These are indispensable, and fortunately nature has provided an amount of carbon and nitrogen in the air, if not in the soil, more than equal to all the wants of vegetation. A large portion of the fertilizing elements of vegetable mold in a rich soil is carbon, and a small portion is nitrogen; both of which are usually combined with other substances. These important elements are often nearly exhausted in fields which have been unwisely cultivated; and I have paid much attention to the subject of cheap and practicable renovation.

By the aid of clover and buckwheat dressed with gypsum, ashes, lime or manure, and plowed in when in blossom, much can be done in the way of augmenting the rich vegetable mold so desirable to a certain degree in all soils. Straw, corn-stalks, leaves of forest trees, and swamp-muck made into compost with lime and ashes, are of great value. Charcoal well pulverized, and saturated with urine, I regard as the cheapest and most useful fertilizer that can be applied to a poor soil, for the production of wheat or almost any other crop.

The earths contained in charcoal, as the analysis of its ash demonstrates, are identical with the earths found in the wheat plant. Coal contains a very large portion of carbon, and will imbibe from the atmosphere a large quantity of nitrogen in the form of ammonia and its carbonates. Unlike stable manure, the salts of lime, potash, soda and magnesia, it will not waste by premature solution nor by evaporation. On the contrary, it is of incalculable value to mix with the liquid and solid excretions of all animals, to absorb and fix in a tangible condition those volatile, fertilizing elements, which are so prone to escape beyond our reach.

When it is recollected that without nitrogen in some form, it is utterly impossible to grow one kernel of good wheat, and that a pint of human urine or four quarts of that of the cow, or one quart of that of the horse fed on grain, contain nitrogen enough to supply 60 lbs. of wheat, we may begin to understand something of the money value of this animal product. But mind this suggestion. Nothing is sooner lost than the hartshorn in an open smelling-bottle, or a large share of the ammonia in free urine in a warm atmosphere. Charcoal and gypsum will absorb it in large quantities, and give it out to the roots of plants as their wants require. In feeding plants, great judgment should be exercised. At least one-half of the food fed out to them in the shape of stable and barn-yard manure, is entirely lost. It escapes into the air, or is dissolved prematurely, and carried like the potash in water running through a leach, beyond the reach of your hungry if not starving plants.

I have just separated a half pound of wheat flour into its proximate elements of starch and gluten. The gluten I have in my hand. It is nearly identical with animal muscle. It forms from 7 to 35 per cent of the bulk of wheat kernels. The more gluten flour contains, the more good bread a given number of pounds will make. A barrel of flour rich in gluten, will make 10 per cent more of bread than one which is nearly all starch. Gluten will bear far more water than starch. The quantity of this meat-forming principle in wheat, depends in a good degree on the quantity of nitrogen in the soil where the wheat is grown.

Prof. Emmons made some interesting experiments, illustrative of soils. He also exhibited some beautiful specimens of the separation of starch and gluten in kernels of wheat and corn; and also of the phosphates in the latter grain.

FARMING IN NOVA SCOTIA.

To Solon Robinson—Sir—I have just finished reading your letter in the March number of the Cultivator; and although it is addressed to your friend Richmond, of Staten Island, I have perused it with much interest and pleasure, and the impulse is so strong that I cannot resist writing a few lines to you, through the same medium.

No doubt you have heard of a place upon the face of the earth, called Nova Scotia, "away down eas', beyond the State of Maine," in lat. 44 north, long. 63, west from Greenwich. Well sir, the person who now addresses you, lives (some would say, stays,) in said Province, and is a farmer too. What! a Southerner would exclaim, farm it in Nova Scotia? Yes, sir, we farm it here, or rather attempt it; but since I became familiar with agricultural journals, especially the Albany Cultivator, and perused the communications of practical farmers, I find we are in the "rear" of agricultural science and information; of course there are exceptions.

It would be impossible in a letter, to be published in an agricultural journal, to go into the details of our system of farming. Suffice it to say, our winters are long, and sometimes very severe; our summers are short and warm; and the only recompense the farmer has for the above disadvantages of climate, is a long and favorable autumn, for fall plowing, making compost heaps, &c. yet too generally neglected.

Our soil is very productive, when properly manage and consists of stiff loam, sandy loam, sand and grave with intermediate grades; besides intervale and dyk marsh; the former (intervale) resembling perhaps, yo prairie ground; the latter (dyke) superior, I suppose, any land yet discovered; for it will produce hay, whe and oats in abundance, year after year, without manu or any renovating substance whatever, or at least it h done so for nearly one hundred years, and I think it is fruitful as ever. There are large quantities of it in t midland and farming counties, and after the expense excluding the tide or sea—in some instances a heavy e pense—it sells from forty to one hundred and thirty doll per acre; and at the higher rate will pay not less than t per cent interest on the amount invested. The upland c be procured at from one to eighty dollars, depen ing upon their location, wild or cultivated state. O houses are built of wood, and are from one to t stories, neat, and generally comfortable; although have plenty of stone and material for making brick. T extent of the farms varies from 100 to 500 acres.

The principal crops are potatoes, (every body kno Nova Scotia potatoes to be good,) wheat, rye, oats, ha &c.; garden vegetables are grown, but at present, limit to a few. We have fruits, consisting of apples, both n tive and imported varieties, (and I have just been eati some raised in my orchard, as sound as the day they we pulled, and if Millerism be not true, I expect to ha them in August,) pears, peaches, (I have eaten as go ones from the garden of the Hon. C. Prescott, Cornwallis, as ever I eat in New-Jersey,) plums, cherries, &c so you see, although I live in Nova Scotia, I can wi knowledge and industry, enjoy good vegetables a fruits, &c. &c.

Our native cattle are inferior, but they have been i proved from time to time, and are now undergoing great improvement by the importation of the Durha breed from England, also horses, as well as swine. W have now the Berkshire breed among us, pure and dire from England. You will observe we are not destit of the materials for a good and profitable system of far ing, provided science, skill and good management, h their legitimate and proper influence among us. Bett things, I trust are in store for the future—and posses of a government both mild and potent, and free from taxation except to support the poor, &c., amounting p annum to not over 25 cts. upon every $400 worth property. A few such men as Garnett, Buel, Dan Robinson, and others, would in a few years make the midland counties of Nova Scotia a garden. F the last ten years we have been rent to pieces by polit cal demagogues, but as the old saying is, "every dog h his day," their plans of self-aggrandizement have bee frustrated by the nobleman at the head of our affairs, a they are now meeting their just reward, viz. degrada tion.

Within a few years, the "emigration Illinois Fever has prevailed, and a number of families have sold the farms and left Kings county, (the very best agricultur county in Nova Scotia,) for your State, and others adjoin ing—hoping "to obtain their daily bread by less swe of their brows." I have always had my doubts whethe they would better their condition (especially those at th middle age of life and in good circumstances) by movin thither. From the tenor of your letter, I should sa they would not. I should like to have some furthe statements from you through the medium of the Cultivator *or otherwise*, relative to the cost of land, amount o all land and other taxes, amount of grain, potatoes, oats rye, &c. raised per acre, profits per acre of differen crops, *durability of the prairie grounds for cultivation*, state of morals, religion, schools, &c.—price of salt, iron and such like articles. Hoping you will excuse the libliberty of thus addressing you, believe me to be,

Yours respectfully, Old Nova.

Kings county, Nova Scotia, April 1, 1844.

No man can *borrow* himself out of debt; if he gets free of it at all, *honorably*, it must be by industry and frugality.

PHOSPHATE OF LIME.

To the late Geologists of the State of New-York:

The subscriber read the Geological Reports as they appeared annually, and was astonished, and at the same time delighted, with the mass of information they contained. The mineral riches of the State, and the heretofore concealed treasures brought to light by your researches, are great beyond measure. They give promise of future benefit to the country, the development of our resources, and the increase of commerce, the arts and agriculture. The subscriber being a cultivator of the soil, is only interested in the latter, which he thinks may be assisted and improved by your labors. The knowledge of these, however, must be known to be appreciated, and the volumes containing the result of your researches, should be diffused through the community that has contributed to the expense. If the Legislature should dispose of the volumes of printed reports by selling or giving them away, the valuable mass of information they contain, would be sooner spread before the public, and the sooner would that public reap the advantages to be derived from your scientific labors. I am departing however, from the object in view in commencing this article.

In reading your reports (which are not now at hand,) I recollect it is noticed that in several counties of this State, Apatite, Phosphorite or the Phosphate of lime was discovered in more than one district, but the quantity or accessibility is not stated. Late agricultural writers speak of the value and importance of the phosphates as fertilizers of an exhausted soil. Now I would respectfully inquire if those phosphates you discovered were in any considerable quantity, and if they were so accessible as to be easily obtained for agricultural purposes? My reasons for making this request, will be seen in reading the following extracts from Liebig's "Familiar Letters on Chemistry," &c. lately published in New-York city.

In the 16th letter he observes—"My recent researches into the constituent ingredients of our cultivated fields, have led me to the conclusion that of all the elements furnished to plants by the soil and ministering to their nourishment, the phosphate of lime, or rather the phosphates generally, must be regarded as the most important."

"In order to furnish you with a clear idea of the importance of the phosphates, it may be sufficient to remind you of the fact, that the blood of man and animals, beside common salt, always contains alkaline and earthy phosphates. If we burn blood and examine the ashes which remain, we find certain parts of them soluble in water, and others insoluble. The soluble parts are common salt and alkaline phosphates; the insoluble consist of phosphate of lime, phosphate of magnesia, and oxide of iron."—p. 173.

Again he says: "It is a most curious fact, that if we incinerate grain or its flour, peas, beans and lentils, we obtain ashes, which are distinguished from the ashes of all other parts of vegetables by the absence of *alkaline carbonates*. The ashes of these seeds, when recently prepared, do not effervesce with acids; their soluble ingredients consist solely of alkaline phosphates, the insoluble parts of phosphate of lime, phosphate of magnesia and oxide of iron; consequently, of the very same salts which are contained in blood, and which are absolutely indispensible to its formation. We are thus brought to the further indisputable conclusion that no seed suitable to become food for man and animals can be formed in any plant without the presence and co-operation of the phosphates. A field in which phosphate of lime or the alkaline phosphates form no part of the soil, is totally incapable of producing grain, peas or beans."—p. 174.

"In a former letter I showed you how great a waste of phosphates is unavoidable in England, and referred to the well known fact that the importation of bones restored in a most admirable manner the fertility of the fields exhausted from this cause."

"Another proof of the efficacy of the phosphates in restoring fertility to exhausted land, is afforded by the use of the *guano*—a manure, which, although of recent introduction into England, has found such general and extensive application."—p. 176.

Liebig further advises us that "If a rich and cheap source of phosphate of lime and the alkaline phosphates were open to England, there can be no question that the importation of foreign grain might be altogether dispensed with after a short time."—p. 177.

The value of the phosphates is also acknowledged by Johnston in his "Lectures on Agricultural Chemistry and Geology." In the first volume of the edition lately published in New-York by Wiley & Putnam, when speaking of phosphoric acid, he says, (p. 274,) "It unites however, with potash, soda, lime, &c. to form compounds known by the name of *phosphates*. In these states of combination, it is almost universally diffused throughout nature, and appears to be essentially necessary to the healthy growth and maturity of all living—certainly of all cultivated vegetables."

Again, when speaking of the earth of bones, and the several forms of the phosphate of lime, he observes (p. 293, vol. 1,) that "In some parts of the world a hard mineral substance, commonly known by the name of Apatite, occurs in considerable quantity. It consists chiefly of a phosphate of lime, which differs but slightly in its constitution, from the earth of bones—containing 54½ per cent of lime; while the latter contains only 51½ per cent. The composition of this mineral would lead us to expect it to possess a favorable action upon vegetation, and this anticipation has been confirmed by some experiments made with it by Sprengel."

"It occurs occasionally in mineral veins, especially such as are found in the granitic and slate rocks. Masses of it are met with in Cumberland, in Cornwall, in Finland, in the iron mines of Arendahl in Norway, and in many other localities. A variety of it, distinguished by the name of *phosphorite*, is said to form beds at Schlackenwalde in Bohemia, and in the province of Estremadura in Spain. From the last of these localities being the most accessible, the time may come when the high price of bones may induce our enterprising merchants to import it, for the purpose of being employed in a finely powdered state as a fertilizer of the land."—(Lect. 9th.)

The first American edition of Johnston contained but nine lectures, and was published in New-York while they were in the progress of delivery. This second edition contains eighteen lectures, and in the fifteenth, when speaking of bone earth, (vol. 2, p. 71,) it is observed, "Burned bones were formerly employed in England, but the practice has gradually fallen into disuse, and the same is the case in Germany. This is no proof, however, that the native phosphate of Estremadura—already, it is said, imported into Ireland for agricultural purposes—would not benefit many soils if applied in the state of a sufficiently fine powder."

These opinions and facts are laid before the readers of the Cultivator, and will demonstrate in this instance how agriculture may be advanced by the sciences of geology and mineralogy; and the late geologists are respectfully requested to collect from their several reports, and give a summary of the localities of the phosphate of lime and their quantities, &c. to be published in the Cultivator. The subscriber, as one of the tax-payers of the State, is pleased and well satisfied with their labors, tenders them his thanks and best wishes for their welfare.

He could not but smile at the scruples of his old friend Judge Scott of New-York, one of the State Senators, in returning to the care of the Secretary of State, a copy of the Geological Reports, which was appropriated to him as a member of the Legislature. The plunder of the public (a portion of the "spoils" of victory,) was so small in this case, that if he had retained it, given it to some public institution, or deposited it in some library, where it could be read; in neither case would it have diminished his vote at the next election, should he again be a candidate, and certainly it would not have changed the vote of his former associate in a benevolent institution.

A PRACTICAL FARMER.

Staten Island, March 25, 1844.

Mr. J. R. Barbour, a great silk authority, says that the valley of the Ohio has gone ahead of New England in the production of raw silk. He thinks that the West and South will take the lead in the growth of silk.

THE OLIVE.

MESSRS. EDITORS—Dr. Olin, describing the soil and productions of Palestine, speaks thus of the olive:

"But this is the proper region for the olive and the vine. Anciently, these hills were covered with orchards of fruit trees and vineyards, and the world does not, probably, produce finer grapes, figs and olives, than are annually gathered about Hebron and Bethlehem. One acre of the flinty surface of the Mount of Olives, carefully tended in olive trees, would yield more, through the exchanges of commerce, towards human subsistence, than a much larger tract of the richest Ohio bottom tilled in corn. Most persons know little of the variety and importance of the uses to which the fruit of the olive is applied in the Eastern nations and in some of the southern countries of Europe. Large quantities of the berries are used by the inhabitants, and exported as food; but the principal value of the olive consists in the delicious oil that is extracted from its fruit. This is used upon the table and in cookery, as the substitute for both butter and lard. It is universally burned in lamps, and instead of candles, which are nearly unknown in the east. It is the principal material used in making soap."—*Olin's Travels, Vol. II. p.* 430.

Mr. Jefferson, in 1787, wrote as follows:

"The olive is a tree the least known in America, and yet the most worthy of being known. Of all the gifts of Heaven to man, it is next to the most precious, if it be not the most precious. Perhaps it may claim a preference even to bread, because there is such an infinitude of vegetables which it renders a proper and comfortable nourishment. In passing the Alps, at the Col de Tende, where there are mere masses of rock, wherever there happens to be a little soil, there are a number of olive trees, and a village supported by them. Take away these trees, and the same ground in corn, would not support a single family. A pound of oil, which can be bought for three or four pence sterling, is equivalent to many pounds of flesh, by the quantity of vegetables it will prepare and render fit and comfortable food. Without this tree, the country of Provence and the territory of Genoa would not support one-half, perhaps not one-third, their present inhabitants. The nature of the soil is of little consequence, if it be dry."

"In Italy, I am told, they have trees of two hundred years old. They afford an easy and constant employment through the year, and require so little nourishment, that if the soil be fit for any other production, it may be cultivated among the olive trees without injuring them."

"Notwithstanding the great quantities of oil made in France, they have not enough for their own consumption, and therefore import from other countries. This is an article, the consumption of which will always keep pace with its production. Raise it, and it begets its own demand. Cover the southern states with it, and every man will become a consumer of oil, within whose reach it can be brought, in point of price. If the memory of those persons is held in great respect in South Carolina, who introduced there the culture of rice, a plant which sows life and death with almost equal hand, what obligations would be due to him who should introduce the olive tree, and set the example of its culture!"—*Mr. Jefferson's letter to Thomas Drayton, dated Paris, July* 30, 1787.

"I am persuaded there are many parts of our lower country where the olive tree might be raised, which is assuredly the richest gift of Heaven. I can scarcely except bread. I see this tree supporting thousands among the Alps, where there is not soil enough to make bread for a single family."—*Mr. Jefferson's letter to Mr. Wythe, dated Paris, Sept.* 16, 1787.

Here is surely ample testimony as to the estimation in which the olive was held in modern times, by those acquainted with its uses. If evidence is wanting as to the estimation in which the ancients held it, we have only to refer to the frequent mention made of it in the historical parts of the Bible, and the beautiful allusions to it so frequent by the Hebrew poets—to the beautiful fictions among the Greeks about its origin, one of which is mentioned by *Apollodorus Atheniensis*, who tells us how, in the reign of Cecrops, Neptune, smiting the earth with his trident, made the sea flow at his feet; how Minerva, determined to outdo his marine godship in beneficence, called on Cecrops to bear witness to what she was going to do, and made an olive tree spring from the ground; how these divinities quarreled about the value of their respective gifts to Attica, and Jupiter, to settle it, appointed twelve gods to determine the question, which august jury of divinities gave a verdict in favor of Minerva; and to the rank assigned to it by Columella among the Romans, as being the first among trees. Yet in the whole of the United States, I know of but two or three instances, in which attempts have been made to introduce the culture of this tree. Long ago, indeed, the colony of Greeks settled at New Smyrna, in E. Florida had planted the olive, and only sixty years ago there were large trees marking the site of that settlement. Recently, Mr. Cooper of St. Simons, and Mr. Spalding, of Sapelo, Georgia, have tried its cultivation, I think, with success; and in the garden of Mr. Rose at Macon, I saw recently a flourishing tree which had thus far withstood the winters there. I suppose the general impression that it would not endure, without injury, the cold of our winters, has deterred cultivators from turning their attention to it; as it is known that the severe winter of 1807 destroyed a large part of the olive trees in the south of France; and as it is known too, that Humboldt, in his essay on the geographical distribution of plants had set down the olive as requiring a climate with a mean temperature of 57 deg. 17 m. the greatest cold being 41 deg. 5 m. Mr. Jefferson, however, says that when killed by frost, it will spring up again from the roots; so also says Mr. Hillhouse; and such is the experience of Mr. Spalding and Mr. Cooper. If the varieties cultivated in France were the only ones to be had, even their comparative tenderness ought not to be an objection to attempting their cultivation here. For all experience shows, and philosophy teaches, that plants of temperate climates, in time, by frequent reproduction from seed, adapt themselves to colder climates, in which, at first, they invariably perished. The Melia Azedarach furnishes a familiar illustration of this fact; and applying to the well known characteristics of the olive tree, the first and second of the laws of temperature, with respect to its influence on vegetation, as laid down by M. De Candolle, we may confidently conclude therefrom that it will adapt itself to our climate even sooner than the Melia.

Happily, however, there are varieties to which this objection cannot be made. "In the southern part of the Crimea, which lies between the latitude of 44 deg. and 46 deg. two varieties of olives have been discovered, which have existed there for centuries. They yield great crops and resist the frost."

"These olives have been cultivated in the Royal Imperial Garden of Nikita, to preserve and multiply the species, with plants which had been received from Provence, and have endured the rigorous winters of 1825 and 1826, while those of Provence, in the same exposure, perished even to the root. Measures have been recently taken in France for the introduction into that country of these two precious varieties, *which are capable of resisting ten or twelve degrees of cold below the zero of Reaumur's thermometer—equal to five degrees above the zero of Fahrenheit.*"—*Kenrick's Amer. Orchardist, 3d ed. p.* 333.

The nurserymen of the United States incur great expenses in introducing such exotics as the Cedar of Lebanon, Garogu elyptica, Paulownia imperialis, Pinus deodara, &c. &c.:—all of which are very beautiful trees; but when they are said to be very beautiful and very rare, all is said of them that can be, with truth, except that they are very expensive. It is true that purchasers are found who are willing to pay high prices for them; and in this, those who import them, find their remuneration. By incurring an expense, not more, it is believed, than has been incurred in the introduction of any one of the exotics above named, the olive of Nikita may be introduced. And if it stand the rigor of our climate, as it does that of its native region, may we not hope to see it, in a few years, spreading over the southern States, adding to the comforts and the wealth of our people? Once introduced, its propagation is a matter so very simple, that it may be easily disseminated to any extent in a very short time. Such men as Dr. Cloud of Alabama, Dr. Phillips and Mr. Affleck of Miss., I would suppose would not rest until they secured the introduction of the olive into their States, respectively. Mr. Affleck, especially, will surely not consider Ingleside complete, until an olive grove shall have been added to his establishment.

Dampier and Lord Anson, the former as far back as 1688, had described the Bread Fruit, as a most invaluable production of the Ladrone Islands. In 1787, persons in London, interested in the West India Islands, prevailed on the King of Great Britain to order a ship to be fitted out at the expense of the nation, for the purpose of introducing the Bread Fruit as an article of food, into the West India Islands. The first voyage, under Lieut. Bligh, was a failure. But the object was ultimately accomplished. The result, from some cause or other, did not answer the expectations of those who had taken an interest in it; yet they never regretted having made the effort, nor the charge made by it on the public treasury. Is it not a matter of higher importance to the southern States of our confederacy that the Nikita olive should be procured at the public expense? Look over the list of seeds and plants brought home by the Exploring Expedition—estimate the whole at the highest value that can properly be set upon them, and all together, so far as real utility is concerned, they are not equal to the value of the Nikita olive. Yet how they are cherished—with what care and expense they are preserved! The government of Great Britain incurs heavy expenses to introduce the Bread Fruit into the West India Islands; the government of France takes measures to introduce the Nikita olive into that country. Shall our government, established in all its branches, on principles of utility, and professing to be regulated in all its movements, exclusively by these principles, lag behind the old and decaying monarchies of Europe in enterprises like these? Shall it be said that in our republic, its exploring expeditions, undertaken professedly for the public good, shall belie the character of all our institutions, by preferring, in their collections, articles of show to those of utility?

Athens, Ga., March 10, 1844. **JAS. CAMAK.**

IMPROVEMENT OF FARM STOCK.

MESSRS. EDITORS—The improvement of farm stock can hardly be too frequently brought before the mind of the agriculturist, and of all who feel any interest in the prosperity of the country. No individual of any observation, whose attention has been drawn to this subject, and who has had an opportunity of critically examining the quality and character of the stock reared by a vast majority of farmers, can fail to be forcibly impressed with its importance to the nation, as a permanent, certain, and reliable means of largely increasing the aggregate wealth and resources of the whole country.

It is believed that this subject may appropriately engage the attention of the merchant, the manufacturer, the statesman and the patriot, as well as the farmer, when it is considered that agriculture is the foundation and the main source of national wealth, as it puts in motion, and imparts life and energy to all other branches of national industry. Let the agricultural products of the country fail for a single year, and what effect would it produce on all other interests? The ships of the merchant would be found moored and decaying at his wharf; the manufactories would cease to operate; our noble canals would then indeed become a "*solitary wilderness*," and every branch of industry would become paralyzed.

If then, such vast interests are so intimately connected with a well regulated, intelligent and prosperous husbandry, it may well be inquired whether improvement in farm stock, which is one of the principal items of the farmer's wealth, is not important, and intimately connected with the general interests and prosperity of the country? More particularly is it so to the farmer, and improvement must principally depend on his well directed and persevering exertions. Each farmer should put the question directly to himself—"Have I, in my possession neat cattle which possess the greatest combination of excellence, which are the most profitable for the dairy, which will mature early, and when no longer wanted for dairy purposes, will put on flesh with the least expense in feeding for the butcher? Have I the best sheep for fleece and carcass—the best breed of swine, those of quick growth and approved fattening qualities?" And if, on investigation, he becomes satisfied he is deficient in one or all of this description of animals, his own interest should at once stimulate him to spare no pains to procure such, no matter if it be at extra exertion, and a reasonable additional expense; for what is an outlay of a few hundred dollars compared with the accumulated profits one may reasonably expect to derive in the period of a few years. Besides, there are other considerations of great interest that should not be lost sight of. It is well known that a great proportion of the labor and expense of the farmer is bestowed upon his grain and root crops; and when those are well secured, it becomes a matter of interest to decide how they shall be disposed of to the most profit. Perhaps a great proportion of farmers decide on feeding them to their stock to fatten them for their own consumption and for the butcher. If stock can be raised, which will consume one-third or one-quarter *less* food than the ordinary or unimproved stock of the country, how important is it he should rear such stock?

This is no ordinary subject; and there can scarcely be any just reason why it should not as deeply interest the agriculturists and arouse them to action, as does the improvement of our home fabrics interest and engage the attention, zeal and persevering energies of the manufacturers. Why do those who are engaged in this branch of industry devote so much time and means in perfecting labor saving machines? Why so much solicitude in regard to a discriminating protective tariff, and why do they invoke the aid and influence of the agriculturist, whenever there is a proposition to modify the tariff in the slightest degree, and why is an appeal made to sustain this interest through pamphlets, hand-bills, and in the columns of almost every newspaper in the country, calling upon all classes to sustain this interest? It is simply because they have the discernment to see that their interests are involved in this question, and that their prosperity is in jeopardy. This is a right spirit, when so restrained and directed as not to infringe upon or injure other equally important interests. Now until something like the same spirit which so extensively pervades the minds of those who are engaged in manufacturing, is infused into the minds of the practical agriculturists, improvement in farm stock will be of slow growth, and no permanent beneficial results can reasonably be expected. The agriculturists of England understood well their true interests in this branch of husbandry, and they have extensively encouraged the breeding of superior stock, and for the last fifty years or more, have by unwearied attention and perseverance brought up their stock to a point of perfection which is unrivalled by that of any other country, and which has largely contributed to swell the wealth of that nation. This improvement has increased their commerce; their stock has attracted the attention of other countries, and exportations to a considerable extent are annually made, and at high prices. The writer of this article recently wrote to a distinguished breeder of England to be informed what he would charge for one of his best Durham heifers to be shipped this spring, and he replied that his price for one about two years old, would be two hundred, and for another one about three years old, would be three hundred guineas. This fact is stated merely to show the value they put upon improved stock.

There have been imported into this country a variety of the very best improved breeds of animals from England, at considerable risk and expense, to propogate and to improve our native stock. Thus a foundation has been laid, which if duly appreciated by those most deeply interested, very favorable results may justly be expected. Who has attended our State and County fairs for three years past, and has not had his admiration excited by the fine display of the noble Durhams, Herefords and Devon cattle, as well as the fine sheep and swine which have graced their exhibitions and done so much honor to their owners. This stock has justly elicited the approval of the several viewing committees appointed as judges, and they have very properly awarded them the highest premiums of the several societies; and it is exceedingly to be regretted that the matter should rest here. If the owners of those improved breeds of animals should have one or more which they could dispose of, to those whose interest it is to purchase them, if any offer is made for them it would hardly be sufficient to pay the freight on a single animal across the Atlantic. Is this a right spirit? Will such apathy and disregard of interest, on a subject which is so intimately connected with the great agricultural interests, promote improvement, or will it not produce a decidedly contrary effect, and discourage those who now take an interest in the subject, and who are willing to devote some time and their resources, to carry forward improvement? It is to be hoped that a better spirit will soon prevail, and that that attention will be given to the subject, which from its importance it is justly entitled to. The fair of the New-York State Agricultural Society is to be held at Poughkeepsie in September. The location selected for it is a good one, and affords great facilities for transporting stock. The premiums offered on stock are of sufficient magnitude to induce owners of good stock to exhibit it, and doubtless there will be a display of fine improved animals which will far surpass that of any other exhibition which has ever occurred in this country. The concourse of people which will there assemble, will doubtless be very great, not only from this but from other States, and if a right spirit is evinced by those whose interest it is to possess good stock, a new impulse will be given to this branch of husbandry which may in a few years produce great improvement, and eventually raise the quality of our stock to a point of perfection equal to that of England. These thoughts are thrown out in the hope that the subject may engage the attention of others previous to the fair in September. C.

Rensselaer County, April 25, 1844.

SOUR SOILS.

It seems to be a matter as well settled in the minds of some men, as if it were actually demonstrated, that certain uncombined *acids* exist in some soils, rendering them what are termed "sour." From whatever this has taken its rise, it is so deeply rooted, that it is questionable if any evidence will be sufficient to convince them of the error, so long as they falsely think, that it is reasoning against the evidence of their senses. One source, and perhaps the chief one from which this idea has sprung, is the benefit arising from the application of alkalies and alkaline earths. But this is too much like framing a theory, and compelling facts to support it. The little knowledge which every one possesses of chemistry, teaches him that the effect of an acid upon an alkali is to produce a salt—a compound of a mild and inactive kind, in comparison with the elements that go to form it. That great benefits do arise from the application of such substances to some soils, cannot be denied. But is it in this way? Is it because free acids exist in the soil which are injurious to vegetation, and whose effects are destroyed by uniting them with an alkali? I think not. Let us examine it a moment.

What acid or acids are found by actual analysis in a free state in the soil? I do not ask for the quantity, but simply for the presence of them. It cannot be carbonic, for this, every one knows, is an essential part of the food of plants; and in the amount in which it is commonly found, instead of being prejudicial to plants, is an actual source of life and vigor. Look at the analysis of soils given by the most correct analysts. We find, it is true, that *inorganic* acids (sulphuric and phosphoric and muriatic,) are present in variable quantities in almost all soils. But what of that? Do we not find also the alkalies, (potash, soda, lime and magnesia,) and the oxides of iron and manganese, as invariably present. True, we are not told in so many words, that they are combined with the acids. But can we suppose that these substances will exist by the side of each other, in circumstances the most favorable for union, and yet remain uncombined? By no means. The moment they come in contact, they unite and form salts, and in this form they are found. I am authorized to say that the examination of the soils from various parts of this State, made by Dr. Emmons, confirm these views.

Are the *organic* acids formed? It is granted on all hands, that these are all formed by the living and growing plant, and depend upon the plant in which they are formed for their peculiar character. The oxalic acid of the sorrel, tartaric of the grape, citric of the lemon and malic of the apple, and a host of others, may be formed by these plants, growing in the same soil. They depend upon the organs of the plant for their existence. Now are these ever found free in the soil. "We have no reason to believe that a plant in a condition of free and unimpeded growth, produces more of its peculiar acids than it requires for its own existence," (Liebig,) and he also says that all of them are "in combination with bases."

During the process of germination, a seed gives off acetic acid to the soil. Does it remain there uncombined? If so, we have no account of it. If seeds are caused to germinate in powdered chalk or carbonate of lime, after a time *acetate of lime* may be washed out from the chalk. (Bracconnet.) And it is possible that the acid is sent out for this very purpose, to dissolve the lime and return with it into the circulation of the plant. At all events, it is always found in the soil, combined with lime.

Oxalic acid is not known to exist in the soil, or in the water which reaches the roots of plants. So says Johnston, and yet the production of sorrel is by many supposed to depend upon the sourness of the soil. But observation proves that if this is the case, lime, the ordinarily recommended remedy, will not so neutralize the acid as to prevent its growth, even applied in immense quantities. Besides, as we hinted above, if the acid must unite with the alkali in order to prepare it to enter the plant, the result ought to be, that this weed should thrive all the better for the application of lime. But this acid has never been found in the soil.

Some physiologists attribute to the roots not only the power of absorbing food, but also of excreting those matters which are taken up with the food and are not necessary for the growth or life of the plant. Among the experiments instituted to determine this point, I find but one in which there was any evidence of an acid excretion. When the ground upon which the poppy had been grown was washed, a considerable quantity of acetic acid was found, but *in the form of acetate of lime*.

Do we ever find free acids in the water of springs or of wells? I believe that in no instance is this the case, although they always contain some salts. Yet this water is all filtered through the soil, and if free acids of any kind which are soluble, exist there, they must certainly be washed out. There is an apparent exception to this, but it is only apparent. We refer to carbonic and sulphuric acid, as they are found in some springs, and as they are produced beneath some soils in overwhelming quantities, so as to destroy all vegetable life. The presence of this acid depends upon some local cause for which there can be no remedy.

I have said nothing thus far of humic acid, which is known to abound in soils chiefly composed of decayed vegetable matter. And I have not referred to it for this reason, that it is utterly insoluble, and therefore can have no injurious effect upon vegetation. It does not affect my theory in the least, for I am only speaking of soils which contain free acids which are thus prejudicial, and which must of course be soluble. If it is assumed that soils abounding in this acid are *from this cause*, prejudicial, I shall still stand upon the same ground. But this cannot be assumed. These soils are unproductive, not because they contain this acid, for it is generally admitted to be itself a great source of nourishment for plants, under the proper circumstances, (being also connected as it is with all the elements of plants,) but because the acid is insoluble, and cannot in this state be conveyed into the mouths of plants.

I know of no evidence of the existence of any acid, organic or inorganic, in its uncombined state in any soil; and till I do, I shall remain as ignorant as I have ever been of what is meant by a "sour soil." This question has nothing to do with the action of alkalies. But the cause of their benefit must be looked for in something else than their power of neutralizing free acids. A. J. P.

PRODUCE OF A VERMONT FARM.

Messrs. Editors—I herewith transmit to you a statement of the products of my farm for 1843. I keep Dr. and Cr. and know at the end of the year how much nett profit or loss I sustain in my operations. I have not taken into the account the support of my family consisting of six individuals, but have offset that against the interest on the capital invested. Mine is a clay and muck farm of one hundred and thirty acres, lying on the banks of lake Champlain, with only ten acres of wood upon it; the rest being under improvement. I cannot boast of any great crops, it being my first year of cropping; consequently I have not got my land prepared for large crops of grain, but intend to practice a thorough system of rotation for the purpose of obtaining large yields per acre. I will give the gross amount of each crop, together with the price it brought, and also the expense I have been at in carrying on the farm:

Wheat,.........	100	bush. at	$1,25	....	$125,00
Rye,..........	168	"	50	....	84,00
Peas..........	71	"	50	....	35,50
Oats..........	250	"	30	....	90,00
Corn..........	20	"	50	....	10,00
Buckwheat,.....	26	"	50	....	13,00
Potatoes,.......	200	"	25	....	50,00
Hay,..........	50	tons at,..	6,00	....	300,00
6 steers sold,.................			25,00	each	150,00
Wool, 100 lbs.,...............			28	....	23,00
					$885,50
I paid for labor, seed, &c,................					252,00
Leaving a balance in my favor, of					$633,50

In addition to the above, I kept on the farm two span of horses, eight head of cattle and fifty sheep, and have wintered them thus far *on the straw and coarse fodder*, and no cattle in this vicinity look so well as mine. I have also in the above estimate for labor, included the putting in of twenty-three acres of winter wheat and rye, now on the ground, and it looks extremely well this spring. I am in hopes the present year, of doubling the above amount, if the season is favorable. Yours truly,

Chimney Point, Vt., March, 1844. D. C. Goodale.

"KNOWLEDGE IS POWER."

Never was this motto more signally illustrated than in the advantages derived by intelligent farmers from the aid of science. Even a slight acquaintance with chemistry and geology, is productive of profit for the pocket, as well as pleasure for the mind. "You may be somewhat surprised to find me farming on the hard soil of Connecticut, instead of teaching mathematics in a ship of war," said a worthy friend who lately visited Albany. "I am somewhat surprised myself, at the transition," continued my friend; "but the truth is, that when leaving the ship on a visit homeward, I bought a copy of Liebig's newly published book about Agricultural Chemistry, for the purpose of reading on my journey; and so much was I instructed and entertained, that I determined to take hold of the old farm once more, and endeavor to practice on the doctrines taught by that scientific German. I have done so for a couple of years; and the result more than realizes my expectations. By economy in increasing the quantity and improving the quality of manures, and by applying more manure and better cultivation, our corn crop is more than doubled—aye, almost trebled; our potato crop is much improved in quality, and greatly in quantity; and our meadows produce hay enough to leave a handsome surplus, where formerly the cattle we now keep would have found rather '*short commons*.' But the greatest improvement in reference to the cattle and meadows, results from adopting the plan which I saw mentioned in the Cultivator, as pursued by Josiah Quincy of Boston. The old stone fences running through our farm, were a nuisance in my sight—forming ready *harbors* for noxious vermin and weeds, besides occupying considerable ground. I determined to follow the Quincy fashion, (and those Quincies have many good traits about them,) by soiling our cattle, and thus rendering division fences needless. I thus keep the cattle in better order on the products of much less land, and save additional quantities of manure that would alone pay me for all the trouble I have in housing the animals. By underdraining, I have reclaimed considerable marshy land, making it now productive; and the peat-bog of twelve acres, formerly a mere nuisance, is now one of the most valuable parts of our farm—furnishing us with abundant material to throw into our hog-pen and cow-yard, for forming compost in connexion with an occasional sprinkling of lime to promote decomposition. I should not forget that even the weeds with which the old farm was infested, are now made tributary to the improved mode of cultivation; for, cut frequently, (as all weeds should be cut till they are exterminated,) they form material for additional manure, when drawn by me into the hog-pen or cow-house for litter. It is satisfactory to find that many in our neighborhood, who at first smiled incredulously at my notions of *book-farming*, (and also some well-meaning doubters, who are always slow of faith,) are now satisfied there is something in it less ridiculous than they formerly supposed. So, with this brief account of myself, since you last met me on board the line-of-battle-ship, do you wonder that I have now returned with increased interest to the old farm, where I learnt to plow in the same fields that were cultivated by my ancestors from the early settlement of Connecticut?"

As one of the multiplying evidences of the beneficial results of agricultural publications, as an example worthy of imitation by many of our farmers, young and old, the foregoing sketch is at your service—in the hope that young men who are inclined to abandon farming in the hope of better fortune otherwise, will at least "READ, REFLECT AND JUDGE," before they abandon their farms, however "worn out" or unprofitable those farms may have been. Farmers who practice on such doctrines, have little need of crossing the Rocky Mountains in search of lands in Oregon. Rho.

PRESERVATION OF CORN FROM FROST.

Mr. S. N. Hawes, of Shoreham, Vt., relates a remarkable case of the exemption of a piece of corn from frost, which he thinks is to be attributed to the plentiful use of long barn-yard manure, in connexion with the stalks of a crop of corn which had grown on the ground the year before—the whole having been plowed into the soil. He says:—

"I plowed deep, strewing the old crop of stalks in the furrows and covering the whole entire. I had a rank and extra growth of a large kind, which required a longer time to mature; and some of the last days of August or first of September, the earliest ears had commenced hardening, when we had one of the severest frosts I ever witnessed at that season of the year. I had much anxiety respecting my corn crop, which I visited early in the morning; but the crackling of the frozen grass at every footstep, prepared my mind to behold it in ruins. Yet determined to know the worst, I pressed on, mounted the fence, which surrounded it, and to my surprise, not a particle of frost was visible upon it! I looked around upon every side; all bore a wintry aspect. I looked again upon the crop before me; it bore the appearance of having been wet by a gentle but profuse shower. I sprang over the fence, determined to pass through it; but ere I had reached half a dozen rods, was glad to retreat, and before I could effect it, was completely drenched. I again remounted the fence where I could take a view of every side; it was alike surrounded by a heavy frost.

"As I stood pondering upon the apparent phenomenon, the fact flashed upon my mind, that the process of decomposition from the extra quantity of long manure, particularly the old crop of stalks, was still going on to that degree that the heat completely counteracted the action of the frost. Near the middle of the day (which was extremely warm and clear,) I traveled a mile in length, visiting every field on the same level with my own, and all without distinction were entirely destroyed. Mine remained uninjured, and yielded an abundant crop of remarkable sound, ripe corn."

PLOWS.

Messrs. Editors—I observed in your last number, a notice and plate of "The Boston Centre Draught Plow,' Prouty & Mear's self-sharpening patent, with new *gearing*. The advantages said to be secured by this new gearing, seem important. Where very deep plowing is required, the fastening extending down from the back of the standard, may interfere with the operation of the plow. This may be obviated, however, by adding to the height of both the plow and beam. The attaching of the wheel to the side of the beam, though doubtless an advantage when turning the last or dead furrow of a *land*, is counterbalanced by the fact, that this new mode of securing it, will not give it so much permanency and strength as the other, which admits of fastening on both sides of the beam; and hence, will be more liable to get out ot order. These conclusions are not the result of any experience with the plow, but are formed simply by seeing the excellent plate referred to in the number.

There are many good plows in this country, and this instrument has been the subject of great improvement during the present century. But it is somewhat a matter of astonishment to observe how *sectional* a thing a plow is, and what a pertinacity of opinion is exhibited in reference to its qualities, so many claimed to be the best kinds. Perhaps it would be no difficult matter to find a score of patents in the hands of as many different farmers, all believed to be the best existing. And indeed there is some ground for this partiality and difference of opinion. Different soils require differently constructed plows. Of this, I have seen abundant proof, but I by no means lean to the opinion that all the variety of existing patents are equally good, and each best adapted to some peculiar location. I rejoice to see improvements in implements of husbandry, and trust that all useful ones will prove as profitable to the inventors, as they are beneficial to the community of agriculturists.

Prouty & Mear's plow is a self-sharpener, and judging from the plate, the point and share are two separate pieces of cast iron, which may be reversed. On the farm to which I am attached, Cornelius Bergen's patent plow No. 10, constructed on this principle, has been used for perhaps twenty years. I believe Mr. Bergen is entitled to all the credit of this improvement, as well as having on account of the peculiar form of the mold-board, produced the lightest draught plow ever tested by an instrument. I think the records of the American Institute will bear me out in this remark. This reversal of the share and turning of the point when worn on the lower side causes the *set* to be downwards again, and may be repeated until the point is worn to a short *stump*, and has the same effect as a new share, on plows where the point and share are cast in the same piece of iron. Hence it is a matter of considerable economy, for it must be evident to every plowman that the share is usually cast aside because the point is worn up from below, and not because it has become dull. If it could be turned, it would answer for much additional wear.

Mr. Bergen's plow is the best for green sward plowing I have ever seen in use, especially if the sod is old and tough. The form of its mold-board, and general shape, is such as to meet with comparatively little resistance in its passage through the ground, while at the same time it admits of taking a broad furrow or slice, and turns it over to the best advantage. Thus much for its general adaptedness. But I have said that the same plow is not the best for every kind of soil. Land in which the mold-board will readily scour or brighten, will admit of the very acute angular plow; while soil that contains little or no grit, and where the ground constantly adheres to the board, requires a greater angle for the mold-board so as to increase the friction. I am aware that there are soils which will constantly adhere to the plow, no matter how well scoured and brightened before put in use. There must be a limit to this increase of angle, beyond which it cannot be safe to go. Every farmer should obtain a plow that will clear itself in its performance, when the nature of the soil will admit of it, for a clodded mold-board neither performs well or draws easily.

A plow that performs best in sod, will not always be found the best for mellow ground. Plows therefore o different construction are frequently very desirable on th same farm, though there may be a uniformity of soil-one (the acute angle like Bergen's,) to secure lightne of draught, where in a heavy sod, lightness is requir for the benefit of the team—the other for loose grou where a plow similarly constructed, sometimes fails force over the furrow to a sufficient distance. Now follows, if these remarks in reference to the soil a state of the ground be correct, as connected with plowin and they are the result of some experience, then no o patent should bear the palm over all others, and for a purposes.

I will add, **Messrs. Editors**, that I have no intere either directly or indirectly in the sale of plows of a patents, but would recommend for ordinary soils, M Bergen's patent. Its advantages are lightness of dra strength, economy in the cost of sharpening, and the c pacity of performing the best work in green sward. might add durability, for the friction being easy, t mold-board will wear well, while all the advantages o the improvements of the wheel and the new gearing a tached to the centre draught plow, is alike applicable this, as well as other patents. Many of the peculiariti of Mr. Bergen's genius as exhibited in his plow, hav been incorporated in other patents; some have adopte the form of his mold-board, others the length of the iro which travels through the ground, and gives steadine to the operations of the plow, while another has adde the self-sharpening principle, though the ideas may b original to the inventors of the different patents.

Brooklyn, N. Y., May 10, 1844. J. G. B.

SHEEP INJURED BY CLOVER.

Messrs. Editors—In reading the "Prize Essay o the preparation and use of manures," published in th last September number of your valuable paper, I notice under the head of green crops, it is recommended as means of enriching the land, "to let the clover grow un til nearly or quite in blossom and then turn sheep upo it."

This method would no doubt answer very well for th land, but I think would not be as beneficial to the sheep the reasons for which opinion, may be found in the fol lowing statement of facts.

On the 9th day of June, 1836, immediately after wash ing, I turned a flock of about one hundred ewes wit their lambs, into a field of about twelve acres of clove (common red,) as the season was favorable, the clove was very fine, and was in the state recommended in th Essay, just coming fully into blossom; the sheep re mained in the field until the 20th, when 19 of them died as I believe from the effects of clover pasture. The fir symptom of disease shown by them was reeling and stag gering backwards for a little while, after which they lay insensible until they died, which happened with th greater number in an hour or two. There were twenty five taken with the disease, of which number six recov ered.

I of course removed the sheep from the field, and sav no more of the disorder. I then made strict searc throughout the field to discover anything poisonous, bu could find nothing except two very small stools of elder that should not be there. I found, however, that the grass on the strips of old sward along the fences, and also on a small corner of the field that had not been disturbed by the plow, was gnawed down to the ground.

The sheep also showed their dislike to the clover, by twice breaking out of the field over a good ordinary fence, which was a very unusual thing for them to do.

These sheep were of a mixed breed of Saxon and Merino, in fine thrift, being the choice of my breeding ewes. I made a *post mortem* examination of two of the carcases, and found no unusual appearance, except that the paunch seemed very red and inflamed. There was no distention as in bloat.

Gypsum—Inquiry.—Will you, or some of your numerous correspondents who are competent, inform the readers of your paper, of the comparative merits of the different kinds of gypsum as manure. I know some far-men who prefer the French plaster to the Nova Scotia; and I have heard it said that that of our own State was much better than either. If this be true, it seems to be very poor policy to import from abroad an article which may be obtained better at home.

Respectfully yours, Pierre V. C. Miller.
Shawangunk, Ulster Co., March 13, 1844.

PHILOSOPHY OF WOOL—No. V.

I have briefly treated thus far of the several valuable properties of wool; valuable, however, only as each contributes its part in the process of manufacture, and all secondary or subordinate, yet in a measure essential to, the felting power.

The phenomena of *felting* long remained enshrouded in mystery. This gave rise to numerous speculations as to the primary cause or causes, many of which, although plausible at the time of their publicity, now that the true cause has been discovered, appear sufficiently ridiculous. But the keen sagacity of man at length mastered the subject by surmising the correct theory, without the means, however, to demonstrate it, for want of microscopes of adequate power. To M. Monge, the distinguished French chemist, are we indebted for the first correct view of the structure of the fibre, which, from its peculiarity, mainly depends the felting principle. He asserted "that the surface of each fibre of wool is formed of *lamellæ, or little* plates which cover each other from the *root to the point*, pretty much in the same manner as the *scales of a fish* cover that animal from the head to the *tail, or like* rows placed over one another, as is observed in the structure of horns;" and he accounts for the felting process in the following way:

"In making a felt which is to constitute the body of a hat, the workman presses the mass with his hands, moving them backwards and forwards in various directions. This pressure brings the hairs or fibres against each other, and multiplies their points of contact. The agitation gives to each hair a progressive motion towards the root; but the roots are disposed in different directions—in every direction; and the lamellæ of one hair will fix themselves on those of another hair, which happens to be directed a contrary way, and the hairs become twisted together, and the mass assumes the compact form which it was the aim of the workman to produce. If the wool is in cloth and subjected to the process of fulling, the fibres which compose one of the threads, whether of the warp or woof, assume a progressive movement; they introduce themselves among those of the threads nearest to them, and thus by degrees all the threads become felted together, the cloth is shortened in all its dimensions, and partakes both of the nature of cloth and of felt." No language can be employed which will convey a more correct and vivid impression of the process of felting, than the foregoing.

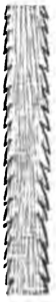
Through the indomitable perseverance of Mr. Youatt, the author of a valuable, though too diffuse, treatise on British sheep-husbandry, Monge's theory was finally demonstrated, although he was often frustrated, and almost yielded to despair, from the imperfections of his instruments. The construction at last of a superior achromatic microscope by Mr. Powell, of London, enabled him to realize his ardent wishes; and his own description of the scene, and the conclusions to which he arrived, are of too much interest to admit of any abbreviation.

"On the evening of the 7th of Feb. 1835, Mr. Thomas Plint, woolen manufacturer, resident at Leeds; Mr. Symonds, clothing agent, of London, Mr. F. Millington, surgeon, of London, Mr. Edward Brady, veterinary surgeon, Mr. Powell, the maker of the microscope, and the author himself, were assembled in his parlor. The instrument was, in Mr. Powell's opinion, the best he had constructed. A fibre was taken from a Merino fleece of three year's growth; the animal was bred by, and belonged to Lord Western. It was taken without selection, and placed on the frame to be examined as a transparent object. A power of 300 (linear) was used, and the lamp was of the common flat-wicked kind. The focus was readily found; there was no trouble in the adjustment of the microscope; and after Mr. Powell, Mr. Plint had the first perfect occular demonstration of the irregularities in the surface of the wool, the palpable proof of the cause of the most valuable of its properties—its disposition to felt.

"The fibre thus looked at, assumed a flattened ribandlike form. It was of a pearly grey color, darker towards the centre, and with faint lines across it. The edges were evidently hooked, or more properly serrated—they resembled the teeth of a fine saw. These were somewhat irregular in different parts of the field of view, both as to size and number. The area of the field was now ascertained; it was one-fortieth of an inch in diameter. By means of the micrometer we divided this into four, and we then counted the number of serrations in each division. Three of us counted all four divisions, for there was a difference in some of them. The number was set down privately, and it was found that we had all estimated it at fifteen in each division. Having multiplied this by four, to obtain the whole field, and that by forty, the proportionate part of an inch of which the field consisted, we obtained a result which could not be disputed, that there were 2,400 serrations in the space of an inch, and all of which projected in the same direction, viz. from the root to the point. Then, before we quitted the examination of the fibre as a transparent object, we endeavored to ascertain its actual character, and proved it to 1-750th of an inch.

"We next endeavored to explore the cause of this serrated appearance, and the nature of the irregularities on the surface, which might possibly account for the production of these tooth-like projections; we therefore took another fibre, and mounted it as an opaque object. There was considerable difficulty in throwing the light advantageously on the fibre, so small a space only as 1-30th of an inch intervening between the lens and the object. At length Mr. Powell perfectly succeeded; and we were presented with a beautiful glittering column, with lines of division across it, in number and distance seemingly corresponding with the serrations that we had observed in the other fibre that had been viewed as a transparent object. It was not at once that the eye could adapt itself to the brilliancy of the object; but by degrees these divisions developed themselves, and could be accurately traced. These were not so marked as the inverted cones which the bat's wool presented, but they were distinct enough; and the apex of the superior one, yet comparatively little diminished in bulk, was received into the excavated base of the one immediately beneath, while the edge of this base formed into a cup-like shape, projected, and had a serrated, or indented edge, bearing no indistinct resemblance to the ancient crown. All these projecting indented edges pointed in a direction from root to point.

"Whether these, like the cones of the bat, are joints, or at least points of comparative weakness, and thus accounting for the pliancy and softness of the fibre, or regulating the degree in which these qualities exist, may perhaps be better determined by and by; one thing, however, is sufficiently plain, that these serrated edges in the transparent object produced (when the fibre was resolved into its true form as an opaque one) by the projecting edges of the cups or hollowed bases of the inverted cones, afford the most satisfactory solution of the felting principle that can be given or desired. The fibres can move readily in a direction from root to point, the projections of the cups offering little or no impediment, but when they have been once involved in a mass, and a mass that has been pressed powerfully together, as in some part of the manufactory of all felting wool, the retraction of the fibre must be difficult, and in most cases impossible."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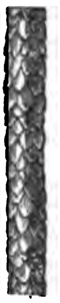
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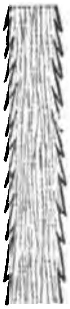
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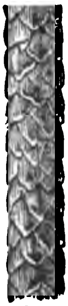
No. 4.

The annexed cuts exhibit microscopic views of fibres of wool from picklock samples of Merino and SouthDown fleeces. The relative difference of serrations can not be conveniently delineated in a plate; a marked difference, however, will be observed in the construction of the lamelæ or serrations.—No. 1. A fibre of Merino wool as a transparent object; No. 2. The same, as opaque; No. 3. A fibre of South Down wool, transparent; No. 4. The same, opaque.

The pressing engagements of the writer at this busy period of the year, will preclude the pleasure it would otherwise afford him to continue the discussion of this interesting subject. L. A. MORRELL.

BEES.

EDITOR OF THE CULTIVATOR—I give here a few questions which if answered through the medium of your paper, will be of essential benefit to many in this vicinity.

By what means can the common board bee-hive be rendered safe against the bee-moth?

If the common hive cannot be made safe, what kind of hive can?

What is the best method of making a bee-hive or house to prevent bees from swarming?

I have tried almost every method to keep the worms from the common hive, such as raising it on nails, sprinkling salt around it, &c. &c. I have also used some of the patent-hives, but entirely without success. I have heard that when a hive is very large, by keeping the bees without swarming, the moth rarely enters it. Is it so?

Fishkill, May 1, 1844. A. B. C.

We think it would be difficult, if not impracticable, to make the "common board hive proof against the bee-moth." A great many kinds of hives have been constructed to guard against the ravages of this destructive insect. A few of them have been more or less useful, but by far the greater portion have been of no benefit whatever. The moth is an insidious enemy, and makes his attack on the hive in such a way that it is not easy to defeat him, and when he has once obtained a lodgment within the hive, it is almost impossible to get him out. The "inclined plane" has been adopted in many cases for the bottom of the hive, under the supposition that the bees would somehow get the worms from their hiding places and drop them on to this board, from which they would roll off to the ground. We are satisfied from critical observation that the number of worms got out of the hive in this way is comparatively trifling. The worm works under the protection of a web, which secures it from their fangs of the bees as effectually as if it were clad in a coat of mail. If the bees undertake to get him out, the feet and fangs soon become clogged with the fibres of the web, and they give up their labors in despair. When the worms have reached their full size and are about to pass into the pupa or chrysalis state, they sometimes crawl about considerably, their object being, apparently, to find a suitable place in which to spin their cocoons and undergo transformation. At this time they are fully exposed to the attacks of the bee, who sometimes seizes and drags them out of the hive. But even then they evince an extraordinary sagacity in finding their way back. When thrown by the bee from the edge of the hive or the inclined plane, they have been frequently observed to be attached to the board by a small web, by which they would directly wind themselves up again to the hive. They have been seen to do this when thrown from the bottom board three successive times, and were then effectually expelled only by the bees carrying them off so suddenly and so far as to break the web before dropping them.

Like many other insects of the same tribe, the bee-moth lies still during the day, and is only active at twilight. Hence, a wire screen thrown over the entrance to the hive during the night, or while the moth is busy, is a good protection. By a little attention, many of the moths may be killed at the time they are hovering round the hive in the evening. Some of the worms may also be caught at the time when they are seeking places for transformation, by placing little troughs, pieces of bark, or elder quills, split in two, so as to make a suitable shelter for them. The worms will be found under them in the morning, and may be killed.

The best defence against the moth, is to guard as much as possible the entrance to the hive. It is much easier to keep an enemy out of a fortress, than it is to expel him when he has once gained possession. In this case, the bees become tired of a continued opposition to the moth, and finding that he has obtained a secure footing, leave him almost unmolested.

The hive should be made of good seasoned stuff, that will not warp, and be put together as closely as possible. There should be no cracks or crevices, for these are sure to afford harbor for the moth. The entrance should be no larger than is really necessary to afford space enough for the bees to pass. The smaller the entrance, the more easily and effectually may it be guarded against intruders.

H. A. Pitts, of Winthrop, Me., has invented a simple contrivance for keeping the moth out of the hive, for which he has obtained a patent. It consists of a series of false bottoms, or slides, attached to the under part of the hive. These slides project out in front of the hive, having spaces of a quarter or a third of an inch between them. A small drawer is made in the back part of the false bottom, or in the rear of the slide, into which some honey-comb is placed. The moth is thus induced to deposit its eggs there. The drawer and slides may be pulled out and the worms destroyed as often as necessary without at all incommoding the bees. The contrivance costs but a trifle, and may be attached to any hive. Where it has had a fair trial, it has been well liked, and is a great protection against the moth. It should be observed that the entrance to the hive is screened by a thin cleat, cut out on the under side so that the bees can pass into the hive, and nailed across over the entrance. This prevents the moth from readily discovering the entrance to the hive, while the spaces between the slides and the drawer, furnish just such a habitation as they desire.

As to the best kind of a house to keep bees from swarming, we remark that there have been many such invented—some of them, under the name of "*palaces*" costing from thirty to forty dollars each. We know not which is "best." For ourselves, we should not be in favor of any of them. It is more natural for bees to swarm, and they will increase much faster, and make more honey in proportion to their number, by being allowed to do so, than if prevented from swarming. As to these *palaces* preventing the moth, we have seen none that appeared likely to do so—on the contrary, their construction is generally so complicated as to afford the moth a very secure harbor, and we have seen many where the moth had succeeded in gaining full possession of the hive, and had nearly exterminated the bees.

WHITE DAISY.

MESSRS. EDITORS—In the summer of 1837, we observed for the first time in a field of ten acres, about five completely covered with the White Daisy; so much so that no domestic animal which we raise, would graze among them, or even look for grass where the daisies grew. They were mowed off that summer, but apparently to no purpose. The next spring, as soon as grass had started, we turned about one hundred and twenty wethers and yearling lambs into that field and kept them there as long as there was any thing green to be seen, when they were driven out until the daisies and grass had started up, when they were put back, and the daisies again eaten off. We continued to change them in and out of that field throughout the summer—our object being to keep the ground where the daisies grew as bare as sheep could be made to gnaw it. The end of this is, that there has not been a daisy there since.

We would recommend to those readers of the Cultivator who are troubled with the daisy, to use their sheep, (if they have any,) not only for the comfort of themselves and families, but for labor-saving animals also. They should be confined to the daisy on its first appearance in the spring, and so many of them as to eat all clean in two weeks or less, when they may be changed into another field, till such time as the daisy again springs up. We have never known or heard of daisies being destroyed in this way before. If you think this worth knowing, please publish it. FRANK FARMER.

The Garden and the Orchard.

CULTIVATION OF FRUIT.—No. VI.

THE QUINCE.

The quince may be propagated by layers, seeds and cuttings. If by cuttings, they are to be taken from the tree in spring, and placed in a light, deep soil, in a moist shaded place, buried not less than ten inches or a foot deep, and leaving but a small portion above ground. If a shaded place cannot be had, spread over the surface of the ground, after they are planted, a coat of decayed leaves. If the weather becomes very dry, water them.

To obtain trees by layers, the young shoots are to be laid down in spring, and buried so as to leave only two or three buds at the extremity, above ground; and when these have grown a few inches, one only is to be left, which will grow the same season, from two to three feet. In the autumn, if well rooted, they are to be removed from the tree and set out in rows; and if the ground is suitable, and they are kept straight by stakes, they will in two years more, make good trees for removal as standards.

The soil for the quince should be deep, rich, and somewhat moist. The trees being small, the distance asunder need not be more than eight or ten feet.

The best varieties are the *Orange*, the *Pear* or *Oblong*, and the *Portugal* quince.

The *Orange*, sometimes called from it shape, the *Apple quince*, has ovate leaves, downy beneath, and large roundish fruit, with a short thick neck, and is of a beautiful rich yellow color. It ripens about the middle of autumn. It is the only variety extensively cultivated in this country. There appears to be several sub-varieties, differing slightly in shape, and considerably in size, but little in quality. The largest sometimes weigh a pound.

The *Pear* quince has oblong-ovate leaves, and a smoother, more delicate, and more elongated fruit, of a regular pear shape. It is quite distinct from the preceding, resembles it in quality, but is of more delicate texture.

The *Portugal* quince, though largely cultivated in England, appears to be little known in this country. According to Loudon, it has broad cordate leaves, and an oblong fruit, which is more juicy, and less harsh than the others, and therefore the most desirable. It is rather a *shy bearer*, which must form a decided objection, as cultivators find sufficient difficulty in this quarter, from the most prolific varieties.

Pruning, to the quince is indispensible. If neglected, it soon throws up a profusion of suckers and branches, and ceases to bear plentifully, and the fruit becomes small, knotty and worthless. Such trees, by thorough and judicious pruning, have been known to yield abundantly of fine large fruit, one year after the operation, cultivation of the soil being also strictly attended to.

The Quince forms excellent stocks for some varieties of the pear, improving their quality, and rendering them more productive. The pears most benefitted by quince stocks, appear to be summer and autumn varieties and those of a decisively *melting* character.

The Japan and Chinese quinces are cultivated merely as ornamental shrubs.

A very formidable, and nearly the sole enemy to the quince, is the BORER. This is the larvæ of an insect, which attacks the tree near the surface of the ground, and works inwards, generally *upwards*, but sometimes *downwards*, to a distance of several inches during summer, perforating the wood. These depredators instead of throwing out their excreted matter like the peach worm, *pack* it behind them, as is common with all borers through *wood*.

The insect which produces this larvæ does not appear to be certainly known.* There is however, strong reason for believing it a species of Cerambyx. The writer received a few years since, an insect taken by L. W. Lawrence of Hudson from a quince tree which had been killed by the borer. It was one of several found in a chrysalis state in the trunk of the tree, and from which, the perfect insect sent, was obtained. It was found on examination to belong to the genus Cerambyx of Linnæus and Latreille. The following is a description. Antennæ with ten joints, tapering gradually towards the point, head white, except a light brown spot upon the crown, one of the same color behind each eye, and two very small diverging oblong spots upon the front; eyes very dark brown; labrum brown at the base, yellowish white on the upper surface at the extremity; thorax yellowish brown above with two broad longitudinal white lines, white beneath; elytra yellowish brown above, with two longitudinal white lines along the middle of each, and which are a continuation of the white lines on the thorax; all the lower part of the body hoary white. According to the author of the article CERAMBYX in Rees' Cyclopedia, the larvæ "resemble soft, oblong, slender worms, with a shelly head, furnished with strong jaws, and six feet on the anterior part. *They live principally in trees, the inner part of which they bore through, reducing the wood to powder*, and undergo their changes from the larvæ to the pupa, and thence to the perfect state, in the cavities which they bore."

As the borer very frequently destroys the tree, various means have been suggested and tried to prevent the injury. Incasing the lower part of the trunk in a box of coal dust, pulverized blacksmith's cinders, tar, or unleached ashes, have been tried with various degrees of success. But the best method appears to be direct attack. The soil should be scraped away from the trunk to a depth of two or three inches, and then cut in with a knife lengthwise, and not *across* the bark where it is possible to avoid it, until the insects are found. The operation should be repeated once a week for several times, as there are generally a number in each tree, and some are almost certain to escape the first examination. Afterwards, the wounded parts should be coated with a suitable composition, as a mixture of tar with ochre or brick-dust, or thick paint. As the insects are constantly penetrating deeper, it is a great saving of labor to arrest their progress early, when they can be removed with facility; hence trees should be examined frequently. But when they have been neglected, and the tree becomes much perforated, to attempt to *cut* them out would destroy it; hence the expedient of drawing them out of the hole by means of a *flexible barbed wire*, has been successfully resorted to. At an earlier period, they are easily punched to death in their holes by a flexible twig. It has also been suggested, when the hole is very crooked, to inject strong soap-suds, or a decoction of tobacco, in order to destroy them. But it may be questioned whether this is sufficient for the purpose, as larvæ generally are very tenacious of life, some even continuing to live when immersed in nitric acid or a solution of corrosive sublimate.

Perhaps the best means of effectually preventing the ravages of the borer, would be to graft the quince upon pear stocks, as the latter is very rarely known to be attacked by this insect.* J. J. T.

EARLY FRUIT.

Many cultivators of fruit sustain a material loss by not directing their attention more particularly to the *earliest varieties*. They often allow one month to pass, unsupplied, when they might be furnished with abundance. The earliest garden vegetables frequently sell in market for ten times the common price, and early fruit possesses equal comparative value. They are not worth less for the cultivator's own use.

Strawberries and raspberries, of select varieties, would soon furnish a supply of delicious fruit; and when a very few weeks have elapsed, the earlier varieties of apples, pears, peaches, plums, and most varieties of apricots, will be fully ripe. To assist in procuring these, it may be stated, that the Yellow Harvest, Summer Pearmain,

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*The writer has not seen Harris' treatise on destructive insects, which it is presumed, contains all the necessary information; but as others also may not have seen the work, the accompanying observations are detailed.

* In a communication, read a few years since, before the Mass. Hort. Soc. by F. M. Richards, it was stated that the plan called Southernwood, planted at the foot of the apple tree, effectually repelled the borer. It may be worthy of trial.

Juneating, and Bough apples; the White Primordian plum; the Amire Joannet, the Primitive or Little Musk, and Madeleine pear; and nearly all varieties of the apricot, ripen before or during wheat harvest; while the Early White Nutmeg peach immediately follows; and the Early Ann and Early Tillotson peaches produce excellent ripe fruit, at least two or three weeks before the common varieties of the red rare ripe, which are so generally considered as standing first on the list for early maturity.

TALK ABOUT FRUIT.

At the Farmer's meeting at the State House, Boston, on the evening of the 27th Feb., the subject for discussion was fruit and fruit trees. From the Mass. Plowman we condense the following:

Mr. **Breck** of the N. E. Farmer, thought the best way to prevent the depredations of birds, on cherries, was to raise enough for them and ourselves too.

Mr. B. thought the peach a valuable fruit, but in this climate it is very uncertain—it is sometimes killed by the severity of the winter. He prefers budding stocks in September.

Mr. B. V. **French** thought orchards should be plowed, or a space around the trees be kept well dug. He prefers the spring for transplanting—washes with potash water, sometimes lime—has used soap. He is much in favor of very deep plowing on first setting out an orchard—had sometimes used a sub-soil plow, and stirred the ground more than twelve inches deep. He sets alternate rows of cherry, apple and pear trees, with peaches also, in the intermediate spaces. Prefers to set peach trees quite late, even after the blossom begins to appear. In pruning, he cuts no large limbs, and finds he needs to cut none if he begins to trim when the trees are young. Plums, he thinks, do best near salt water—but they are an uncertain fruit on account of the curculio; which no one has as yet found an easy way of destroying.

Mr. **Gray** thought the spring best for transplanting. He has had trees suffer much from dry weather, and has saved them by putting moss round them. [Probably straw or chaff would do about as well.] He thought it too much work to tar trees to stop canker worms. He has seen square boards placed about the trunks at the cost of a shilling each, which was preferable to tarring. A wadding was stuffed between the board and the tree, and tar put on the under side of the board out of the reach of the sun and rain, where it would keep soft much longer. He prefers to set apple trees 40 feet apart—prunes when young.

Mr. G. thought the apple was the staple fruit of Mass. and a reasonable profit might be expected from an orchard. Pear trees may be easily raised here—they are longer than apple trees in coming to maturity, but they last longer. The old Endicott pear tree at Danvers, is now 150 years old. As to caterpillars, when young, the nests may easily be taken off with a conical brush. Canker worms will not annoy an orchard that is kept in tillage, so much as one that is left in grass.

Hon. Mr. **Dodge** observed that the cultivation of fruits was an interesting employment, and we had here great inducements to engage in it. He had no fears that the influx of productions from the west would spoil the business here. If we make proper use of our advantages, we shall not be injured. He said farmers were under great obligations to the Horticultural Society for the introduction of new fruits and the investigating the subject of the various insects that destroy them.

Mr. D. raised pear trees from seeds. For producing apple trees, he sows pomace, and sows ashes with it to correct the acid. He buds apple and peach stocks, the second year after they vegetate—buds peach trees the first summer—always takes buds that are fully matured, and suffers the little slip of wood to remain with the bud lest the eye should be injured.

Mr. **Cole** said there was no necessity that apple and pear seeds should freeze before they will vegetate; but to ensure germination, it is necessary to keep them moist. He kept two boxes of seeds in a cellar, one was kept wet, the other left dry—the wet ones came up readily, but the dry ones did not vegetate till the next year.

It seemed to be the general impression that it was be not to put trees deep in the ground when transplanted and so far as experiments had been made, the plan o putting them entirely on the top of the ground, and covering the roots with compost of muck, loam, &c. seem to do very well.

The editor of the Plowman says there was a greate unanimity of opinion on the subject of managing fru trees, than there used to be a few years ago. This is a evidence of the advantage of *comparing* opinions.

FRUIT TREES ON DIVISION LINES.

"Messrs. Editors—Although I do not suppose yo consider the Cultivator as a law journal, yet your opinions on the following case would oblige at least one o your subscribers. When a fruit tree is planted so near division line that a part of the branches pass over the lin or wall, to whom does the fruit on such branches belong and has one neighbor a right to enter another one grounds to gather fruit so grown? Inquirer."

We are no lawyers; and the discussion of law ques tions forms no part of the proper business of the Cultivator; yet as the queries proposed are fairly put, and relat to matters sometimes misunderstood, and consequently the sources of contention and litigation among neighbors we shall give our notions on the subject; premising tha in so doing, we have no intention of trespassing on th domains of the gentlemen whose right it is to discuss an settle all questions of law and equity.

The answer to the first question is, that the right or ti tle to the whole tree, trunk, branches and fruit, belongs to him on whose land the tree is standing. There is an old maxim, "Whoever owns the ground, owns all above it up to the sky;" and this has doubtless led some to suppose that fruit in the case supposed by our correspondent, changed owners by passing a wall or line. The first decision reported of this law question, was in 1693, and to this effect; that if A. planted a tree so near the land of B. that its roots extended into B.'s land, then A. and B. were owners or tenants in common, of the tree. But if all the roots grew in the land of A., although the branches did reach over the land of B., the whole property was in A. This decision, was, however, so clearly erroneous, that it has been over-ruled and set aside by later authorities, both English and American. In the case of Lyman *vs.* Hale, decided in 1836, in Connecticut, where the whole subject was ably argued, it was decided that when the trunk of a tree stands on the land of A., and sends its branches over, and its roots into the land of B., such overhanging branches and the fruit are the sole property of A.; and if B. gather such fruit, he is liable to trespass on A. In the language of a Report made to the Massachusetts Legislature in 1841, "The man who allows the branches of his tree to overhang his neighbor's farm, undoubtedly commits a wrong; but he does not thereby lose his title to those branches, any more than he would the title to his cattle by their being found trespassing, through his negligence, upon his neighbor's field."

The law respecting taking fruit grown as stated in the second query, would not seem quite as well settled as in the first instance, and decisions are somewhat contradictory. In the reign of James I. it was decided that "if a tree grew in a hedge, and the fruit fall in another man's land, the owner may fetch it in another man's land;" but in a case in 1832, it was decided that such right existed only where fruit so fell by accident; and Chitty considers this last case as settling the law on this point. The law, however, respecting the first query, virtually decides the last. The man who plants a tree to overshadow his neighbor's land, or sends its roots into his soil, does him an injury, and permits a nuisance, for which there are obvious and easy remedies. Justice Croke early decided that "one may cut down boughs if they hang over his ground," and the Conn. Courts, in the case of Lyman *vs.* Hale, held the same doctrine. Chitty confirms this as the law, but in the spirit of a good citizen, adds, "It would seem that there ought to be a previous request to the neighbor to abate the nuisance, before I proceed to abate it myself." Napoleon, who suffered not the minuas matters of right to escape his notice, thus enacted in his code: "Art. 672. A neighbor may require trees and hedges planted at a less distance, (lofty trees two metres, and low trees half a metre from a division line,) to be pulled up. He whose property is overshadowed by the branches of his neighbor's trees, may compel the latter to cut off such branches. If it be the roots that encroach on his estate, he has a right to cut them therein himself."

It seems then that the tree planted by A. is his throughout; but if he allows it to trespass on his neighbor, it becomes a nuisance, and is to be abated accordingly. When this is done, no question can arise respecting the fruit or the right of gathering. We beg leave, however, to say here, that those who are in favor of going strictly according to the letter of the law in all their dealings, yielding nothing to comity or neighborly feeling, will be very apt to find their estates passing into the lawyers pockets, and they soon left without lands or trees to differ about.

CATERPILLARS.

In a late excursion through the State, we were surprised at the great number of caterpillars on the apple-trees. In the Mohawk valley, in particular, the foliage of the trees was in many instances almost entirely eaten up by them. It is really astonishing, that after having been at the trouble to raise trees, people will suffer them to be destroyed in this way. Caterpillars may be easily killed if taken when young. The best way is to take them early *in the morning*, before they get out of their nests, and wipe them off clean, web and all together, and crush them under foot. If there is any that cannot be reached by the hand, use a conical brush, attached to a pole, which will take them off pretty well. Spirits of turpentine, oil, and some other substances, are sometimes recommended to kill them. We have tried oil and turpentine, but found them to be injurious to the tree—frequently killing the branches to which they were applied. We should not, therefore, recommend their use.

Another matter very much neglected in many places, is the pruning of trees. We noticed several old orchards on the Mohawk, which seem to have been for years totally neglected in this respect. The branches were as thick, and interlocked as closely as a thorn hedge. It is impossible trees can bear fruit that is good for anything, while in this situation. They should be kept constantly pruned, leaving the proper branches free and open to the air and sun. This will give fruit of good size and flavor.

CHARCOAL FOR PEACH TREES.

Messrs. Editors—A friend of mine has just informed me of the success he has met with, by the application of charcoal to his peach trees; a few years ago he had some fine trees in his garden which invariably had wormy fruit; and the trees full of gum; when the fruit was about the size of marbles, he had the earth removed from each tree about 2 feet around and 3 inches deep, and filled up with charcoal; the result was that the fruit grew to a fine size free from worms; and every year since, the fruit has been good, and the trees became healthy and free from gum; while two trees left without the charcoal, continue to bear wormy fruit, and the trees unhealthy; as this will be in time for the readers of the Cultivator to make a trial this year, and should it prove as good with others as in this case, it will certainly be of great benefit to the fruit grower.

If farmers will plant their pumpkins, melons and other vines on land that brought corn the past year, they will never be troubled with the striped bug. This course has been practiced here for many years, and *has always* proved successful, when vines planted on land that had any other crop, even vines the year previous, are destroyed by the bug. H. R. Robey.

Hopewell, Va., May 10, 1844.

Chip or Scollop Grafting.—At a late meeting of the Farmers' Club, New-York, Mr. Carter described and performed this mode of grafting. A chip of bark and wood is cut out of a stock, a like chip is taken for the graft, and is inserted by little corresponding slits at each end to make a good fit. It is said that by this process, seed fruit can be successfully grafted on stone fruit, and *vice versa.*

Veterinary Department

CURE OF SWINNEY.

A correspondent of the Southern Cultivator gives the following for the cure of swinney or swaney in horses:

"Put a twist upon his upper lip, and introduce the small blade of a common pocket knife, (the point of which must be sharp,) into the thinnest part of the shoulder, which will be near the upper margin of the shoulder blade, and push it directly in until you reach the bone, holding the knife as you would a pen when writing, and scratch up the membrane that covers the bone for a space of the size of a silver dollar; the knife may then be withdrawn, and after the small quantity of blood that follows is wiped away, the orifice will not be seen. The knife may then be introduced in one or two places below the first, and used in the same way, and the operation is over. This may be repeated in six or eight days; we have but seldom found it necessary to repeat the operation more than twice or thrice, and in many cases a single operation will effect a cure."

TO REMOVE CHAFF, &c. FROM AN ANIMAL'S EYE.

Messrs. Editors—I send you the following description of an easy way to remove chaff or similar substances, from an animal's eye. Procure a small quantity of honey, and having the animal's head held fast, open the eye with the thumb and finger of one hand, dip the forefinger of the other in the honey, taking up as much as will stick on the end of it, and holding it near the eye, give it a sudden strike so as to hit the chaff with the honey on your finger, when the chaff will stick to the honey and be drawn out. If you do not hit it at first, try again. The reason of giving a sudden strike is, to hit it before the animal can shut or roll the eye, as it will do, if you attempt to touch it in a slow manner.

The above remedy, at the suggestion of a neighbor, I tried on a steer's eye that had an oat chaff in it for a week, and was inflamed so much as to be white in appearance, and totally blind, yet the chaff came out on my finger, and the eye was well in a few weeks. I have tried it since with like success. A dry oat chaff spread on the moist eye-ball will stick so that the animal cannot get it out, and when moistened by the eye-lid will not be seen without a close examination, yet it will destroy the eye if not removed. I suppose the above is not a new thing, but perhaps it may benefit some one of your readers.

Disease of an Ox, &c.—We lost an ox under the following symptoms. He was seen in the morning rubbing his head and chin with great violence on the fence, and against trees, &c., and so continued at intervals of a few minutes, till one side of its head and chin was raw, bloody, and much swollen, when he died in the afternoon. Some said it was the mad-itch, but knew no cause or cure. Perhaps you can tell. Do cattle ever have maggots in the head, like the sheep? We lost a sheep that acted precisely as the ox did, and on examining its head a maggot was found, which no doubt caused its death. The ox's head was not examined so closely, as to be sure whether it died from the same cause or not. N. W. C.

Four Corners, Huron Co., Ohio, Jan. 1, 1844.

We do not know that the *cause* of what is called *mad-itch* has ever been discovered. In the tenth volume of the Cultivator, page 95, it is stated, "that Mr. Simms, of Indiana, after losing several cows by this disease, succeeded in curing the remainder by the following treatment. As soon as the animal was attacked, he gave it as much soot and salt as it would eat. In a few hours he gave it from three-fourths of a pound to a pound of sulphur, and in the morning as many salts. It is the opinion of Mr. S. Rust, sulphur alone would effect a cure, though he accompanied its action with salts."

The ox is not affected with worms in the head, like the sheep; though we have heard of instances of *leeches* getting up into the nasal sinuses and occasioning the animal much pain. We do not think that "one maggot" in the head of a sheep, would kill it, or occasion it much inconvenience—in fact it is a matter of doubt how far these insects ever affect the health or comfort of the sheep. But we purpose to take up this subject more in detail at a convenient opportunity.

HARD MILKERS.

I have had but little experience with hard milking cows, but have known a small piece of *wheat straw* inserted repeatedly without causing inflammation, as mentioned on p. 166 of this paper; a straw may be softer than a quill, or there might have been "more of good luck than good management." But if long continued, the milk would flow out at all times. I do not recommend this practice except in one case, and that is, when cows' dugs become sore or wounded, the milk may be drawn without difficulty for a short time, till the sore part can heal. The irritation of milking sometimes keeps up a sore a long time; and in one case where a cow's teat was badly torn in a brush-heap, it could have been milked in no other way. As a matter of course, the point of the teat should be well softened with new milk before the straw is inserted; and if carefully done, it may, like medicine a choice of evils, save a cow's udder from *caking*, and prevent the partial ruin of a fine animal.

J. J. T.

REMEDIES FOR DISEASES OF CATTLE.

Colic.—The best remedy is 1 pint of linseed oil, mixed with ¼ of laudanum.

Diarrhœa.—Give half an ounce of powdered catechu, and 10 grains of powdered opium, in a little gruel.

Fever.—Bleed; and then if the bowels are constipated, give half a pound of Epsom salts in three pints of water daily, in gruel.

Hoove or Hoven.—Use the elastic tube; as a preventive, let them be well supplied with common salt, and restrained from rapid feeding when first feeding on rank grass or clover.

Mange.—Half a pound of black brimstone, quarter of a pint of turpentine, one pint of train oil. Mix them together, and rub the mixture well in over the affected parts.

Milk Fever or Garget.—Two ounces of brimstone, two ounces of diapente, one ounce of cummin seed powdered, one ounce of powdered nitre. Give this daily in a little gruel, and well rub the udder with a little goose-grease.

Murrain.—Half a pound of salts, two ounces of bruised coriander seed, one ounce of gentian powder; give these in a little water.

Poisons swallowed by oxen are commonly the yew, the water dropwort, and the common and the water hemlock; one and a half pints of linseed oil is the best remedy.

Purge, in Poisoning.—Either one pound of salts in a quart of water gruel, or a pint to a pint and a half of linseed oil.

Sprains.—Embrocation; one ounce of sweet oil, four ounces of spirits of hartshorn, half an ounce of oil of thyme.

Sting of the Adder, or Slow-worm.—Apply immediately strong spirits of hartshorn. For sting of bees, apply chalk or whitening mixed with vinegar.

To take Film from a Horse's Eye.—Blow loaf sugar and a little salt into the inflamed eye, and in most cases it will be relieved. Sassafras buds pounded, and put in water, to stand till it becomes nearly as thick as cream, applied to the eye is an excellent remedy for inflammation.

To relieve Colic in Horses.—Rub spirits of turpentine on the breast of the horse; and if he be drenched with it he will be relieved. Horses should never be put to severe work on a full stomach; more horses are hurt by hard driving after a full feed, than by a full feed after hard driving.—*English Far. Journal.*

Domestic Economy

TO PRESERVE TOMATOES.

Messrs. Editors—As I am very fond of tomato and have a way of preserving them to use, when the se son for them is over, a way which I have never se proposed, although others may have heard of it, I ha concluded to send it to you, that you may publish it you think proper.

Dip the ripe tomatoes in scalding water, peel the and divide them into two, or if very thick through, thr slices, lay them on plates and put them into the oven a ter the bread is drawn; if a good oven, by the time it cool, or in 48 hours, they will be perfectly dried; p them into paper bags and keep in a dry place; wh wanted for use, dip them into cold water and lay the on a dish to swell, and in a mince or stew, they are a most equal to the fresh fruit. If you wish to make toma sauce, add a little water to cook them in. They are ve good to eat out of hand in the dry state.

Brooklyn, May 6, 1844. A Female Reader.

PRESERVING EGGS.

I have just read the mode of preserving eggs in t last number of the Cultivator, and a lady at my elbo for whom I have the highest esteem, informs me that s preserves them as follows, and has never taken up a b egg, after keeping them all winter:—Put a layer of s in the bottom of a jar, and stick the eggs into the sa *point downwards*, till a layer of eggs is made, when mo salt is put in, and again a layer of eggs, and so on succe sively till the jar is full. Having often eaten of the egg I know the mode to be a good one. T.

Weak Eyes.—Wash the eyes frequently in cold w ter if they are in the least inclined to weakness.

Make a wash by pouring water over a jar full of ro leaves; let it stand all night, and then strain the wat It will be found excellent for the eyes, and should be us frequently.

A poultice made of rose leaves is good for a stye up the eye-lids.

If the eyes are very weak, boil a handful of fresh gathered salad in a pint of water, strain it, and apply t liquor to the eyes at intervals. It will be found ve soothing. A poultice of boiled salad leaves will also r lieve severe pain in the eyes.—*Selected.*

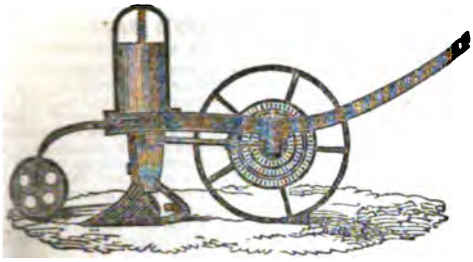
COTTON GIN—SEA ISLAND COTTON.

Mr. Editor—In the May number of the Cultivator f 1844, is an inquiry relating to a Gin for Sea Island c ton. It is asked if a machine differing from the comm roller gin, propelled by the foot of the tender, is used the growers of this article?

To the first qualities of cotton cultivated in South Ca olina, no gin is so well adapted as the common foot g There have been many constructions of the self-feedi gin propelled by horse power, steam, &c. The fibre Island Cottons attaching very closely to the seeds, a these gins not removing it without cracking them, th are unsuitable.

Your correspondent must be sensible that the value long cottons is affected by the manner of its preparatio Unnecessary exposure to the sun, careless handling, & are to be avoided. Indeed to dispense with sunning has been the desideratum. No possible good can res from it. Still as prepared at present some exposure unavoidable. A recent invention removes this necessit A gentleman of the Carolina Sea Island plantations h constructed a gin for the cleaning of these cottons wh renders exposure unnecessary. This machine is mo by the foot of the operator, will clean from forty to six pounds per diem. It is on the roller principle.

The merits of this invention were recognized by a S ciety of Agriculturists in their award of one hundr dollars to the inventor. It will, your correspondent pr sumes, be patented. The Charleston papers of a subs quent date may furnish your inquirer with more detail information. *Charleston, S. C. May* 14, 1844.



SEED PLANTER.

In another part of this number, will be found an article on the growing of turneps, in which it is recommended to sow the seed with a machine. We here give a cut of a good machine for this purpose. It was invented by Messrs. T. & J. Lewis, of Boston. It is calculated for planting all kinds of garden seeds, as well as corn. By the use of a set of rotary plates fitted to the hopper, all kinds of seeds in hills or drills, from three inches to six feet apart. Several gentlemen have testified that it is the most perfect machine of the kind they have seen. The price is $15.

SHEARING SHEEP.

In this climate, sheep should not generally be sheared much before June. After having been sheared, they should be protected by shade from the hot sun, and if the weather turns cold, or a storm arises, they should be allowed the shelter of sheds. Three or four days after the sheep are sheared, the *ticks*, if there are any, will all go on to the lambs. Immerse the lambs in a weak decoction of tobacco, and you will thus get rid of them. Take care to wet the skin fairly, but do not keep the lamb too long in the liquid, and take care that it does not get into his ears, eyes or mouth, as it will make him sick. Ticks occasion the sheep much trouble. To relieve themselves from the intolerable itching which the ticks create, the sheep bite and scratch themselves with their teeth, by which much wool is pulled out and wasted, and the sheep, besides, loses flesh rapidly. The mode here mentioned, is the readiest one of extirpating ticks.

A POTATOE DIGGER.

In answer to the inquiry of our correspondent "Viator," we give the following extract from the Report of the Committee on Agricultural Implements, at the late Fair of the American Institute: "A Potatoe Digger, exhibited for a premium by Mr. A. C. Ketchum of Schenectady, N. Y. This machine consists of two parallel sides furnished with handles resembling those of a plow; they are about fifteen inches in width and two feet apart. In front is an iron plate which is intended to penetrate the earth to a depth just below the potatoes required to be dug; behind this plate, near the bottom of the sides before described, are two pullies, one on each side; and on the upper edge of the sides, about three feet behind the others, are two more pullies, over which two endless chains revolve when the machine is in motion. These chains are connected by small iron rods, about two or two and a half inches apart, and parallel to each other. When this machine is put in motion, the earth with the potatoes is passed over the plate on to the parallel iron rods, through which the chief part of the earth first falls, and then follow the potatoes. It is clear that this machine will not act advantageously in a tough, rigid, or very wet soil. Your committee witnessed its operation in such a soil, and were not disappointed at its partial success. Nevertheless they are unanimously convinced, that the principles developed in this machine are such as to merit the encouragement of the Institute, on the ground that it will answer an excellent purpose in a light dry soil; of which Mr. Ketchum presented a satisfactory certificate; and they have no doubt it may be improved so as to operate in other soils."

DURHAM BULLS, DUKE OF WELLINGTON AND METEOR.

AS frequent applications are made by gentlemen at a distance for the use of these animals, to prevent applications by letter this notice is given.

These animals will be let to cows at $10 each; the money in all cases, to be sent with the cows, and paid to the subscriber. Wellington was bred by Thomas Bates, Esq., of England, and out of his prize cow, Oxford, celebrated as a milker. Meteor bred by Mr. Geo. Vail, of Troy, and out of his imported heifer, Duchess, and got by Wellington. Duchess was also bred by Mr. Bates, and got by his celebrated prize bull Duke of Northumberland. These animals are on Mr. Vail's farm, about two miles from Troy, and will be allowed to serve a few cows out of his own herd. Pasture for a short time may be had for cows sent, at the usual prices. Apply to the subscriber on the farm.

April 1, 1844.—3t. A. CLOCKIE.

FINE FARMS FOR SALE.

THOSE very superior Farms situated near Galway Corners, in the county of Saratoga, collectively known as the Earl Stimson Farm, will be sold cheap and on terms most accommodating to the purchasers as to credit. The property consists of about 340 acres, is so situated as to be conveniently divided into three or four farms, all having the necessary buildings, and will be sold together or in parcels, to suit purchasers. Each farm is properly divided into pasture, tilled and wood land, and is in the highest state of cultivation, fenced in the best manner and with the most durable materials. The property comprises among other buildings, a large and convenient hotel, which is a favorite resort of families in the summer on account of the superior healthiness and beauty of the country. The farming buildings of all kinds are most extensive and convenient for all the purposes of agriculture and the raising of stock. The premises also include a country store, a most eligible location for a country merchant, having been occupied as such for about forty years. It is within two hours drive of Ballston, Saratoga, and Schenectady. The farm is well known among leading agriculturists, and in the agricultural periodicals, as the Pattern Farm. For terms, &c., apply to J. OAKLEY,

Oct. 1.—tf. No. 75 Nassau street, New-York.

GREAT SALE OF ELECTORAL SAXON SHEEP.

THE undersigned will sell at vendue the two flocks of *Pure Electoral Saxon Sheep,* belonging to the estate of the late Henry D. Grove, as follows:

1. That at Grainger, Medina co., Ohio, consisting of about 400 sheep, on the farm now occupied by them, on the 30th of *September next.*

2. The home flock, at his late residence in Hoosick, Rensselaer county, N. Y., consisting of about 360 sheep, on the 15th of *October next.*

A rare opportunity is offered to those who may be anxious to improve the quality of their flocks. The following is the opinion of the distinguished manufacturer who has usually purchased Mr. Grove's wool, of the character of these flocks:

"The purest blood in this country was introduced by the late Mr. Grove in his own flocks, the wool from which I have been familiar with since their importation in 1827. In point of fineness and admirable felting qualities, this wool is unsurpassed by any flock in this country, and the fleeces average about half a pound each more than any other I am acquainted with of equal fineness. SAM'L LAWRENCE.

Lowel, April 9, 1844."

Terms of sale, cash.—Reference, Sam'l Lawrence, or either of the subscribers.

Buskirk's Bridge, April 20, 1844.

ELIZA W. GROVE,
W. JOSLIN,
my1.—6t. S. A. COOK.

IMPROVED CATTLE, SHEEP, SWINE, &c.

WITH a view of facilitating the diffusion of Improved Breeds of Cattle—of superior fruit-trees and seeds for field-crops, and of improved farming utensils, a register will be kept at the Hall of the State Agricultural Society, in the Old State-House, Albany, for the purpose of recording the names and residences of persons having any articles of the above character to dispose of. Farmers, stock-breeders, fruit-growers and mechanics, who desire to buy or sell improved articles of any kind needed in farming, can have their requests registered by addressing the subscriber, post-paid—no charge being made for the service. It is desirable that the directions shall be, in all cases, as specific as possible in reference to prices, qualities, &c.

The frequent requests for information from persons desirous of improving their stock of cattle, sheep and swine, as well as their crops of wheat and other grains and fruits, induce the belief that a registry of this kind will be found measurably useful in promoting the objects of the State Agricultural Society—as it often happens that farmers are induced to try experiments when improved breeds and seeds can be conveniently obtained.

Various improved breeds of cattle, sheep, swine and fowls, are now registered; as are also sundry improved varieties of wheat—well worthy of attention from farmers desirous of bettering the condition of their stock and crops.

Agricultural, and other journals friendly to the objects of this notice, are requested to give it an insertion.

HENRY O'REILLY, *Rec. Sec. State Ag. Soc.*

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☞ ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.

DICKSON'S IMPROVED RUTA BAGA.

THE subscribers have lately received 2 cwt of this new variety of Ruta Baga, raised last season by Mr. Dickson of Lancashire. England, and admitted by all the judges at the Agricultural Premium Shows in Great Britain, to be the largest, most solid, nutritious, and clean growing of all the cattle turneps raised in England, where it obtained numerous prizes, and is *confidently* recommended to the farmers of this country as a decided improvement over the ordinary Ruta Baga; price $1,50 per lb. One pound will sow an acre. Also, Betterave Jaune Allemange or German Orange Sugar Beet, a fine quality, and more productive sort than the White Siberia; was tried in our climate last season with complete success, $1 per lb. Also, *White Belgium Green top Carrot* for field culture, superior to all others, both in size and quality, $1,50 per lb The above are now in season for sowing, and will be warranted as represented, growth 1843.

J. M. THORBURN & Co.
June 1—1t. 15 John-street, New-York.

AGRICULTURAL IMPLEMENTS, &c.

THE undersigned are Agents in this city to sell the following celebrated machines, viz:

Hussey's Premium Corn and Cob Crusher.
Dickey's " Fanning Mill.
Platt's " Portable Grist Mill.
Hovey's Premium Straw Cutter, (Spiral knives.)
Warren's " "
Hull's Stalk and Straw Cutter.

Being proprietors of the now celebrated "Warren's Improved Portable Horse Powers and Threshing Machines," for one, two and four horses, they continue to manufacture and sell them with increased success and satisfaction. Of the two horse machines, one correspondent states, "after a fair trial with barley and wheat with two horses, I can thresh in a clean and thorough manner, at least 30 bush. wheat in 1 hour with comparative ease to the horses; and this day, without driving them at all hard, in sixty minutes, 200 sheaves of wheat of a large size were threshed out in a clean and excellent manner, which is about 15 bushels. The straw, after threshing, is easily bundled; and as it comes out whole and unbroken, I consider these machine on that account important; and as only three hands are required to do the work well, I think the great saving of labor such an item as to make them what is much needed by many of our farmers in this section of country."

The prices for these machines are very low, viz:—two horse power alone, only $50—two horse power and thresher, together. $75—one horse power and thresher. $60—four horse power and thresher. from $100 to $ 10. Cash payable in this city on delivery Liberal deductions made on all machines and implements to dealers.

L. BOSTWICK & Co.
June 1—1t. 145 Front street, New-York.

PELTON'S OUTLINE MAPS,

FOR THE USE OF SCHOOLS AND ACADEMIES.

THIS series of Maps, just published, contains all the recent discoveries, the new boundary line of Maine, &c., comprising the Map of the World, North America, United States, Europe, Asia, Africa and South America. Each map containing about forty square feet, is neatly colored, varnished and mounted on muslin in the best manner, with a neat roller and moulding. For accuracy they are unsurpassed; and the boldness of the engraving, the richness of coloring, and the distinctness with which both the natural and political divisions of the earth are addressed to the eye, can scarcely fail to attract the attention and produce a distinct and lasting impression upon the mind.

Superintendents, Trustees, Teachers, and all who feel an interest in the subject of education, are respectfully requested to examine the merits of this work.

The above maps are for sale by the subscriber, at his residence, 2 Ferry-street, and at the book store of W. C. Little, Albany.

E. C. PORTER,
May 15, 1844—1t. *General Agent for the State of New-York.*

N. B. Schools that are now supplied with Mitchell's Outline Maps will be allowed a fair price in exchange for Pelton's. Should any prefer Mitchell's, they can be supplied with them at a price from $6 to $10 (the usual price being $15) for the whole set; the subscriber having obtained them in exchange for Pelton's. E. C. PORTER.

MADDER SEED.

THE very high prices which the Madder Dyes of France and Holland have attained, are sufficient to excite the attention of our intelligent agriculturists. It is only necessary to take into consideration the immense quantity of Madder consumed in the various manufactories of the United States, to be convinced that the cultivation of this plant would be attended with great advantages, and that it may be undertaken with certainty of profit.

The Madder root can be cultivated in almost every climate. The sands of Silesia, the marshes of Zealand, the arid soils of the South of France and Persia produce it, and of almost equally good quality. It is well known that atmospheric influences make but little impression upon a root, the valuable part of which grows beneath the surface of the soil; and what a powerful guarantee does this circumstance afford to the cultivator of the Madder. It protects him from all varieties of temperature, which so frequently destroy crops of a different nature. For those who cultivate this root, a crop is assured as soon as the seed which they have put into the ground begins to germinate.

A special report upon the cultivation of this plant was laid before the Academy of Sciences at Paris, and a prize awarded to the author. It was written by M de Gasparin, Peer of France, Member of the Institute, and formerly Minister of the Interior. An extract made from it, which is itself sufficient to instruct all who wish to direct their attention to this new branch of cultivation in this country, will be furnished on application. French Madder Seed, obtained from last year's crops, may be had of the subscribers, who have received a consignment of a considerable quantity. Price $1 per lb., or at reduced rates when a quantity is taken. J. M. THORBURN & Co. 15 John-st., N. Y.

June 1—1t.

HUSSEY'S REAPING MACHINES,

GREATLY improved, warranted to cut twenty acres of wheat in a day. The same machine, by a change in some of its parts, will cut hemp; this was satisfactorily proved last year in Kentucky

Hussey's Corn and Cob Crushers, lately much improved. Price from 25 to 44 dollars, with a set of extra grinders.

Hussey's Corn Shelling and Husking Machines, all manufactured and kept for sale by the subscriber, in Baltimore, Maryland. All other agricultural implements made to order. Baltimore possesses ample facilities for shipping to all ports of the United States OBED HUSSEY.

TO GENTLEMEN FARMERS.

A YOUNG Scotchman (unmarried) is desirous of obtaining a situation as overseer on a farm. He has received a liberal education, and for several years has devoted his whole attention to the attainment of all the improvements and details of modern husbandry, now practiced with so much success in Scotland. He is also conversant with the management of cattle.

His credentials are of the highest order, and from individuals known to the advertiser. Salary not so much an object as employment in a healthy situation and a comfortable home.

Apply to Watts Sherman, Esq. City Bank, Albany, or to Dr. A. T. Watson. Jr., New York city. 2t

---

PROUTY & MEARS'

Patent Centre Draught Self-Sharpening Plows,

OF various sizes and prices, from $4.50 to $13 each, with an extra point and share. Wheels will be attached when required These plows are now believed to be the most perfect plows in use. They are strong, and can be kept in repair at a small expense. Among the premiums which have been received for these plows the following may be named at Worcester $100; Boston $20, and a gold medal; New-York a gold medal; from the Philadelphia Agricultural Society $10; at Wilmington, Del., first premium; at Govanstown, Md., silver cup; at Prince George, Md., silver spoon Also Subsoil Plows at 6, 8, 10 and 12 dollars each. For sale wholesale and retail at the Seed and Implement Ware-house, No. 176, Market-st., Philadelphia, by 2m. D. O. PROUTY.

FROM THE STEAM PRESS OF C. VAN BENTHUYSEN & CO

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. I. ALBANY, JULY, 1844. No. 7.

THE CULTIVATOR

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LUTHER TUCKER, PROPRIETOR.

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☞ This paper is subject to newspaper postage only, being one cent within the state or within 100 miles of Albany, and 1½ cent for any greater distance.

THE FARMER'S MUSEUM,

(*Each no. containing 16 pages,*)

is made up of selections from this paper, and published monthly at 50 cents a year—Fourteen copies for $5,00—Thirty copies for $10.

THE CULTIVATOR.

MONTHLY NOTICES.

COMMUNICATIONS have been received since our last, from J. Holmes, S. Tillotson, * * *, John Williams, A Workingman, R. W., L. Durand, C. Rich, H. D. Sewall, J. G. Chambers, James Boyle, W. R. Sanford, J. R. Cook, J. J. T., X. Brutus, J. W., C. H. Tomlinson, J. J. Thomas, D. H. M., Center Draught, A Subscriber, L. Feuchtwanger, J. N. H.

Our thanks are due to the Hon. J. COLLAMER, M. C., for his speech on wool and woollens—WM. R. PRINCE, Esq. for the Flushing Horticultural Society's Address—To WM. KENRICK, Esq. for a copy of the new edition of his New American Orchadist—To J. R. BAILEY, Esq., New-York, for the Leicester (Eng.) Journal, containing the proceedings of the Leicester Agricultural Society.

☞ An article from PROF. HALL, in reference to a communication in our June number, signed "A Practical Farmer," will appear in our next.

☞ The engraver having failed to finish the cut, we are again obliged to defer the communication of "Richmond."

A NEW CORN-PLANTER.—Dr. BEEKMAN, President of the State Ag. Society, informs us that Mr. James S. Griswold of Spencertown, Col. co., has invented a machine for planting corn, which he has examined, and which he thinks, so far as he can judge without an actual trial, will answer the purpose most admirably. It is simple and easily kept in order.

PORTABLE GRAIN MILL.—We saw in the street the other day a portable mill, which from the simplicity of its construction, &c., we are inclined to think well worthy of trial. The patentee is Mr. Erastus Arnold of Otego, Otsego co., N. Y. It will grind any kind of grain fine, but is more particularly designed for grinding grain for feeding animals. A principal excellence of the mill, consists in its being so constructed as to avoid heating the meal in grinding. It can be had of A. Wheeler & Brother, Chatham 4 corners, price $30—for a size suitable for the attachment of a horse-power.

PROFITS OF FINE FRUIT.—Three years ago, Samuel Hecox of Lyons, N. Y. sold seven dollars worth of cherries from a tree of moderate size, of the Yellow Spanish; Zerah Burr of Perrinton, N. Y., sold eight dollars worth from two small and very early cherry trees, last summer; and Wm. Otley of Phelps, N. Y. sold ten dollars worth of Greenings (R. Island) from a single tree, which bore forty bushels. On what capital, would a large orchard of such trees pay an annual interest?

"COTTAGE VILLA."—We like the design for a Cottage Villa, sent us by *N. C.* of Washington, very well. The drawings, however, are too large for our columns; and to get them reduced, and the engraving made, would cost about $40—a larger sum than we can afford at present.

"THE SILK QUESTION SETTLED.—Report of the Proceedings of the National Convention of Silk-Growers and Silk-Manufacturers, held in New-York, Oct. 13, 1843." This is a pamphlet of eighty pages, drawn up under the direction of the American Institute. It comprises a great amount of valuable information in reference to the silk-business in this country, drawn from those persons who are practically engaged in it. There is no reasonable doubt that this is to become a great silk-producing country—especially some portion of the Ohio and Mississippi vallies—where its full success is already demonstrated. This pamphlet ought not only to be in the hands of every silk-grower, but every well-wisher to the country. It was prepared for the press by that indefatigable friend of the silk cause, I. R. BARBOUR of Oxford, Mass., to whom we are indebted for a copy of the second edition. This edition has been enlarged and improved, and the work stereotyped, so that is now afforded at the low price of 60 copies for $5.—150 for $10—1000 for $70. Orders for it may be addressed, post-paid, to Mr. Barbour, Oxford, Mass.

PLOWS.—Mr. L. Durand, writing to us on the subject of plows, says:—"Last spring I sent to Boston and obtained one of Prouty & Co's. Centre-Draft sod plows, which we have used in turning over a meadow for corn. Although I had formed a high estimate of these plows, yet I must say "the half had never been told." When there was no stone to interrupt, it would run the whole length of the field without breaking the furrow, and the draft is a third easier, running at the same depth, than any other plow I ever used. The coulter is set into the beam in such a manner that it cuts under on the land-side some two inches, so that each furrow shuts close to the previous one, and the whole being plowed in this manner, makes a perfectly smooth surface. The wheel attached to the end of the beam is of great advantage on a smooth surface, as it assists the draft, and the plow can be guaged to any depth. On stoney and uneven ground the wheel can be taken off. One of the principles of this plow is to run steady, which it will do for some distance without holding. Perhaps on rough and rocky soils, a shorter plow would work better than this, as when thrown out of the ground it would catch quicker than a long one like the Centre-Draft. There are but few soils, however, that this plow cannot be used on to advantage." "The workmanship of these plows is admired by all. Mine being the only one in the town, (and perhaps in the county,) it created quite an excitement with the farmers who have seen it, and it is hoped that others of the kind will soon be in use here." "There are many other kinds of improved plows, among which are Ruggles, Nourse & Mason's, Howard's, &c., and judging from the premiums they have taken, they must be very perfect. In conclusion I would say, that, as there is no implement used in farming more essential than the plow, procure a good one, and never think of plowing sward without a cutter, for you cannot make smooth work without one."

Wind-Mill.—In answer to the inquiry of Mr. J. Wilkinson, inserted in our May No., we will state that we have been shown a model of a wind-mill invented by Mr. George Parker of Corinna, Penobscot co., Maine. It is simple in its construction, and may be readily adapted to various purposes. Mr. Parker states that one can be made for a well, with all necessary apparatus for raising water, the whole cost of which would not exceed twelve dollars.

☞ Mr. J. G. **Chambers**, of Frederica, Del., gives us some account of the mode of cultivation practiced in his neighborhood. We trust the bad management of which he speaks is not by any means common in Delaware, and that the farmers of every section may soon learn the benefit of a more improved system. Mr. C. says:—"Our county is completely exhausted by bad tillage. The system practiced, has been to clear the land, put in corn, followed by wheat, rye or oats—put the farm into two or three fields, and as soon as the fields are clear of grain, in with the cattle, sheep, hogs, and horses, from the first day of January to the last day of December, until the land is so reduced that there is not more than one-fourth of it will bring wheat at all, and not corn enough to reimburse the tiller. So you must not be surprised at my inquiry in a former communication, how to start right. We cannot get any manure but what we make on the farm, except lime, and that costs too much. It is my opinion that fully one-half of the present inhabitants of the lower part of Delaware, and the eastern shore of Maryland, would greatly better their condition by tilling one half the land they now go over. But make this proposition to a man and he will answer, 'I can scarcely get along now, and if I put myself on one half, I shall starve.'

"We have had a warm, dry spring. Wheat has been much injured by the fly, but is fast reviving by the late rains."

Injury to Trees from Mice.—Mr. Samuel Allen, of Black-Rock, showed us, the other day, several hundred apple and pear stocks which had been so much injured by mice during the winter, that the owner of the nursery in which they stood, had thrown them away—or rather had given them to Mr. A. He had them carefully cut down below where they had been gnawed, grafted them with good scions of choice varieties, and set them out in a good soil. They appeared to be doing well. The suggestion may save trees which are valuable.

Geological Survey.—It is not perhaps very generally known that the legislature lately authorised the sale of copies of the Geological Survey, at the rate of $1 per volume. A share of the books will be sent by the Secretary of State, to the treasurer of each county; and persons who want to secure copies should enter their names with those officers—depositing $8 or $10 at the same time. There will be fourteen or fifteen volumes, when the work is completed—all quartos, and mostly thick volumes. Academies have the prior right of purchasing at $1 per volume within a period of six months from the passage of the law.

To retain the Ammonia of urine.—Dr. Jackson gives in the New-England Farmer, the following as an excellent mode of collecting the salts and gaseous matters of urine. "Take 20 measures of dry peat and one of ground gypsum, and mix well together. Place barrels half full of this mixture in places where urine may be collected, and it will be found that the salts and ammonia of many barrels of urine will be consolidated in this mixture, without giving the slightest odor, or being in any way offensive, for the salts are taken up, and the carbonate of ammonia, formed by decomposing urea, is immediately absorbed. A mixture of peat or swamp muck and gypsum, will also serve to absorb all the disagreeable gases of vaults, which will be converted into valuable fertilizing compounds."

Cattle.—A friend informs us, as an evidence of the emulation created by our Agricultural exhibitions, that among those who are preparing animals and articles in western New-York, he knows one gentleman who is getting ready *ten yoke of cattle* as his contribution in that line towards the next State Fair at Poughkeepsie. The "River counties," and the fine cattle of New England, should be largely and nobly represented on the occasion.

Sheep and Wool.—In a communication from Daniel S. Curtiss to the State Ag. Society, he mentions that he has on his farm in Canaan, Col. co., a flock of sheep which he commenced seventeen years ago, from "good Escurial merino" ewes—using the best Saxon bucks he could get since then. The flock has improved much in quality and quantity—the fleeces averaging, for the last two years, three pounds six ounces; and Mr. C. thinks the clip of this year will exceed that average a couple of ounces. His flock consists mostly of bearing ewes and yearlings, and he keeps no wethers.

☞ Persons having good stock may find their interest in reporting their experience to the State Society.

Harvesting Wheat, &c.—"A Working Man" cautions farmers against harvesting wheat too early. He says—"it is doubtless a good plan to cut grain before it is quite ripe; but farmers would err widely if they should cut it when absolutely in the milk. It would be so damp as to render its preservation difficult." We did not understand the statement alluded to by our correspondent, as representing the yield of the crop at an average of 70 bushels per acre. To have made the experiment of value, the product of an acre or more should have been given. No farmer should adopt any practice he may see detailed in the agricultural papers, or which may be related to him by his neighbors, without considering whether his circumstances, location, soils, &c. render it probable that such practice will be the best for him to pursue. Much, for instance, has of late been said in favor of the use of charcoal as a manure, and where a farmer is so situated that he can make an experiment with it at a trifling expense, it is doubtless worthy of a trial; but the man who should leave his stable manure in his yard, and depend upon charcoal alone, would be guilty of consummate folly. So with a hundred other things, several of which are mentioned by "A Working Man"—the farmer should read, reflect, and decide with judgment and common sense whether the practices of others are suitable for him.

Farming in Tennessee.—Mr. James Holmes of Readyville, Tennessee, gives us some interesting remarks in relation to the state of agriculture, &c., in that State. Mr. H. speaks of the practice of sowing wheat on corn-ground while the corn is standing, and says it is quite common to do so where the weeds and grass are so thick among the corn that it is quite impossible to cover the grain with plows or other implements. The yield in such cases, although the ground is naturally of the best character, is not over twelve bushels per acre—yet, he says, most farmers are satisfied, because they get as much as their neighbors. Indian corn, he thinks, does not yield over 35 bushels per acre, take one year with another, on what is called very good land. But we cannot doubt that agriculture is improving in that section—and with advantages of soil and climate, perhaps not excelled by any State, we trust Tennessee will one day assume the rank to which her natural resources entitle her.

Peach Trees.—Mr. Charles J. Ryan. of Long Island, in a letter to us on the cultivation of peach trees, says he thinks plowing among them is injurious. "The peach," (says he,) "is a tree whose roots have a tendency to run near the surface of the earth. At the end of every years' growth, is to be found a number of fibres, which constitute the main support of the tree. If these rootlets or fibres are disturbed by a plow, two or three times in a year, what can be expected but the yellows, or something else as bad?" He observes that he has seen the peach tree survive its twenty-fifth year, producing good crops both in size and quality. The ground was cultivated with different sorts of culinary vegetables. The plow was not used, and care was taken not to injure the roots.

Poudrette.—A correspondent at Long-Island, writes us that he has used poudrette—he manured a piece of corn-land partly with poudrette, (a gill to a hill, and some with a pint to a hill,) and partly with street and stable manure. The crop was best where was put a pint of poudrette to a hill. His neighbor used it for wheat, broadcast, at the rate of 40 bushels to the acre. The crop was so inferior that he has used none since. Now we are not told here how much of the street and stable manure was used to a given extent of land, or what was the relative expense of the manure and poudrette. What we want to know, is, which is the most *profitable* manure—and in order to be able to tell this, those who make experiments, must state the relative expense of the different substances used, for a given extent of land, as well as the product and nett value of the crop from each sort.

Cheese-Press.—In a note to an article on Gloucester cheese, published in our May No., we stated we presumed a beam press was used. Our correspondent "R. M." says, "this is an error—it is a perpendicular press, merely a large stone 3 or 4 hundred weight, the cheeses placed on top of each other, the last always at the bottom, and of course gets the hardest *squeeze*."

Fair at Washington, Miss.—From the Concordia Intelligencer, we learn that the annual spring fair of the Adams county Horticultural, Agricultural, and Botanical Society, took place on the 17th of April. The attendance was very large, numbering several hundred *ladies*. The display of stock, among which were several fine Durhams, showed clearly that there is a spirit of improvement at work. In the department of *Home Manufactures*, were specimens of jeans, plain and colored, hearth-rugs of beautiful colors and texture, fine samples of butter, &c. &c. There was also a respectable show of implements; and taken altogether, the exhibition may be said to have been highly gratifying to the friends of improvement.

J. S. **Skinner**, Esq. has been appointed to deliver an address before the Agricultural Society of New-Castle county, (Del.) at their next exhibition. Great preparations, we learn, are being made to render the exhibition superior to any former one held by that society.

Tennessee Agriculturist.—Mr. **Fanning**, the former editor of this paper, being engaged in the management of Franklin College, Mr. **Charles Foster**, formerly one of the editors of the Western Farmer and Gardener, takes charge of the Agriculturist. In addition to other high qualifications, Mr. Foster is one of the best draughtsmen in the country, and it is proposed to illustrate each number of the Agriculturist with engravings from his pencil, of country residences, animals, fruits, plants, flowers, &c.—a sample of which appears in the June No.—viz. a view of Dr. Shelby's residence, and a portrait of one of Mr. Mark R. Cockril's Saxony bucks, both of which are well executed.

Strawberries winter killed.—The Boston Cultivator states the past winter has been very destructive to strawberries in that vicinity. The Early Virginia (a celebrated early kind,) Hovey's Seedling, the Wood, and Methven Castle, are in some gardens nearly all killed; while the Scarlet, or Royal Scarlet, separated from the other kinds only by a path, and under the same management, are all alive and flourishing. Young plants, it is said, have endured the cold with less injury than old ones. The Royal Scarlet, which it is said has escaped injury, is spoken of as a large, valuable, and productive variety.

Massachusetts Society for the Promotion of Agriculture.—At a meeting of this highly useful society, the oldest of the kind in the country, recently held in Boston, the following gentlemen were elected officers for the ensuing year:—John Wells, President; Peter C. Brooks, 1st Vice-President; John C. Gray, 2d do.; Abbott Lawrence, Rec. Sec.; Benjamin Guild, Assistant do.; Henry Codman, Treasurer, and Josiah Quincy, jr., Cor. Sec'y. Daniel Webster, J. C. Warren, E. Phinney, F. C. Lowell, David Sears, and W. P. Mason, Trustees.

Agricultural Education.—The late State Convention of Common School Superintendents appointed a committee to co-operate with a committee of the State Agricultural Society, for promoting the introduction of agricultural books and studies into the common schools. The Hon. John Greig of Canandaigua, is the chairman of the committee on behalf of the State Society; and we perceive the name of Gov. Seward and Lieutenant Governor Dickinson among his associates. This committee will meet at Poughkeepsie, on the second Thursday (11th day) of July. Writers on agriculture, and other friends of the the cause, may promote the object by communicating their views on the subject—in reference to the preparation of agricultural works, as well as the introduction of the matter in school exercises—under cover to the care of the Recording Secretary at Albany. The school superintendents can incidentally render an immensity of service to the cause of agriculture, by bearing its importance steadily in mind when discharging their duties among the ten thousand school districts of the State.

The Season in Ohio.—Extract of a letter from a gentleman at Zanesville, dated Juue 12:—"The season here has been remarkably favorable to vegetation, and there is much heavy wheat in the country, though there are fields greatly injured by the fly. The fruit crop is fair, and the prospect in Ohio, taken all in all, looks like any thing but starvation."

Moles.—Many of your readers are no doubt desirous of knowing the best mode of destroying moles. The following, I have tried most successfully. Raise the skin of the heart, or soft part, of a kernel of corn with a penknife, scoop out a portion of the soft part, and fill up the vacancy with wet arsenic. Place a few of these in the tracks of the mole, and I assert his ravages are at an end.

J. **Boyle.**

☞ The drawing alluded to by Mr. B., was too imoerfect to admit of our using it.

Domestic Industry.—The manufacturers, as well as the farmers "down east," will probably, be represented by fair specimens of their products, at the State Fair in Poughkeepsie, as well as at the several of the New-England Fairs and Cattle-Shows. We have seen a letter from **Samuel Lawrence**, Esq. who is largely connected in business at Boston and Lowell, saying that an assortment of goods from his establishment will be exhibited at Poughkeepsie—about fifty pieces in all. The well known fabrics of the Middlesex Mills, of which Mr. S. is agent, is a sufficient guarantee that the exhibition will be alike creditable to the enterprising proprietors and to the country. Manufacturers of all sorts of useful goods, in New-England, as well as in this state, may find the Agricultural Fairs advantageous opportunities for exhibiting the varied products of their factories and workshops—those products particularly which anywise concern the the comfort or profit of the farming community.

To make yellow butter in winter.—Put in yolk of eggs just before the butter comes, near the termination of the churning. This has been repeatedly tried, and it makes very fine sweet butter. It is kept by many as a great secret, but its great value requires oublicity. B.

Sturgeon.—Our friend **Botts**, of the Southern Planter says one of his friends gives the following recipe for cooking sturgeon:—"Slice the white part of a sturgeon, and pour upon it boiling water to extract the oil, then boil it hard until nearly done; put it into a stew-pan with a little water, flour, cream, butter, pepper and salt, or catsup, if you like it, and stew it well."

Bachelor's Pudding.—In the same paper, "Oberlin" gives the following for making Bachelor's pudding. "Break, or grate ripe bread into new milk, and permit it to get soft before adding a good portion of boiled rice, some eggs, butter, and other condiments the taste may dictate, and sweeten with molasses."

LETTER FROM EUROPE.

We are happy to present our readers with the following interesting letter from Mr. J. P. NORTON, of whose departure from this country, we spoke in our May number; and they will be pleased to learn that it is the first of a series we have reason to expect from him during his stay in Europe.

Durham, England, June 1, 1844.

MESSRS. EDITORS:—The sight of your paper in a foreign land, has afforded me much pleasure, and I am happy to say that it does not suffer by comparison with English periodicals devoted to the same subject. It has seemed to me that a slight sketch of my first impressions of the country might perhaps be interesting to your readers. With some allowance for exaggeration after twenty-five days at sea, the country about Liverpool on the 12th of May, seemed to me perfectly charming. The grass was of the most brilliant green; the wheat in some fields was nearly a foot in height; the plowed fields were neat as gardens; trees were scattered about in sufficient numbers to vary the landscape, and the neatly trimmed hedges, in many places just bursting into bloom, completed a picture of cultivation such as I hope we shall yet boast of in America. Since that time, I have learned that all England is not in such a state of perfection. Some of the fields in the coal districts have reminded me strongly of like ones at home, always excepting the hedges, which, even if ill-trimmed, give a certain air to a field that no crooked or stump fence can do. It is much to be desired that this method of fencing may be introduced among us, though hardly to be expected where wood and stone are so abundant as in our eastern states.

The country about the city of Durham, is not as fine nor the farming as good as in many parts of England. Coal is the great production of this region, and the tall chimnies of the collieries, surrounded by black machinery for hoisting, and huge heaps of refuse coal, meet the eye in every direction. One of these pits near Sunderland is worked at the depth of about 1500 ft. below the level of the sea. As you go north to Newcastle and Shields, about fourteen miles from this place, their number increases, till, on the banks of the Tyne, the volumes of smoke poured from their chimnies, joined with that from many alkali works and furnaces, overspreads the whole country and fills the air with the odor of bituminous coal.

In the course of a visit to Hexam, Northumberland, I saw some excellent farms in the beautiful valley of Tyne. One of the best was that of Mr. Harbottle, near Hexam. He practices a five year rotation; two years in clover, cutting the first and feeding to sheep or cattle the second year; barley or oats succeed, then turneps, carrots and potatoes, or other roots, and finally wheat. He had twenty-two acres of Swedish turneps in the ground, and expected to have nearly the same quantity of white turneps and potatoes. There must have been about sixty acres of wheat, oats and barley. He keeps 12 or 14 horses at work constantly, and does his thrashing by steam. He showed a sample of last years wheat pulled from the stack, a bushel of which weighed 66 lbs. One thing is to be remarked as to his plowing; the drills for potatoes or turneps are run diagonally across the field; the plough next year is not run at right angles directly across the ridges, but at a very obtuse angle, thereby mixing the manure in each drill very completely with the soil, and causing the succeeding grain crop to come up evenly. Another advantage occurred to me, which was that in diagonal plowing the team can go nearer to the fence. The crops in this region are now suffering much from drouth, as there has been no rain for nearly four weeks, more than very slight showers.

The city of Durham is chiefly remarkable for its Cathedral and Castle, the latter now the seat of the University of Durham; the former is a truly noble building, and most interesting for its antiquity. It was founded in 1094: just 750 years ago, and its stones are worn by the feet of warriors, nobles, priests and kings, who in olden times flocked to St. Cuthbert's shrine. It looks as if another seven hundred years might pass on, without sapping its massive walls. The great central tower is 2 feet in height; the length of the chancel within, is 4 feet, and of the nave 200. Some of the pillars are feet in circumference.

My next letter will be from Edinburgh, where I ho soon to be established, in the laboratory of Prof. Joh ton, accomplishing the object of my visit to this countr a thorough knowledge of analytical chemistry as appli to agriculture. In compliance with your request, I sh be very happy to give you from time to time, a report our proceedings there, and of such practical observ tions as I may make in excursions through the country.

JOHN P. NORTON.

STATE OF AGRICULTURE IN IRELAND.

An impression seems to prevail in this country the distresses of Ireland, arise from over population— other words, that the soil of that island does not, a cannot yield sufficient subsistence for the number of i inhabitants. We are satisfied that this is not the ca The miseries of the Irish people arise not from a de ciency of agricultural products, but from the inequali of their distribution. An article in the last number the Journal of the Royal Agricultural Society, on t past and present condition of the agriculture of Irelan by William Blacker, Esq., contains many very importa facts. These facts are of the more consequence, as m ny of them have a direct bearing on the interests of own country.

Mr. Blacker contrasts the present condition of Irela with what it was about the commencement of the pr sent century, or at the time when the celebrated Arth Young made his tour through that country. From th it appears, that though population has greatly increase yet production has increased in a greater ratio, and up the whole, the condition of the people has been mu ameliorated. In fact the modern agricultural improv ments in some parts of Ireland, are quite astonishin At the time of Mr. Young's tour, none of the prese means of improvement—such as draining, house-feedi of stock, turneps, clover, and the cultivated grasses were practiced; and worse management than generall prevailed, could hardly be imagined.

"The consequences," says Mr. B. "attending such state of things could not be otherwise than most disa trous. Although the country was not one-third people the miserable inhabitants year after year were expos to all the horrors of famine, followed too generally b disease; and even in favorable seasons they were mo commonly under the necessity of importing food. Co trasting the then state of Ireland, as described by Young with its altered condition in the present day, when maintains three times the number of inhabitants, besid exporting more food than the whole of the island pr duced in those times; and comparing also the gener state of its present population with what it was the they being beyond all contradiction better fed, bett clothed, and better housed now than was then the case it seems impossible to deny that, as population increase the condition of society improves, notwithstanding a that may be said to the contrary: and the truth of thi not only appears on a comparison of the general state o the country now with what it was many years back, bu it also appears by a comparison between the state of th east and west of the kingdom at this present moment In the west and south-west the population is small, an exhibits every appearance of poverty and destitution whereas in the east and north-east, where the population is great, they are *comparatively* in the enjoyment of all the comforts of life. One cannot help being struck with the positive contradiction which these simple facts give to all the assertions of those who argue that the misery to be met with in Ireland is brought on by *over* population. The misery is to be met with, generally speaking, where the population is thinnest; and the least of it is to be seen where the population is greatest. The question may naturally here be asked—How can this be accounted for? The answer is plain. The misery is occasioned not by the excess of the population in proportion to the capabilities of the soil, but to the deficiency of employment."

Mr. Blacker next makes some very proper remarks on the duty of governments to encourage the employment of its own population.

The exports of grain from Ireland for several years past, have been great—the average for the last thirteen years amounting to more than one half of all the imports into Great Britain. This will be seen by the following table.

*An account of the Corn, Grain, and Flour, imported into Great Britain in each year, from 1st Jan. 1830 to 1843.**

Year.	Imported from Ireland: Qrs.	Total Imported: Qrs.
1830	2,215,621	4,650,567
1831	2,429,182	6,971,182
1832	2,990,767	3,788,665
1833	2,737,441	3,191,710
1834	2,792,668	3,351,558
1835	2,679,438	3,000,613
1836	2,958,272	3,601,865
1837	1,030,293	4,356,223
1838	3,474,302	5,009,031
1839	2,243,151	6,831,249
1840	2,327,782	6,318,304
1841	2,856,525	6,542,406
1842	2,063,600	5,306,697
1843	2,721,400	4,167,823
	35·639·382	66,588,023

Ireland contains about fifteen millions of acres under cultivation—only four millions more than the state of New-York—yet Ireland, with a population of about ten millions, exports annually more grain than the whole territory of the United States.

From government surveys lately made in Ireland, it is stated there is yet remaining five millions of acres, unimproved, capable of profitable cultivation. It is also stated there are fifteen millions of acres of a similar character in England and Scotland; so that it cannot be supposed that those countries, notwithstanding the vast advances they have lately made in agricultural improvement, are as yet anywhere near the highest limit of production. Is it not, therefore, unwise to look to England with the expectation of finding there a market for our surplus farm products?

NOTES OF A WESTERN TOUR.

We have received from Mr. JAMES WILEY, of Bedford, Pa., some account of a journey from Pittsburgh by way of the Ohio and Mississippi rivers to St. Louis, thence to Chicago, and by way of the lakes to Cleveland, &c. Want of space prevents our giving the communication in detail.

In speaking of Cincinnati, the writer says it is one of the prettiest and most orderly cities he ever saw. The draymen, butchers, &c. are better dressed than the same class he has seen anywhere else. "In short," he says, "everybody and everything, even the hogs and dogs, about the city, looked well." He saw no indications of mobs or anything of the kind. At Louisville, he saw the celebrated Kentucky giant, whom he says is "*a very qui*[illegible] *man*"—a description which we have no doubt is quite as graphical as that given of the same personage by Charles Dickens. He found St. Louis a very flourishing place, and he thinks it is destined to become one of the largest cities in the world; but the appearance of the city is not agreeable, and the market places, &c. were very dirty, and in respect to order and neatness, contrasts very unfavorably with Cincinnati. The American bottom, opposite St. Louis, on the Illinois side of the Mississippi, is spoken of as being "the finest land in the world, and the most unhealthy. He says there are many people settling there, but if the land was ten timez as good, he would not go to "this *death pot*."

Of Alton, Mr. W. says he hopes those who have occasion to mention it, "will remember the mob-monument raised to its disgrace."

About Jacksonville, he saw many good things. "Good churches, good schools, good farms, and some good Durham cattle. From Jacksonville to Springfield, is a beautiful country—much open prairie, and thousands of horses, cattle, mules, &c., feeding." Being in the neighborhood of Springfield, the day before the cattle show holden at that place, he saw some good cattle and sheep. Springfield is described as being located in a beautiful prairie, the land being excellent, &c. The country on the Sangamon river is spoken of as being "settled by persons apparently not much accustomed to agriculture—at least on any improved system." The farmers have not yet introduced the cultivated grasses, except in a few instances on a very small scale. He called on one farmer who had resided there sixteen years. He had a few yards of blue grass in front of his house, but he was not much disposed to encourage the growth of this "new thing."

Peoria is mentioned as a beautiful place, rapidly improving, &c. The country on the Rock and Fox rivers, is spoken of as being very fine—good for sheep, &c. Chicago is represented as a very thriving city, doing a great business. It is the depot for an immense wheat-growing region. The husbandry through a considerable portion of Illinois is described as being very bad. The weeds were growing, says Mr. W., as "if they were contending for a premium." But on the whole he thinks there is a spirit of improvement being diffused, which will ultimately be productive of much good.

KENRICK'S AMERICAN ORCHARDIST.

The great demand for this standard work, having nearly exhausted the former editions, a new one, making the *seventh*, has been lately issued. We have no doubt that Mr. Kenrick's work is in many respects superior to any one of the kind ever published in this country, and in fact, none has been received with such favor. Mr. K. informs us that the present edition has been revised with very particular care, and many additions made to the former editions. In 1840-41-42, Mr. K. visited France and England, where he collected much information which he has here given. To the list of fruits which was before very large, he has added several new kinds which have been lately proved at the garden of the London Horticultural Society, and elsewhere in England and in France. The appendix contains excellent remarks on vegetables, ornamental trees, shrubs and flowers, &c. Published by Otis, Broaders & Co., Boston.

MACHINE FOR DRAINING.

Mr. A. Hodge, jr., of New Orleans, inquires whether there is any "Yankee invention more convenint and less weighty" than the English drain plows. We are not informed of any implement invented for this puprose in this country, excepting the one spoken of in the late report of the Commissioner of Patents referred to in our June number, p. 179. Perhaps Mr. Ellsworth may be in possession of some particulars in relation to the machine which are not made public in his report. We find descriptions of several machines or draining plows in various English works, but they all require great strength of team to work them, and we are unable to say whether they would in this country be found useful. If any of our correspondents can throw any light on the subject of Mr. H.'s inquiry, we shall feel obliged.

The *mummy* or Egyptian wheat, has proved unprofitable, as far as we know. It does not become readily acclimated, and at best it makes only an inferior flour. It is of the *many headed* variety (*Triticum compostium,*) as is all the wheat we have known brought from Egypt. The *wild-goose* wheat, and the "*California,*" which at the south attracted so mnch attention a few years ago, are merely different names for the same variety.

Onondaga County Cattle Show at Syracuse, on the 2d and 3d days of October next.

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* *Note.* A *quarter* is 8 bushels, grain measure. The *Imperial* bushel of wheat is 70 pounds—the standard bushel of wheat in this country, is 60 pounds—thus, a *quarter* of wheat is 560 pounds, or 9 and a third American bushels.

HILLING POTATOES.

Several years ago we made an experiment to ascertain whether hilling potatoes was of any advantage. We left two rows with the ground level—those on each side were hilled in the usual mode. At harvest time it was found by careful measurement, that the two rows left level, yielded most—how much most we have forgotten. Since that time we never "hill up" potatoes, unless the ground is too wet and we want to turn off the water. An inch or two of earth over the tubers will keep the sun from injuring them, and that is all that is needed. We see some one who signs "An Old Farmer," gives the result of an experiment of this nature in the N. E. Farmer. He left two rows in the piece unhilled—or only gave them a little earth at the first hoeing. At harvest he measured the product of the two unhilled rows, as well as that of two rows on each side, and the unhilled rows gave *five pecks* more (and larger potatoes) than either two of the other rows. He argues (and reasonably) that by hilling we deprive the crop of the benefits of moisture. He says potatoes need a mellow soil, but this cannot be well secured by increasing the size of the hill *after* planting. A correspondent of the London Gardener's Chronicle says, "moulding up potatoes retards the formation of the tubers." The editor of that publication doubts the conclusion of his correspondent, and says—"Potatoes are stunted and swollen branches proceeding from the sides of the main stems, which alone rise into the air, clothe themselves with leaves, and so convey their food to their underground progeny. * * * Now the quantity of lateral branches will be in proportion to the quantity of earth through which the stem passes; tubers are lateral branches, and therefore the quantity of tubers will be regulated by the same cause. Moulding up is a contrivance to increase the quantity of earth through which the main stems have to pass, and should, therefore, according to the theory, be a beneficial operation."

Now we do not understand how it is that "potatoes are stunted and swollen branches," &c. We believe that potatoes proceed from a class of roots or stems entirely different from others, and designed particularly for the production of tubers. In the next place the editor contends that as "moulding up" increases the number of lateral branches, the quantity of potatoes would also be increased by the same means. Our experience has taught us a somewhat different conclusion. We admit that the large quantity of earth through which the main stem passes has a tendency to increase the number of lateral branches, but we have *not* found this increase of branches or roots accompanied by a corresponding increase in the weight or yield of potatoes. In other words, we have found earthing or "moulding" up, to increase the number of roots, and the *number* of tubers, but not the yield either in weight or measure, because they were "*small* potatoes." We have also noticed that those varieties which throw out a great number of lateral branches, produce many tubers in number, but few in the aggregate weight.

The editor speaks of potatoes being produced in the dark which formed all over the branches, of which he gives an engraving. We have often seen potatoes produced in this way—have found them very numerous, but never knew any but small sized ones grown in such circumstances.

CARBON CONSUMED BY ANIMALS.

Most farmers have noticed the greater quantity of food required by animals when exposed to a cold atmosphere, than when placed in one of moderate temperature. The true reason for this is, that *carbon* is as necessary for the support of animal life and heat, as for the support of flame, and the quantity of carbonaceous food which the animals require, will always be in proportion to the degree of cold to which they are exposed. We find this principle well illustrated in some remarks made by Mr. Nesbit in a late speech before an agricultural association in England. The same amount of heat is said to be generated by the combustion of a pound of charcoal, whether it is rapidly consumed in oxygen, or by ordinary b ing, as in the lungs of animals. A pound of charco made to give off an intense heat, might be consume one minute, while in the breathing of an animal a p of charcoal would generally be consumed in twenty hours. From this it is easy to understand how the quimaux are able to eat eight or ten pounds of w blubber, and drink a gallon or two of train-oil per A large amount of carbon is consumed in that col mate in keeping up the animal heat of the body, w must be supplied by large quantities of food which tains carbon. In a warm climate proportionably carbon is consumed in keeping up the animal heat, less carbonaceous food is required. These facts sh teach the necessity of keeping animals warm in win

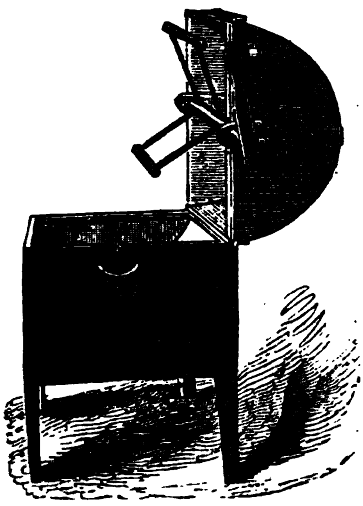
INSECT IN GRASS.

At one of the agricultural meetings in Albany, winter, Hon. Mr. Rhoades observed that an insect s lar to that found in wheat, sometimes called the w had been seen in grass. We have this season disco in the spear-grass, or Kentucky blue-grass, (*Poa tensis*,) what we suppose to be the insect referred to, is not, however, of the same class as the wheat insect more nearly resembles in character the *spindle* wor Indian corn, classed by Dr. Harris under the name *agriadæ*. The insect, in the larvæ state, may be fo around the stem of the grass above the upper joint. so small that it is not readily seen by the naked eye, cept when nearly full grown. We have not yet di vered it in the perfect or fly state. The period o attack on the grass, is soon after the head makes its pearance, and (judging from what we have this year s continues but a few days—their ravages having ce before the grass comes into bloom. The effects of insect are easily seen by the dead grass. The egg f which it proceeds, seems to be deposited between stem and leaf, (or sheath,) and the larvæ preys on juices and tender part of the stem, which soon caus to die and turn white down to the first joint. We h noticed on some fields where the kind of grass mentio prevails, that nearly all the heads were dead. We h not seen it on any other kinds of grass than that m tioned. We should not suppose that it would occas much damage, as it only attacks the stalk in the man described, and the variety of grass to which it seems be confined is chiefly valued for its *leaves*, which are injured, and probably not lessened in quantity.

Berkshire and Sand-Hill Hogs.—A writer in Southern Planter, objects to the Berkshire, and wha calls "*No-bone*" (China) hogs, that they have too s legs, too large a body, and too little ability to get th food. He says, "give me something of the South Ca lina Sand-Hill hog, a hearing ear, (at least in acorn tim a light body and long legs, then a good range, and I w ensure meat enough."

These objections remind us of a similar one we he from a large farmer at the west. Neighbor C. was commending to neighbor A., the improved breeds swine. Their propensity to fatten, the fine quality their flesh and their quiet dispositions, were highly exto ed. A. listened to the eulogium for a while with si attention, when accosting C., he said, "but can your n breed run well ?" "Oh no," said C., "they can har run at all." "Well then," rejoined A., "I don't w any of 'em, for I intend my hogs shall get their livi *somehow, and I would nt give a cent for one that could out-run a dog*." To those farmers who want hogs to "c their own fodder," we say, take the "long legs and lig body." Then "with a good range," (and they w scarcely permit you to set bounds to their "range,") y may have plenty of hogs and a *little* "*meat*" (not pork provided you can catch it.

Damp Beds and catching cold.—Visitors are ofte lodged in beds not in common use, and which have as consequence, contracted a dampness, causing dangerou colds. To prevent completely this disaster, spread well aired blanket on the bed-tick, and the sheets over i



GALT'S CHURN.

This is one of the best churns ever made. Any quantity of butter, from one pound to twenty-five pounds, can be churned at one time. It works easily, without wasting any cream, is easily cleaned, is very durable, and brings the butter in a short time.

Manufactured by R. Sinclair, Jr. & Co., Baltimore, and sold by the principal implement establishments at Bos-

EFFECT OF DROUTH ON THE MATURITY OF PLANTS.

The last year was remarkable for its unusual high temperature, particularly the months of August and September, and scarcely less so for the want of rain which was experienced in many sections of the country. The spring months were cold and vegetation backward. Planting was of course late, and the planted crops did not come forward as rapidly as seemed necessary to ensure perfection. This was especially the case with corn and potatoes. In July the temperature changed: from being wet and cool, it became dry and hot, and in some places this dryness became a drouth of great severity. During the early part of the hot weather, planted crops grew with rapidity, but the want of rain soon checked their growth, and for a month or more the plants seemed nearly stationary. In some places the potato stopped growing, the vine died, and the appearance of a mature crop was exhibited; but the root showed that the suspension of the growth, had at the same time checked the approach to maturity, and though the vine might be dry and dead, the root remained green and immature. We had a field of some twenty acres of corn, that was just beginning to silk at the time the drouth set in most severely. For nearly a month there was not a day, except one or two on which slight showers occurred, in which the leaves of the corn did not curl from the heat more or less. During this time ears set, the corn silked, but the kernel did not form, and more than double the usual time elapsed between the throwing out of the silk and the having ears fit for roasting, that usually does. It became evident that unless the month of September was unusually favorable the crop of corn would be small, and its safety from frost much endangered. Fortunately our fears in that respect were unfounded; that month was favorable, our corn the first of October was untouched by the frost, and an average crop of full sound corn was secured.

From our experience and observation, however, we are convinced that plants make very little approach to maturity or ripening, no matter what may be the temperature, unless a plentiful supply of water be present at the same time. Heat and moisture are the indispensable conditions of the growth and maturity of plants, and either, alone, will be found ineffectual or destructive. The rains of September aided the ripening of potatoes where the vines had not dried up; but where this took place during the drouth, they proved watery and immature. We are certain the ripening of corn and potatoes was delayed some three weeks at least, on our farm by the drouth; and nothing but the favorable weather of September, and their exemption from the frosts so general in the northern states, gave them their chance for maturity.

Since the above was written, we have noticed a paper from a correspondent of an eastern paper, in which the same views are taken of this matter that we have expressed. The writer says,—"My early potatoes which were planted and up in good season, were not riper, if so ripe, Aug. 30, as they have generally averaged in favorable seasons at the 30th of July. My corn was likewise nearly a month behind its growth, and so of most other vegetables we harvest in the fall, and it appears that vegetables which do not require but four months in favorable seasons to come to maturity, will this year require nearly five; and it is not because we have not had a sufficiency of sunshine and heat, for I think we have had a fair average compared with seasons in past years."

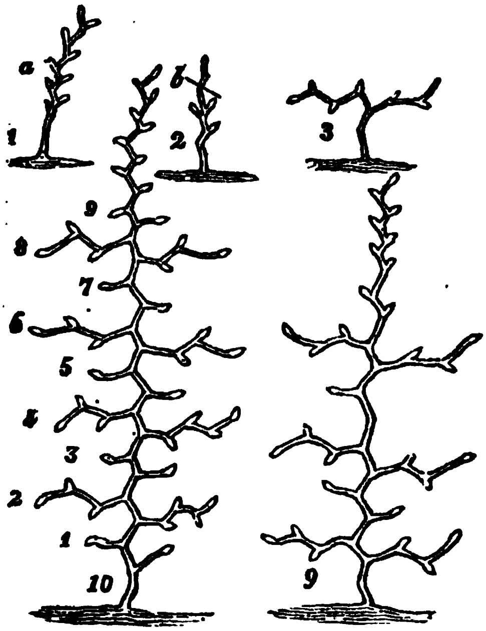
Next to corn and potatoes, apples appeared to be stopped in their growth and their maturity more checked than other plants or fruits; and we have rarely witnessed more rapid changes than occurred in what should have been early fruits, such as the Sweet Bough and White Harvest apples, where after the great heat and drouth, the earth was again saturated with water by rain. We have seen some curious results from this suspension of growth in the potato. Where rains supervened, shoots put out from the tubers of those vines longest dead, as they would from roots planted in the spring.

EARLY SEEDLING PEARS.

There is an impression abroad which has had a great tendency to prevent the general introduction of that excellent fruit, the pear, and that is, that the man who plants the young tree, must be fortunate indeed if he lives to partake of the fruit. That this impression is a mistaken one is evident from the experiments of Van Mons, who has grown thousands if not millions of pears from the seed to fruiting in from six to eight years, and in many instances in even much less time. His object has been by cross impregnation to produce new and finer varieties, and early fruiting was essential to the success of this plan. The result is well known to every orchardist and fruit grower in the country, in the rich fruits he has produced, and distributed to every part of the world. We find in the New Gen. Farmer, a proof that such early fruiting is not confined to the old world. At the last Agricultural Fair at Canandaigua, a basket of beautiful pears were exhibited, *raised from seed, and the tree only four years old.* Four years since the grower, John Crofout, took a fine pear of the variety called Catherine, and planted it entire in a rich spot in his garden. Several young trees came up from it, and grew vigorously. Taking some leaves from the parent fruit, he selected the shoot most resembling the original, and pulled the others. Stimulating manures were applied to the tree, and it grew vigorously. Last year, being four years old, and about six feet high, it blossomed finely, and produced about two dozen of beautiful pears, more resembling the St. Germains than the Caterine, and equal if not superior to the latter fruit. This is certainly a remarkable instance of precocity in a pear tree, and should induce further attempts at this kind of culture.

Crops in N. Carolina.—From a letter to the editors, dated Red House, May 25—"The crops of corn, wheat and oats, were never more promising. We have had the earliest spring ever known in this region of country. This section is adapted to the culture of corn, wheat, oats, cotton and tobacco. The corn and wheat crops are very forward. Some of our farmers are now preparing to cut wheat, and will be in the midst of harvest next week."

To preserve iron from rust.—Heat the iron to redness, just perceptible in the dark, then cool it in tallow.



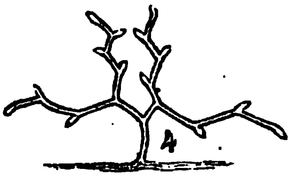
GRAPE CULTURE.

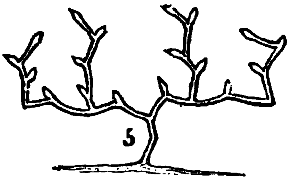
From Wilson's Economy of the Kitchen Garden, we take the following directions for the training of the grape vine. The first is calculated for a scale where the plant is to cover a space eight feet in width, and of any height from eight to eighteen feet or more.

No. 1 on the plate is a representation of the plant when set out, of one year's growth from the cutting, and is to be cut off to one good bud, as at *a*. The lower bud is seldom counted, and only the upper bud is to be allowed to produce one shoot; the young buds on this shoot will many of them shoot out in the course of the summer which should be pinched off.

No. 2 represents the plant of one shoot, one year after being planted, and is to be cut down to two good buds, as at *b*, about fifteen or eighteen inches high from the ground. The shoots from these two buds are to be trained to a trellis, horizontally, to a distance of four feet, and then their ends pinched off, as we intend the plant to fill a space in width of eight feet.

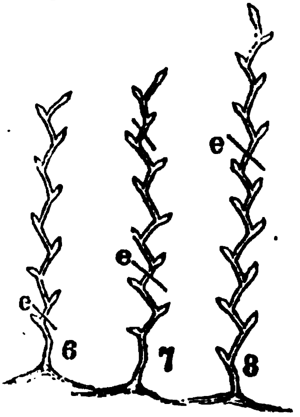
No. 3 represents the plant two years after setting out, with the two last year's horizontal shoots as they must be cut into three good buds. The two buds next to the stem, are to be allowed to shoot and grow upright as high as they please, to be tied up to the trellis, and the end buds to be trained horizontally, to the limits of three or four feet distance, and again pinched off.





No. 4 represents the plant three years from setting out with its two last year's upright shoots, as they must be cut down to four good buds, which are this year to bear fruit, and the horizontal cut into three good buds; their shoots are all to be trained upright, which will complete the head of your vine with eight branches at about one foot apart.

No. 5 represents the vine four years after setting out, with the two centre branches that bore fruit last year, as they must be cut down near to their origin. The two next cut down to four buds for bearing fruit. The next two to one good bud, for producing one good wood shoot. The next and last two, to three buds for bearing its regular culture, afterwards, is to cut four o branches low down, and to leave four longer to fruit alternately, always allowing the branches that fruit the one year, to be cut down, for recovering a shoot again for bearing the next. The other mo training, is called horizontal training, but may be e led to any height or distance, so as you retain the ng shoot, or it may be confined to a very low spa cutting it off.



No. 6 represen plant when set ou same age as the c to be cut also t good bud, as at *e*. bud to be allow produce one shoot.

No. 7 represen plant one year af ting out, to be cut to three good b at *e*. The shoot the upper one of is to be trained up and the two lowe to be trained hor tally.

No. 8 represe plant two years setting out, the leading shoot of which is to be cut do nine buds as at *e*. The upper bud to be allowed to sho right, and all the others horizontally; four feet from side. The two last year's horizontal, cut as they m to one good bud, its shoots to be trained as it wa year.

No. 9 represents the plant three years after settin with its branches cut as they must be. The two l ones to three good buds for bearing fruit. The nex cut to one good bud for wood. The next two, to for fruit. The next two, to one. The other two to t and the leading one again to nine. The upper bud to its shoots continue upright—the other eight horizon

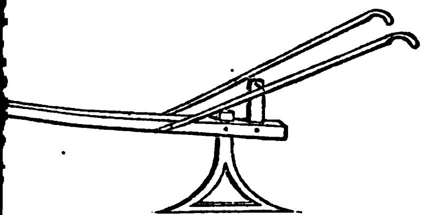
No. 10 represents the plant four years from settin with its branches cut as they must be. The lower to one good bud; the second two, to three bud third two to one; the fourth two to three; the fifth to one: the sixth two to three; the seventh two to the eighth two to three; the ninth two to one, an leading shoot to nine buds, all to be managed in the way as last year. And in this way you may contin plant as far as there is room: when that is term cut off your leading shoot, and regulate all the hor branches so that they may bear fruit and wood alter ly to the end of the grape vine's existence.

It may be necessary to observe, that in the first m described for training the vine, the two horizontal bra es or arms to support the upright shoots, are intend extend four feet from each side of the main stem, an each of them are to be selected four upright bra which will make them about a foot apart. It will be cessary to rub off any intermediate buds, so as to reg them, to be placed at proportionate distances. Af ter they are once cut down to one bud, the next y cutting down would be a joint higher, and this may s ly be allowed for a year or two; bnt whenever they too far above the arms, by cutting down to the lower new bud, they must be cut down on the old wood ne their origin, and only one good shoot allowed to gr any other bud to be rubbed off. And the same rule t be observed in cutting all those trained on a horiz plan. In directing vine buds to be left on the lead shoot, it is only intended in case the plant be very str and vigorous; should it not be so, it would be bette cut it to five, or even to three buds; in which case th would be only one or two branches on each side ins of four, as exhibited in the plate; and the choice of nu bers should always be regulated by the strength and c dition of the vine.

Out of every thousand men, twenty-eight die annua

PLEMENTS FOR CULTIVATING CORN AND OTHER CROPS.

Corn-ground should be kept light. In some instances is not naturally too heavy, and where this is the the use of some implement that will merely cut up weeds, seems all that is necessary in cultivating crop. A light harrow and cultivator are perhaps as implements as can be used. But where the ground compact, something is required to loosen it, and the roots a chance to penetrate and obtain the sub-necessary for the growth of the plant. The com-plow, though much used, we think is not the right of a tool for this business. It throws the soil too into ridges, and instead of loosening, its pressure the substratum heavier than it was before. We generally suppose ourselves in advance of oth-the proper construction and use of implements of dry; but in the use of the right kind of implements cultivating Indian corn, the south and west are ahead us. They use a coulter, a shovel plow, and a cultiva-according as either is most suitable. The coulter is and very effective implement, particularly use-effecting deep tillage, which is effected without ing the growing crop, or inverting the surface l, which is a great security against drouth. The im-ment is sometimes made with two points, as in the



vel cut. The late Hon. James M. Garnet of x county, Va., highly recommended this tool cultivating corn, and gave the following directions making such an one as is here represented:

The lower part is made out of inch square iron, flat-d and well-steeled at the points, and is twenty-two s long. The upright part is of bar-iron, about inches wide by five-eighths thick, and should be teen inches high from the top of the bottom of the e bar. The front and hinder edge of the upright l be left square, as it is much easier to break, to cut a root with a coulter. A half inch -bolt will suffice to fasten the upright in the mor-through the beam, which mortice should have a iron plate above and below, made so exactly to fit part of the coulter, as to keep it firm in its place. The pitch for the beam of a two-horse plow should be to the beam of the coulter.”

he shovel-plow consists of a beam and handles simi-to that of the coulter above represented. The share piece of wrought iron laid with steel, somewhat re-bling a round-pointed spade or shovel. The poin ld be drawn forward and the sides bent back so tha shape will be similar to a cultivator tooth. The e is fastened on by a screw-bolt to a piece of wood, 3 inches square,) morticed into the the beam. This lement, when rightly made, is very useful. It is rally made badly, which prejudices those who never a good one, against them. The share is commonly too near at right angles with the beam, which pre-vents the tool from drawing readily into the ground, and while attached to the horse occasions it to have an unsteady, jumping motion. If the share is rightly set, it will be drawn into the ground by the natural draught, will work in any ground well, and will do better work among stumps or stones than any other implement. The share may be made of any width or size, or shares of different width may be made to fit the same wood-work, and used as needed. A wheel of proper size at-tached to the beam, for land not too rough, would be found an advantage in imparting steadiness of motion, and enabling the plowman to regulate the depth with more ease and precision. A good plow of this kind, although it more thoroughly loosens the soil than a common plow, yet leaves it less thrown into ridges and in better order. The best farmers pass the the cultivator through immediately after the shovel-plow, at the last time of working the corn, which leaves the ground sufficiently level.

In cultivating a crop on sward-gound, the sod ought not to be turned up the first season. Unless the furrows become run together by heavy rains, or settle down too hard, decomposition will more effectually take place, and the gases evolved will be more effectually taken up by by the crop, if the sod is left undisturbed. Should it be expedient to loosen the soil, the coulter will do it without bringing the grass to the surface, and the shovel-plow with its thin, sharp edge, will shave the furrows just as is wished without breaking them. A shovel-plow of small size may be run very close to the corn, and sufficient earth may be thrown by it to bury and kill the small weeds around the hill, without doing any hurt.

Potatoes need a little earth thrown around them—just enough to keep the sun and air from injuring the tubers. The cultivator and shovel-plow will generally do the work right.

For turneps, beets, &c., some tool is wanted that will cut the ground fine and kill the weeds, and at the same time run near the plants without doing harm. It must not throw the earth towards the plants because while they are small a slight burying will kill them. A frame like a cultivator with sharp harrow-teeth, and strong but sharp knives, turned in, will cut every thing close up to the plants.

In cultivating all crops, it should be made a primary object to keep down the weeds from the outset—they should not be allowed to get the least headway. The harrow, cultivator or plow, should be kept constantly moving, and by due attention to this, the use of the hoe or hand-labor may be in a great degree rendered unnecessary.

Driving Horses with a Single Line.—While on the subject of cultivating corn, &c., we cannot avoid saying a word on the mode of driving horses with a single line, practiced at the south and west. Horses well broken to this mode, are much more easily governed by the driver than by the other mode. They will generally go straighter forward, and in marking out furrows for planting, or working among corn, there is no necessity of a boy to ride—a man skillful at the business will mark out his rows, for half a mile in length, as straight as if done by a line. The horse is soon habituated to the mode—he learns that a *steady pull* is intended to bring him to the *left*, and a *jerk* to incline him to the *right*.

The heavy six-horse teams to be seen on the National road, are all driven by a single line attached to the leader, or near forward horse. The off horses are coupled to the near ones. It is true horses may be so disciplined that they will go right without any line, being fully under command of the driver's voice, but they are not often found so, and for managing one horse, only, we decidedly prefer the single line instead of using double lines, or heating the horse by putting a boy on his back.

TO KILL GOPHERS, &c.

An animal by some called the gopher, a species of mole, is sometimes very troublesome in meadow grounds, by throwing up little mounds of earth, which buries and destroys the grass. We have heretofore given various modes of destroying them, one of which, with a cut of the trap, will be found at page 70 of vol. 10. A writer in the Prairie Farmer, (John Sherfry,) says he poisons them with arsenic in the following manner:—“I take a small potatoe and stick holes into it with my pocket knife or a sharp stick, and put into the holes a little arsenic; then I go where they have last been digging, and with a spade or hoe open their tunnel, and drop in the potato. I then put in a wisp of straw or grass or any thing else that will keep the ground from closing the tunnel, and cover it up with earth. Sometimes one can discover them when they have a hole open, throwing out earth; that is the best time to roll a potato in.”

AGRICULTURE IN SCHOOLS.

We are happy to perceive that the subject of introducing agricultural books into the common schools and common school libraries, is atttracting much attention, and are pleased to give the following Report submitted to the State Convention of Superintendents of schools, lately assembled at Rochester. Heretofore, little or no information on this subject has been within the reach of the youth of our country generally, and they have grown up ignorant, in too many cases, of the most common objects with which they are surrounded, and of the first principles of the art by which they are to obtain a livelihood. We have, however, no doubt, that the interest now awakened will be the means of soon bringing forward some suitable works for our schools and school libraries, which will be an important aid to a sound and useful education.

Mr. Patchin presented the following report on the subject of introducing the study of agriculture in common schools, recommending that it be frequently made the subject of school exercises, and that more agricultural works be placed in the libraries.

The committee to whom was referred the consideration of the subject of introducing the study of *agriculture* as a branch of education in our schools, respectfully report,

That, as agriculture is the art on which all other arts depend, and the profession in which the greater part of our population are engaged, its improvement and prosperity is a subject of the highest importance; and the committee are of the opinion that the time has arrived when the elements and scientific principles of agriculture should be taught in all our schools, especially to the older class of pupils.

The rapid progress which has of late years been made in those parts where the discoveries of science have been brought to bear on the improvement of agriculture, affords the strongest evidence of the importance of diffusing a knowledge of the principles upon which these improvements are based, among those who are soon to become the owners and cultivators of our naturally fertile, though much abused soil. There can be no donbt but that such knowledge, if properly imparted, would have a direct tendency to improve the practice of agriculture, and elevate the profession to that high rank in public estimation which it so justly deserves.

Your committee have perceived, however, that there are numerous difficulties connected with the subject, and that it requires more deliberate consideration than they have bestowed upon it, to devise the best means for accomplishing the object. Much can be done by the introduction of books on agriculture into the district school libraries. This object has received considerable attention from the New-York State Agricultural Society, and premiums are now offered for the best essays for the purpose. There is still wanting a suitable *text book* on agriculture, for the use of schools.

In view of this whole subject, therefore, the committee beg leave to recommend this subject to the earnest consideration of this convention, and to submit the following resolutions:

Resolved, That this convention recommend to teachers, as far as is in their power, to impart instruction on agriculture, by occasional dialogues or conversations, and the reading of agricultural books and periodicals, so as to explain the principles of this art, and show its respectability and importance to themselves and society.

Resolved, That the convention deem it of the highest importance that our school libraries contain more works on the principles and practice of agriculture, suitable for the perusal of the young; and therefore we take pleasure in recommending to the trustees of school districts under our charge to purchase works of that character.

Resolved, That we will, as county superintendents, take the subject into consideration, and be prepared, at our next annual convention, to express our opinions respecting it, and to act decisively upon it, if deemed advisable.

Resolved, That a committee of three be now appointed to take this matter under their special consideration, and report thereon at our next annual convention; an the State Agricultural Society be requested also to a a committee to confer with them.

A committee of three was appointed, to take th ject into consideration, and report at the next conve

TURNEP FLY.

The *Brassica* tribe of vegetables, (turnep, cabba dish, &c.) is attacked by a little black, shining be which entomologists have given the name of *Halti* rived from a word signifying to leap. It is som called the turnep flea, sand flea, &c. The same or similar insect is sometimes quite destructive to c bers and other vines, while they are in the first le England this beetle, or flea, is called "the fly." the most formidable enemy to the turnep cultur great precautions are used to guard against its ra In this country it also not unfrequently destroys th nep crop, almost as soon as it makes its appearance ground. Various remedies have been devised agai such as sprinkling the plant with plaster, air-s lime, ashes, watering the plants with alkaline or solutions, &c. &c.

The best applications are undoubtedly those most promote the growth of the plants, because a as they are in rough leaf, they are safe.

At a late meeting of the Royal Agricultural Soc Council, various remedies for the attack of the fly proposed and discussed. Mr. Beard, agent to the of Buckingham, mentioned an experiment he had He took an old sack, ripped it open, and nailed it pole the size of a pitch-fork handle, leaving the en the pole about eight inches longer at each end tha sacking. He then smeared one side with tar, after w two men drew the sacking, tarred side downwards, larly over the field, letting it sweep the ground at a gle of about forty-five degrees, fresh tarring with a as often as required. He caught great numbers of beetles or flies, and saved the crop. He has pursue plan for several years, and has not had occasion to up a single acre from the effects of the fly. He pr gas tar, in consequence of its having a stronger sce is sometimes necessary to go over a field more than o but the work can be done with great expedition.

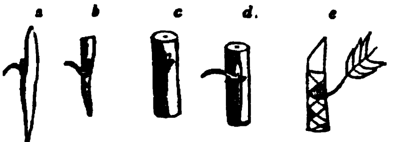
Another gentleman spoke of his experience which been very successful. A month before he begins to his turneps, he provides vessels for the reception of seed, adding to every twenty pounds of seed, half a of linseed oil, taking care to have it well mixed, t adds a pound of flour of sulphur, and every morning the whole rubbed between the hands to get the seed proper state for drilling. He has practiced this m for twenty years without a single failure.

There is also another insect which does consider damage to turneps, radishes, &c., commonly called *maggot*—(*Anthomyia Brassicæ*, of entomologists.)

The parent fly deposits eggs near the crown of plants—the larvæ, as soon as hatched, make their way to the root, which they perforate in every direction, liv there till full grown and ready to pass into their oth stages. Whole fields of turneps and radishes are som times rendered worthless by them.

Kollar says—"the only way of diminishing this d structive fly is to pull up, and carry away betimes, th plants attacked by the larvæ, which may be easily disc vered by their dull lead color, and the withering of the leaves in the sunshine."

An Apple without Seed or Core.—S. W. Jewet Esq., in a letter to the Boston Cultivator, says he has thi year received some "slips," (scions we suppose,) of kind of apple that has neither "*core nor seeds*." Th fruit, he says, is only propagated near Ticonderoga, N. Y. The origin of the variety is given in the following words—"The top of a young tree was bent over and covered with earth which took root; the tree was cut asunder which stopped all connexion with the natural roots of the tree, and by sprouts which sprung from the top portion of the body a regular top was formed, which produces this fine fruit, said to be a beautiful red, good size, very pleasant table apple to be used in the fall."



BUDDING.

The effect of propagating choice fruit about a farmer's premises, is, figuratively, to grow the rose where only grew the thorn, and literally to provide for one's family and friends, some of the choicest luxuries of life; and these luxuries far surpass those of a like kind which are purchased with money, because upon one's own trees, they may be permitted to attain their highest perfection, and because they are rendered more endearing by the personal care and labor which we bestow on their culture.

Budding has several advantages over grafting. It is more readily performed, with fewer implements, and with greater success; it does not injure the stock if unsuccessful, and the operation may be twice or thrice repeated the same year, as the season for its performance is protracted, for some one or other of the varieties, for about three months. Although July and August constitute the ordinary season for budding, the plum and the cherry may often be budded in the latter part of June, and the peach, apricot, and nectarine, as late as the middle of September. Any one may readily acquire the art under the directions we are about to give.

The first consideration is to provide stocks, if this provision has not been already made. Seeds may be collected the coming season by almost every family. Those of stone fruit may be mixed with earth or deposited in a hole in the garden, and in the autumn buried superficially to expose them to the expanding influence of the frost; and in the spring, those of the peach and plum that have not burst their shell, should be cracked and the whole sown into a well prepared bed. Cherries may be sown immediately after they are taken from the fruit, and the apple, pear and quince in the autumn or spring. All kinds will generally grow the first season. If transplanted in June and well treated, the peach will generally be fit to bud in August or September following, and the others in two or three years, if put into nursery rows, and well taken care of. The rule applies to trees as animals, the better condition they are kept in while young, the more profitable they will become at maturity. No one will regret the trifling labor and attention which he has bestowed on a little plantation of this kind, after he has begun to realize the fruits from it.

A bud is an organized plant in embryo, with roots, branches and foliage, and like a seed, possesses individuality, capable of development and the reproduction of its species. The process of budding is the transferring this embryo plant to another tree which must be of the same genus if not of the same species. The apricot and nectarine may be and generally are budded on the peach; the plum and the peach are budded on each other, and the apple and pear may be worked on the wild crab and hawthorn—and the former is put on quince to produce dwarf trees. To render the transfer or budding successful, three things are requisite. 1. That the bud be in a proper condition to transfer. 2. That the stock be in a condition to receive and nourish it; and 3. That the transfer be skillfully made. The bud ought to be matured, of full growth, and yet not so hard as to cause injury in separating it from its parent. The stock must peel freely, as this is necessary for the insertion of the bud, and indicates the presence of what is termed the cambium, which is the soft, partially formed woody matter which underlays the bark, which ripens into indurated wood—is the source of nourishment to the bud, and is the bond of union between the bud and the stock. The operator must use caution that he does not injure either the bud, the bark, nor the cambium, as all these exercise important offices in effecting the union; and he must withal take care to apply his ligatures properly. It will be seen from these remarks, that both the stock and the graft should be in a state of active growth, and the more vigorous the better, when the budding process is performed. It is also preferable to bud when the weather is cloudy, but not wet. Twigs for budding may be preserved for many days, with care. They should be immediately divested of their leaves, but not wholly of their leaf-stocks, or petioles, to prevent the exhaustion of moisture, and may then be wrapped in fresh grass, or with their butt ends preserved in moisture.

The only implement necessary is the budding-knife, and the only preparation some bass-matting, or inner bark of the bass-wood or linden. We shall here describe only the common mode, which we take from the Encyclopedia of Gardening.

Shield-budding, or T budding, is thus performed—Fix on a smooth part of the side of the stock, rather from than towards the sun, and of a height depending, as in grafting, on whether dwarf, half, or whole standard trees are desired; then with the budding-knife, make a horizontal cut across the rind, quite through to the firm wood; from the middle of this transverse cut, make a slit downward, perpendicular, an inch or more long, going also quite through to the wood. This done, proceed with all expedition to take off a bud; holding the cutting or scion in one hand, with the thickest end outward, and with the knife in the other hand, enter it about half an inch or more below a bud, cutting nearly half way into the wood of the shoot, continuing it with one clear slanting cut, about half an inch or more above the bud, so deep as to take a part of the wood along with it, it, the whole about an inch and a half long; (*a*.) then directly with the thumb and finger or point of the knife, clip off the woody part remaining to the bud; which done, observe whether the eye or germ of the bud remains perfect; if not, and a little hole appears in that part, it is imperfect, or as gardeners express it, the bud has lost its root, and another must be procured. This done, placing the back part of the bud or shield between your lips, expeditiously with the flat haft of the knife separate the bark of the stock on each side of the perpendicular cut, clear to the wood, (*c*.) for the admission of the bud, which directly slip down, close between the wood and the bark, to the bottom of the slit, (*d*.) The next operation is to cut off the top part of the shield (*b*) even with the horizontal first made cut, in order to let it completely into its place, and to join exactly the upper edge of the shield with the transverse cut, that the descending sap may immediately enter the bark of the shield, and protrude granulated matter between it and the wood, so as to effect a living union. The parts are now to be immediately bound round with a ligament of fresh bass, (*e*) previously soaked in water to render it pliable and tough, beginning a little below the bottom of the perpendicular slit, proceeding upward closely round every part, except just round the eye of the bud, and continue it a little above the horizontal cut; not too tight, but just sufficient to keep the whole close, and exclude the air, sun and wet.

Future treatment.—In a fortnight at fartherest after budding, such as have adhered may be known by their fresh appearance at the eye; and in three weeks all those which have succeeded will be firmly united with the stock, and the parts being somewhat swelled in some species, the bandage must be loosened, and a week or two afterwards finally removed. The shield and bud now swell in common with the other parts of the stock, and nothing more requires to be done till spring, when just before the rising of the sap, they are to be headed down close to the bud, by an oblique cut terminating about an eighth or a quarter of an inch above the shield. In some cases, however, as in grafting, a few inches of the stock is left for the first season, and the young shoot tied to it to prevent injury from the winds.

To REMOVE INK SPOTS.—Spots made by black writing ink, on the pages of a book, may be removed by washing them with a solution of oxalic acid in water. The spot must be afterwards washed with clear water. In this way the writer has easily removed fresh ink and left the page white, and old spots have been nearly obliterated.

THE "GANG SYSTEM" IN ENGLAND.

Heaven knows we have misery and degradation and vice enough in this country, and if we had been ignorant of it, the foreign travellers who traverse it, have kindly and frequently brought the fact to our notice; and so intent have our English brethren been on this, that they seem to have overlooked the misery and degradation and vice existing on every side at home. Scarcely had the public recovered from the shock produced by the vile attrocities revealed by the commissioned inquirer into the state of the laborers in the coal districts, and the unparalelled misery of the manufacturing ones, when a new source of oppression and crime was revealed in that part of the Report of the Special Poor Law Commissioners which relates to the employment of women and children in agriculture, or what is called the *Gang system* of labor. We have room for only a brief notice of the subject here; and we only allude to it, to show the condition of the agricultural laborer there, and enable the American tiller of the soil to compare the condition of his wife and children as well as his own, with those described.

The gang system originated at Castle Acre in Norfolk, several years since, and has been gradually spreading, as poverty and misery compel the agricultural districts to adopt any course that will prevent absolute starvation. The parishes around Castle Acre were in the hands of two or three proprietors, and to avoid poor rates, these men allowed the cottages on their lands to fall to decay, and refused to build new ones. The proprietors of Castle Acre on the contrary, kept up their cottages and obtained exorbitant rents by letting them to the poor laborers from the adjoining parishes. As these parishes must have laborers, they resort to those collected around Castle Acre, of which there are some two or three hundred. To facilitate business between the employer and those wanting employ, a person called a "gangsman," is employed as a middle man between the parties. The Report describes the operation of this system as follows:

"Suppose a farmer in or near Castle Acre, wishes to have a particular piece of work done which will require a number of hands, he applies to a gang master, who contracts to do the work, and furnish the labor. The bargain is made with the gang master, and he makes his bargain with the laborers. He accordingly gets together as many hands as he thinks sufficient, and sends them in a gang, under an overseer, to their place of work. If the work, as usually happens, is such that it can be done by women and children as well as men, the gang is in that case, composed of both sexes, and of all ages. They work together, the overseer taking care they are steady to their work, and checking any bad language or conduct. The overseer usually goes with them to their place of work, and returns with them when they have done for the day. One gangsman at Castle Acre has about one hundred persons in his employment, with four or five overseers."

The result of this system is easily seen, and are forcibly detailed in the Report. The gang-master for instance, engages 50 hands to pull turneps, or harvest wheat, in a field 5 miles off. On reaching the place, the weather becomes unfavorable, they cannot work, and they return without receiving any thing. Children of six years old have to walk 5, 6, or 7 miles to their work at times, and if it rains, are compelled to walk back again. To children, such walks are worse than the work. The day, for the gang, is divided into four parts, and if a laborer, man or child, fails, or rain stops him, before the part has passed, he gets nothing for it. One of the worst effects of the gang system is its moral influence on the laborers. The character of the employed is of no consequence to the gang-master, and hence, says the Report, "all sorts of characters, male and female, are mixed up in these gangs. Idle and profligate persons whom no one would employ unless they could be kept under constant superintendance, naturally find a resource in these gangs. A large proportion of the females consist of grown up girls, of whom one of the overseers stated, that in consequence of ganging, seventy out of one hundred were very imprudent, or prostitutes." As the places of work are frequently from six to ten miles distant, the gangs are sent in carts or wagons, and during their absence which is sometimes several days, sleep in barn or elsewhere, as they can, which will in part account fo the gross immorality of this class of the laboring poor. Another consequence results from this system. Th whole laboring population, wherever it prevails, are i the power of the gang-master, who, if he is a "har man," and he has every temptation to be such, becomes perfect tyrant. Were he ever so favorably disposed, h has little power to mitigate their condition; but he ha the power to exact from them any amount of labor he pleases; frequently his condition is that of "a poor ma who oppresseth the poor," one of the most grinding a aggravated kinds of oppression. One of the most alarming features of the case is, that the gang system i spreading and increasing; a sure proof of the deepest condition of moral and physical degradation, a condition i which a man voluntarily consigns himself, his wife a children to a state of hopeless servitude for the miserab pittance of potatoes and bacon, that will keep soul a body together. Negro slavery is an evil for which G will visit any nation; but here in the midst of a peop boasting that whoever touches their soil is free, we fi a deep and firmly rooted servitude, to which in its consequences, American slavery affords no parallel. Th government which tolerates such a state of things, which by its lust of power has reduced its agricultur population to such a frightful condition, must expect th the day of retribution, dark and terrible, cannot be distant.

DAIRYING.

Experiments are being made with glass milk pans i England. It is thought by some that they will be fou very excellent articles. The price, it is said, will n be high, and it is supposed that they have an advantag on account of the purity of the metal, and their bein no risk of any injurious action which may injure th cream or prevent it from rising. Cheap China has bee recommended and sometimes tried for milk pans. It thought by some that milk pans should be shallow. Th subject was discussed at a late agricultural meeting i England. One man stated that he believed it had bee demonstrated that the same measure of milk poured int a vessel allowing it to stand two inches deep, would ca nearly twice as much cream as it would do if its dept were eight inches. Now does the experience of dairymen in this country agree with this? We should be gla to know.

At the meeting above alluded to, Mr. Greaves state that he had found in his own dairy that a piece of saltpetre about the size of a hazel-nut, dissolved in war water, and mixed with every gallon of new milk as soo as it is strained, not only caused the milk to cast its crea better, but had the effect of removing from the butte every disagreeable flavor arising from the herbage o particular pastures, such small addition to the milk, of well known and simple saline substance, imparting to a wholesome character, rather than otherwise, in a dietetic point of view.

We have seen saltpetre used in this way with good effect.

Another gentleman at this meeting spoke of the sypho for separating milk from cream. The syphons wer made of block-tin, with a tube about a quarter of an inc bore. They are completely self-acting, merely requiring to be inserted in the milk and set at work, the strea continuing to flow by such decantation until the crea presented itself for admission into the lower orifice o the tube, when its greater body and less fluidity prevented its free passage, and the syphon gradually stopped of it own accord. This complete draining of the milk from the cream, rendered the butter very superior in its keeping properties.

Sore Teats in Cows.—An old receipt for this ill which the cow is heir to, is rubbing the parts affected in molasses, and we have known it to be tried in many cases with success.—*Bost. Cult.*

PRINCIPLES OF BREEDING.

At the sixth agricultural meeting in Albany last winter, the subject for discussion was the proper mode of improving the breed of domestic animals. Mr. Howard, associate editor of the Cultivator, made, substantially, the following observations.

Mr. H. said although he thought the remarks which had been made by the gentlemen who had before spoken, were, from their general character, highly interesting, yet he should have been pleased if something had been said having a more direct bearing on the subject under consideration.

It seems to be admitted, by most persons, that domestic animals have in some cases been improved by man, and the object, in the outset, is to ascertain *how* that improvement has been effected; because, "what man has done, man can do." What, then, has been the system pursued by the improvers of animals? Some natural principle has doubtless been acted on. In the history which has been given of the management of Bakewell, Fowler, Colling, and others, we are not informed that the constitutional qualities of their animals were changed or improved, by keeping them on any peculiar kinds of food. They, to be sure, had their animals well fed with wholesome food, adapted to their age, but no particular mode of feeding was relied on to effect a *constitutional* improvement. Nor was it supposed that those men had a very thorough knowledge of the phisiological principles, which had just been spoken of. In saying this, it was not intended to undervalue science, but simply to state, that with such light only as is within the reach of every man, important improvements have been made. If to the practical habits of observation which those celebrated stock-breeders possessed, had been added a thorough knowledge of anatomy and animal physiology, the results of their labors might have been still greater. But practical skill and discrimination, are of the first consequence, and with the men who possess these requisites, theoretical knowledge will be turned to the best account.

An attempt will be made to state, briefly, what is believed to have been the *foundation* on which Bakewell, and other improvers of stock, conducted, or continued to conduct their operations.

The best domestic animals for any particular purpose, are seen to possess certain natural or constitutional characteristics.

It may be said to be a law of nature applicable to the animal and vegetable world, that "*like produces like.*" This, though a truth in a *general* sense, is not strictly so in a *particular* sense—if it were, all animals of the same general family or race, would be *exactly* alike. For an illustration of this idea, suppose we take a given number of animals of any species, breed them together, and rear their progeny. We do not find an *exact* resemblance among them, nor do they exactly resemble either of the parents, or any of their progenitors. Some of the offspring may not possess as many good points as their progenitors had, and occasionally some may be found with more. There is a variation, but still there is a general resemblance. Now if we select from the offspring of our first named animals, some which are actually better than their progenitors, and breed from them, always bestowing proper attention, we may have some among *their* progeny also, which will exhibit the same superiority over the parents that was mentioned in the first instance. If we select the best from these again, and go on as before, we obtain the same results—we may still have a few superior ones—and thus by attending for many generations to these rules in selecting, a general, fixed and permanent improvement is effected.

But it should not be supposed that the superiority of offspring to parents, which has been spoken of, is frequently to be expected; on the contrary, such superiority is rare, especially in those breeds which have derived their excellence chiefly from the art of man—in such cases a progeny is more likely to be inferior to its progenitor, than superior—nevertheless, that superiority is sometimes found; and experience has proved that if such animals as possess it are chosen for propagation, those superior points, though in their first development they may seem to have been only an accidental deviation from general laws, may be perpetuated in the future progeny—may be transfused through a larger number of animals, and other improvements added in succeeding generations.

The principle then is this—that *like begets like* in a *general* sense—that there are some variations within this rule, which, when seized on, constitute the basis, under proper management, of new and improved varieties. That particular qualities in animals, though apparently accidental at first, may become fixed and hereditary, (coming under the general principle that like begets like,) by the exercise of care and skill in selection and breeding.

It is by having acted on this principle, that improvement in breeding domestic animals has been chiefly effected.

But it is impossible to lay down rules for selecting and breeding, so minutely that they will infallibly lead every one who undertakes to follow them, to the desired point of improvement. To be able to select the best animals for particular purposes, requires a nicety of discrimination which can only be acquired by a long course of the closest observation, and a habit of comparing different animals, united with a natural taste for the subject and a thorough understanding of its principles. Such is the attention, study and observation, that is necessary to constitute a successful breeder, that few men have hitherto been able to secure that title, and until men are much altered, it will continue to be so in future. It is an easy matter to improve an inferior stock by crossing it with a superior one; but when there is no longer a superior stock to resort to for crossing, there will be found but few who will be able to push improvement any further. And this will always render the number of *truly fine* animals, comparatively small, and as a natural consequence, the prices they will command, will be comparatively high.

It is believed that the principle here laid down, is the one which has been acted on in breeding, whether improvement has been sought by crossing distinct breeds and rearing a new one from the issue, or by breeding entirely from one variety. It is this principle which constituted the basis of the improvements effected in the Long Horn cattle by Bakewell and Fowler, in the Short Horns by Colling and his coadjutors, in the Herefords by Price, Tompkins and others. It has also been equally the basis of improvement in sheep-breeding, from the Leicesters of Bakewell down to the South Downs of Ellman and Webb, and the Anglo-Merinoes of Lord Western. *Proper selection* is the grand point, and, with a sufficient range for this, with due care in feeding, &c., in proportion to the skill and judgment of the breeder in discovering the excellencies and defects of animals for particular purposes, so will be his success in attaining the points of improvement at which he aims. Every thing depends on the faculty of the breeder to select those animals for propagation which are best calculated to promote his object.

It may not be improper to make a remark here in relation to certain modes of breeding, in reference to which much has been said and written.

Breeding from animals of near relationship, commonly called *in and in* breeding, is generally considered injudicious. On the other hand, crossing two distinct races, whose characteristics present a wide contrast, is by some considered equally impolitic.

Breeding *directly* in and in, or from *precisely* the same blood, is not, probably, often practiced by professional breeders. It is usually admitted that Bakewell practiced very *close* breeding, if, indeed, he did not breed from precisely the *same* blood, with both cattle and sheep. And yet his stock not only improved in symmetry and tendency to fatten, but in constitution also.* It is true that after his death the stock declined, but under the guidance of his master mind, no degeneracy was indicated. He made such selections of animals for breeders, in the beginning, as suited his judgment, but afterwards confined himself to his own stock; but it has been observed that his stock was so large as to furnish unusual facilities.

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* "The principle which he [Bakewell] invariably adopted was, to select the best beast that would weigh most in the valuable joints; so that while he gained in point of shape, he also acquired a more *hardy breed*. and especially by attending to the kindliness of their skins, he became possessed of a race, which was more easily fed and fattened than any other." - [Complete Grazier, p. 34.]

Crossing long-wooled with short-wooled sheep, and breeding from the issue, is commonly considered injudicious, and in general the plan does not succeed, yet examples may be cited to show that great success has sometimes followed its adoption.

Mr. Twynam, of the county of Hants, Eng., has for twelve or fourteen years been engaged in breeding a race of sheep from an original cross of the Cotswold and South Down. His sheep sustain a very high character, and he has carried many prizes on them. Count de Gourcy, in the account of his late tour through England and Scotland, speaks of them in the highest terms, both those which he saw in the possession of Mr. Twynam, and of the same stock which he saw on the pattern farm of Lord Ducie, under the direction of Mr. Morton. The Count states that Mr. Twynam has for a few years past, sold many of his sheep to be sent to Australia, India, &c.[*]

Another striking example is that of the Anglo Merino sheep of Lord Western. He commenced his experiments about the year 1812, with some sheep presented him by George III., which that monarch had received from Spain. The peculiar race to which he has given the name of Anglo Merino, were produced by a cross of the Spanish with the English long-wooled sheep—the object of Lord Western being, as he has declared, the production of a Merino fleece on a Leicester carcass. His first crosses were with the Leicesters, and afterwards with the Cotswolds and the Kent long-wooled sheep. His success, up to this time, has been very satisfactory. He has obtained a carcass weighing at two years old from a hundred and twenty to a hundred and thirty-five pounds nett, selling at a high price to the butchers, and has obtained at the same time a fleece averaging nearly six pounds of washed wool, commanding a price in market nearly equal to full blood Merino. His flock of breeding ewes, of the cross-bred stock, is about eighty in number.

It is not now intended to *recommend* these modes of breeding, but to show from these examples, (and others might be given,) that men who thoroughly understand the business, with a sufficient range for selection, may effect improvement by either of them. But the breeder must not be confined to too small a number of animals—he should have so many to choose from that there may be an opportunity of obtaining the points he wishes for, without concomitant defects. Range for selection is very important, and much disappointment has frequently been experienced from inattention to this particular. Some seem to have an idea that to obtain a superior stock it is only necessary to procure a single pair of animals of the breed desired, and leave them to an indiscriminate copulation. The expectations of farmers are often highly raised from the circumstance of a few improved animals being brought into their neighborhood, and it appears to be supposed that in the course of a few generations their whole stock will possess the blood and perfections of the new breed. These expectations are seldom realized. From the limited chance for selection, animals having the same defects are permitted to breed together, and the consequence is that these defects become more and more conspicuous with every generation, so long as the injudicious course is followed, the stock degenerates and dwindles away to worthlessness, perhaps, even before the sanguine, but dull-sighted owner is aware of it. This consequence may perhaps follow sooner where stock is bred from close affinities of blood, but if the selection of breeders is confined to the progeny of only two or three animals, it is almost impossible to avoid degeneracy.

It is often remarked that high bred animals, as they are called, (or perhaps we should say high-bred *fattening* animals,) do not breed readily. In animals of this character, a sort of artificial temperament or constitution seems to take place—a change somewhat analogous to that which not unfrequently occurs in plants. An extraordinary development of one class of organs is frequently attended with a greater or less defect in other organs. Strawberries and other fruits, of a size much greater than is common with the species, are sometimes produced. But they are generally much less prolific than other kinds which show no extraordinary departure from the original or natural characteristics of the race. The flowers of some plants by cultivation become *double*. In this case, the stamens, or one portion of the procreative organs, are converted into petals—the plants become *monsters;* and are either totally barren or produce only a small quantity of imperfect seed. So with certain animals, cultivation has partially changed their constitution—their procreative faculties are weakened—the energies of the organs of generation become as it were swallowed up by the fat-secreting organs—and the animal is either incapable of propagation, or begets only a feeble progeny.[*]

The skillful breeder will be always on his guard against this defect, or *monstrosity*—he will take care that no one property is cultivated to the sacrifice or injury of any other essential one—he will not encourage the fat-forming organs to such a degree that the generating organs of his animals become weakened, and consequently the constitutions of their offspring impaired. Vigorous and energetic animals should always be chosen for propagation—and the ultimate success of those breeders will be greatest, who pay due regard to the proper balance of the animal system.

In reply to an inquiry by Professor Emmons, "which of the parents has most influence on the progeny?" Mr. Howard said—that was a question on which even "doctors disagree." Some few years ago, the Rev. Henry Berry, of England, wrote a prize essay on this very question, and the ground he took was, that where both parents are equal in strength or purity of blood, the influence of each on the progeny is equal.

It is, however, reasonable to suppose, that in some respects this influence of the parents cannot be equal; and that the theory is well founded that the *constitutional* qualities, nervous temperament, &c., are more likely to resemble the dam, and the *external* qualities, such as outward form, color, hair, &c., to resemble the sire. Many examples might be cited in support of this theory. Many farmers have noticed how much more likely their animals are to inherit the diseases of their dams, than their sires. When we consider that the animal is supported during the fœtal stage of its existence entirely from the blood of the mother, and that this blood, circulating through every part of the system would, of course, be affected by the state of the animal's health, this consequence would seem to be perfectly natural.

On the other hand it has been noticed that the outward features of the sire, more frequently than those of the dam, are enstamped on the progeny. This has been attributed to the nervous influence of the dam—or what is called the influence of the imagination of the dam on the fœtus. Practical men believe there is something in this. Professional breeders avail themselves of the principle in giving to their animals some desired marks or qualities. It must have been something akin to this, by the influence of which, through the medium of peeled rods, Jacob caused the cattle to be born "ringed, streaked, and speckled." Breeders of horses sometimes take great pains to operate on the imagination of the mare, and thus produce in the foal certain characteristics. At the time of conception, or within the first month afterwards, the fœtus seems to be particularly susceptible to this influence, and it is not difficult to produce the changes spoken of. Some striking instances of the effect of this sympathetic influence, might be given. One of the most remarkable, perhaps, as showing the evidence of anterior excitement, is that of a mare, seven-eighths of Arabian blood, after having produced a foal by a stallion quagga, (a species of zebra,) continued, after a lapse of five years to reproduce the markings of that animal, at three successive births, although the sire of all the subsequent progeny was a thorough bred Arab horse. This is a well authenticated fact, and correct portraits of the mare, the hybrid, and the three foals which the mare afterwards had by the horse, the latter showing the stripes of the quagga, are preserved.*

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[*] The Mark-Lane Express of May 13th last, gives an account of a show of animals which had just been held in England, at which Mr. Twynam carried the prize for the "best ram of any kind, breed or age."

[*] Barrenness of females seems in some cases to result from excessive venereal excitement. Cases of this kind are entirely distinct, and are the result of a different cause from the imbecility here alluded to

The influence of one black sheep, though it may never have any progeny, is often noticed in causing black lambs. Shepherds who have kept black dogs with their sheep, have observed the same effect. The nervous influence of animals in a state of pregnancy, shows itself very conspicuously in the effects of fright on the offspring. Many cases of this kind might be cited in the human species, as well as in our domestic animals.

AGRICULTURAL COLLEGE IN TENNESSEE.

In the March number of the Cultivator we mentioned that a charter had been obtained for an Agricultural College near Nashville, Tennessee. It gives us pleasure to be now able to state that considerable progress has already been made towards fitting the institution for the reception of students, and that it is expected to be opened by the first of January next. It has received the name "FRANKLIN COLLEGE," and is located at "*Elm Crag,*" the residence of T. Fanning, Esq. editor of the Tennessee Agriculturist. We have received from Mr. Fanning a pamphlet containing the outlines of the system of education which it is intended to pursue. We are happy to see that our friends have commenced the work in good earnest, and hope their success may be all they have anticipated. The "outlinea" seem to us to be based on the right principles. It is true, as here stated, that "no word has been more vaguely used than the term education," but we trust the time is at hand when proper education will be considered the cultivation of those physical, intellectual, and moral powers of man, by the harmonious exercise of which his own happiness, and that of his species, is promoted.

We would call attention to the following extracts from the pamphlet referred to:

"In conformity with the ancient maxim, that 'in a sound body alone can a sound mind exist,' we regard PHYSICAL EDUCATION as the firm basis of all useful training. As a broad, deep and solid foundation is essential to the stability and safety of an edifice, we esteem proper Physical culture as the ground work of the highest intellectual and moral attainments. Not that size and mere physical force are always sure criteria from which to infer the greatest strength of mind, but that the full development of the physical man is important to the greatest mental and moral energy. Believing these are plain principles in nature, the truth of which no intelligent mind will controvert, we proceed to detail the plan which we propose adopting for the accomplishment of this important improvement, in the system which we present for consideration.

Notwithstanding the strong prejudices against manual labor, as connected with the education of the young, we believe and trust they can all be removed, and that physical education will, at no very distant day, become one of the most agreeable parts of juvenile training. Experience and observation have and do demonstrate the great truth, that exercises in the way of sports are the engrossing employments of youth; and this clearly proves that physical exercises are disagreeable only from association. Parents as well as youths must be convinced that physical labor is at least as important as mental, before it will be appreciated.

The objects of the trustees may be more clearly seen by carefully studying the following propositions:

1. Physical Education is essential to good health, a vigorous constitution and a sound mind.

2. It was designed by the Creator as a blessing to man. He was made to "till the earth," and was placed in the garden of Eden to "dress and keep it."

3. Labor has been honored by the best of men in all ages, should be honored now, and the young should be taught to regard it as respectable and highly important to their well being.

4. While manual labor affords exercise of body, it offers recreation and variety to the mind.

5. It will enable youth to acquire knowledge of agriculture, horticulture and the mechanic arts, which will be very useful to them through life.

6. Labor, in an institution of learning, will supply the place of idle and vicious sports, and will be the surest preventive of dissipation.

7. Students, by devoting a portion of their time to physical culture, can apply themselves more clearly to books, and can think more intensely on all subjects.

8. Physical Education gives energy of character, and habits which will enable their possessor to succeed with more certainty in every avocation of life.

A full discussion of these propositions we deem unnecessary, for they are self-evident, and only require the intelligent to see them to be satisfied of their truth.

All learned and reflecting men admit there is a strong tendency to deterioration in the human family, and that idleness, from whatever cause produced, is productive of sloth, feeble muscular powers, defective intellects, and the consequent depreciation of all the powers.

There are two extremes in society which we have but little hope of materially benefitting by the system we propose. The very degraded and the very opulent, too generally view labor as a punishment, and therefore will be loath to adopt any industrious avocation. It is a lamentable truth, that not one man in fifty, brought up in luxury and idleness, ever becomes educated, is successful in business, or is even capable of retaining the estate inherited. Hence the doctrine of one of our profoundest statesmen, that generally in three generations property, and often respectability, passed from families. Not one in a hundred who does not understand the means of accumulating wealth by industry, is competent to take charge of it.

But objections are strenuously urged against labor as connected with education. It is said "Manual Labor Schools have been attempted and failed." This is true, and we add it was but just that they should have failed. When labor is performed as a degradation it cannot but be objectionable.

The evils are two, but both can be corrected.

1st. The character of the employments were such as to forbid success. The hard labor of the cornfield, without science to direct, is truly uninteresting. It is our object to have such improvements and operations in the farm, garden, nursery and workshops, as will, in themselves, be interestng to youth. The importance of every performance will be fully explained by those amply qualified, and we doubt not by the proper classification of students, and division of labor, commendable emulation may be excited, and students thereby will become as much interested in physical as mental labor.

2d. The character and qualifications of those who conducted the physical operations in the manual labor schools with which we have been conversant, were such as to forever preclude success. Men without education have been employed, as a kind of overseers, to drive boys to their labor as slaves. To remedy this glaring outrage, we contemplate having all the physical labor conducted by professors, tutors and officers, of the institution, or gentlemen eminently qualified, and no student will be asked to perform service, in which the teachers shall not diligently employ their time.

On this plan the farm and garden will afford the best facilities for the study of geology, chemistry, botany, tillage, the care of crops, the propagation of fruits and ornamental shrubs; while the workshop will constitute an excellent laboratory for the study of natural philosophy. And it is not to be forgotten, that all men, whether lawyers, physicians, preachers, merchants, or others, will be much benefited through life by a practical knowledge of agriculture, horticulture, and the Mechanic arts."

RUST IN WHEAT.—Mr. Willam Messic, in a communication published in the Northern Planter, says:—"Wheat sown on land where gypsum is used freely, is certainly more apt rust, than where it has not been used." Does [illegible] observation of others corroborate this?"

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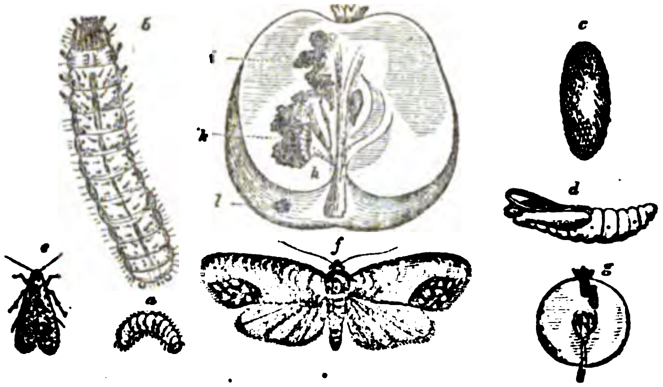
*See Nat. [illegible] Library. Mammalia, vol. 12, p. 342, &c.



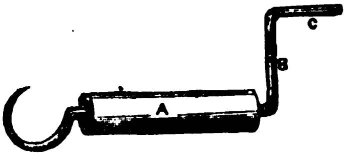
The Apple Tree Worm—*Carpocapsa pomonella*—Larvæ nat. size *a*; greatly magnified *b*; larvæ enclosed in a silk web *c*; chrysalis *d*; perfect insect *e*; magnified *f*; larvæ in a young apple *g*; larvæ feeding on the pulpy part of the apple *h*, *i*; larvæ *k*; quits the fruit at *l*.

The insects we have now described, have been depredators on the foliage or the wood only, the canker worm excepted; but there is another most mischievous enemy of the apple, that attacks the fruit only, and where it prevails is known as the apple worm. It is a true caterpillar, not a grub, like the plum and cherry weevils; and is the larvæ of the moth called *Carpocapsa pomonella*, the codling or fruit moth. A good description of this worm, with figures, which are copied above, may be found at 230 of Kollar's work on insects. In some years this apple worm has been so common in New-England, that a very large part of the apples were rendered worthless by it. It is very rare in the interior of the States, but we have occasionally met with it, and it is to be apprehended it will become still more common. The moth appears in the latter part of June, or beginning of July, and without puncturing the fruit, deposit their eggs in the hollow at the blossom end of the fruit, where the skin is most tender, and the worm the least liable to disturbance. As soon as the worm is hatched, which is in a few days, it commences eating into the young fruit, making their way from the eye towards the core, and marking its presence by the powder thrown out of the opening. The moth seems to prefer early to late apples, and the thin-skinned summer fruits suffer the most extensively. In the course of two or three weeks, the worm has burrowed to the core, and attained its full size. To get rid of the matters made in its excavations, it cuts a round hole through the side of the apple, and thus is enabled to keep its burrow clear. Sometimes the worm leaves the apple before it falls, but usually the injury it has received causes it to fall prematurely, when the worm quits it, and spins a cocoon, in which it changes to a chrysalid, and in a few days more, the perfect insect appears, to renew the work of destruction. These are only the earliest ones; the later ones do not perfect their transformations till the ensuing spring. The surest mode of destroying the apple worm, is to allow swine to run in the orchard, to gather all the fruit that first falls; or where this cannot be done, to pick them up by hand and feed them to some animal. The plum weevil and the apple worm are distinct insects. The plum weevil has been found in the apple, but the apple worm never in the plum.—*Gaylord's Prize Essay.*

COTTON GIN.

Messrs. Editors:—In the number of the Cultivator for this month, I observe an inquiry from Central America, in relation to the cotton gin mentioned in my letter of 1842. I regret the information I have to give will not be very satisfactory. The model gin is yet in the hands of the inventor and patentee. He makes none, and so far as I know, will not allow any other person. There can be no doubt but this gin would answer for Sea Island cotton, as the least amount I have heard suggested for a day, is 150 pounds of clean cotton. The quantity is however, uncertain, as the inventor has never permitted it tested. He has told me it will clear 250. If this can be attained, it would abundantly answer for uplands. The gin would cost about $75. In the fall of 1842, a company purchased from the patentee its use for two counties, for which they paid him $5000, with the privilege in a given time to this State, if they so determined, for $50,000. This company sent on an agent, with the inventor, who by agreement was to superintend the construction of certain number of gins in Paterson, N. J. On getting there, a disagreement took place, and the model being in the possession of the patentee, he would not let the agent have it, & returned the money, and so far as I know none were made. I have heard it suggested, indeed it is said to be the remark of a Sea Island cotton planter, that they do not want it, as it would reduce the price of that species of cotton. The inventor is here now, and too busily engaged in perfecting other machinery, to remember any former matter of his ingenuity. The last made public, is a pump for lifting water, and this I consider the perfection of that machine. It is simple, efficient and durable —it is not bounded by quantity or height. The longest in use here, is 32 feet. This a child can work, raising 1¼ inch column. I am sure a mans strength would raise 1¼ inch column, 100 feet. J. B. Cook.

Demopolis, Ala., May 25, 1844.



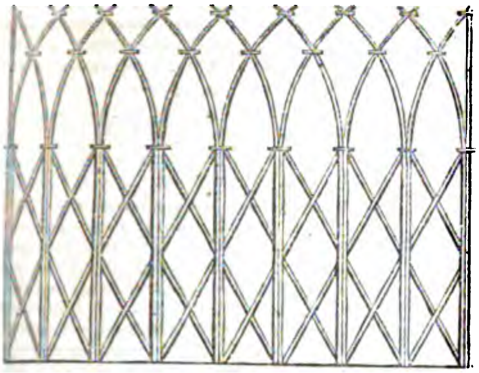
A STRAW BAND MAKER.

Messrs. Editors—This little instrument which I have used with success, (invented by a friend of mine) performs what it was designed for. With the aid of this a band of any required length may be made of short straw, from the threshing machine or flail. It requires two persons to make bands: one to let the straw out, the other to twist, somewhat similar to making a tow string.

When drawn out the required length and twisted, the band should be doubled and let twirl. This will keep the twist till the band is wanted to be used single. To form the instrument, round a piece of iron one half inch thick and about eighteen inches in length, form a hook on one end and make it small and sharp at the point. The hook is one and a half inches in diameter, with three quarters of an inch opening to receive the straw. Bore a piece of wood five inches long for a handle A, to turn on the iron next the hook; bend the remaining part of your iron B nearly at a right angle with the first bend A, five inches in length; bend the remaining part of your iron C at a right angle with the last bend B. On this you may have a wooden handle as before or not, as you choose. John M. Harlan.

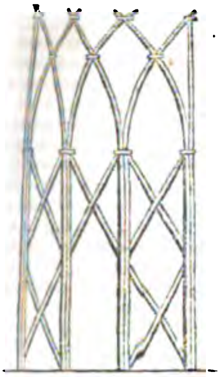
Chester county, Penn., May 17, 1844.

Anti-Magnetic Property of the Onion.—The magnetic power of a compass needle will be entirely discharged or changed, by being touched with the juice of an onion.



GRAPE FRAME—(Side view.)

Messrs. Editors—I send you a rude draft of a frame for a grape vine or trellis. It is the cheapest, if not the strongest trellis for a vine, which can be constructed, being nearly all made of straight poles; the diamond work alone being made of slips of board about 2 inches wide, to be nailed to the poles on the inside.



End view. Entrance.

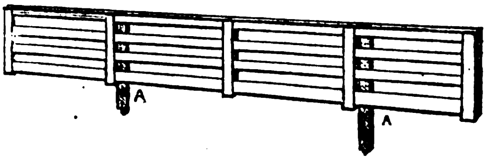
The four corner posts should be larger than any of the rest. All the others should be about 2 or 2½ inches in diameter each, at the foot. Two poles are tied together with large wire, say about 7 feet from the feet of them, or base; and at the corners, two poles besides the corner large pole, making three, are tied together, then lay them about two feet apart or more if you wish, according to fancy, only place them all at an equal distance apart, then nail on the slips of board as in the figure. Having completed the two sides, which should be alike, the two ends should be made in like manner as per figure; the two sides may now be raised and locked together by placing in the crotches short poles notched at each end to hold them together; then raise the ends and tie them to the corner posts, after securing the whole frame and placing a few boards across the poles, that bind the two sides together, for a floor to stand upon; then bend over the tops of the poles and tie them, as in the plate, and the whole is finished. This may be extended in length or width, and varied almost to any extent in height and proportions. Here you have a true gothic temple after covered with the vine, in which you may sit, and none to molest or make you afraid. The poles may be of oak or ash, or almost any wood that is straight and smooth, and will bend without breaking. Elisha Thayer.

Dedham, Mass., May, 1844.

IMPROVEMENT IN FENCES.

Editors of the Cultivator—Having experienced great trouble and expense from my fences being thrown up every winter by the frost, and having attempted several expedients to remedy the evil with but partial success, I was pleased to hear that a patent had been taken out for a fence on a new construction, expressly designed to obviate this difficulty. The contrivance referred to combines all the advantages of the common post and board fence, and is less, or not more expensive, while it effectually guards against the action of the frost; and as in rural economy few things are so important as fences, I thought you would be pleased to make this improvement more generally known, through the columns of your useful journal.

The drawing I have sketched will give an idea of the construction. It represents two lengths of board fence, say 12 to 14 feet each. The posts marked A, are alternate detached posts put in the ground, with a mortice over them in the cap, through which they may pass when lifted by the frost, without raising the body of the fence; and being sharpened at the lower end, they are easily driven to their place when the frost leaves the earth. These posts should be of locust or cedar. The other alternating posts, cut to the height the fence is wanted—say 4 to 4½ feet—may be of any less valuable timber: pine, or hemlock scantling, 4 by 4 or 5 inches, and those by the side of the long or ground posts, need not be more than 2 by 4 or five inches. A board corresponding to the top board in the figure, is nailed to the back of the short posts, close beneath the cap.



It will appear, from the inspection of the figure, that the fence keeps its station on the ground, while the posts which preserve its vertical position, may be thrown up, more or less, by the action of the frost.

I should add that there have been many trials in this county for the last two years of the advantages of this improvement, and so far as I am informed, with great and uniform satisfaction.

Mr. Isaac Van Amberg, of Watertown, in the county of Jefferson, is the patentee of the above "improvement in fences," and is now about establishing agencies for its wider diffusion. Henry D. Sewall.

Watertown, Jefferson county, N. Y., May 29, 1844.

CULTIVATION OF FRUIT.—No. VII.

Raspberry, Gooseberry and Currant.

Although these fruits are not so important as some others, they should be considered as indispensable to every fruit garden. Their early maturity, their pleasant and agreeable flavor, the certainty of the crop, and the short period of time required to bring them forward to a good bearing state, render them truly valuable.

The Raspberry.

This is generally considered as much superior to the other two in flavor. Most of the varieties are propagated with great facility by transplanting the suckers, and those which do not increase by suckers, are easily propagated by layers. Of the latter, are the Early Red, and the American White, both of which are well worthy of cultivation. The extremities of their recurved stems frequently take root spontaneously by bending over to the earth; but where this is not the case, they may be made to root with facility by making a hole in the earth with a sharp stick, thrusting in the ends of the branches, and securing them by pressing the earth about them with the foot. After one summer's growth, the newly rooted plants are detached, either in the autumn of the same year or the succeeding spring, and will bear some fruit the first year, and plentifully the second. New varieties are raised from the seed, and will come into bearing the second year so that their quality may be determined. Bridgman says, "Raspberry beds are in their prime about the third or fourth year; and if well managed, continue in perfection five or six years, after which they are apt to decline in growth, and the fruit to become small, so that a successive plantation should be provided in time. Select new plants from vigorous stools in full perfection as to bearing.

The soil for the raspberry should be rich and inclining to be moist. The culture is very simple; for common varieties, consisting merely in pruning each spring, and in keeping the weeds and grass well cleaned away from around them and the soil well cultivated. The pruning is best performed early in spring. All dead stems should be removed, grass and weeds cut away, and all the smaller shoots cut off even with the ground, leaving only from three to five of the most vigorous of the last season's growth for bearing the coming summer, these should be cut off at the top to about four-fifths of their original height, and neatly tied together. If they are slender and not sufficiently rigid to bear the future weight of leaves and fruit, they should be secured to a stake. In tying them together, they should be allowed to spread open at the top in the form of a wine-glass.

There are twenty or thirty named varieties of the Raspberry, but we are able to speak from personal knowledge of but few of them. The *White* or *Yellow Antwerp*, is an excellent one and of large size; for excellence it is commonly considered as standing at the head of the list: but it partakes of a slight musky flavor, hence it is considered by some as inferior to others. The *Red Antwerp* is highly esteemed, but is inferior to the preceding.[*] The *Red Cane* is a good bearer and has a pleasant flavor. The *White American* is a very valuable one, and is probably too much neglected. The *Black American* or wild raspberry, (*Rubus occidentalis*) affords an excellent fruit, which probably might be much improved by cultivation.

THE CURRANT.

The currant is very hardy, grows freely, and almost uniformly bears abundant crops; the pleasant flavor of the fruit is well known, and ripening early in summer when but few kinds of fruit are yet mature, it becomes of great value.

As to soil, Loudon says, "it generally does well in any common garden ground, well tilled and recruited; it bears the *greater crop* in a strong loam, or improved clay, somewhat moist; the *earlier* in a light sandy mould, which is not poor. Previous to planting the ground should be dug two feet deep."

The mode of propagating the currant is by *cuttings*. The shoots for this purpose are to be of last year's production, and of vigorous, straight and thrifty growth. Before planting, every bud is to be cut off closely except two or three near the top, to prevent the growth of too many stems. They should be inserted at least six or eight inches into the earth. Instead of allowing numerous shoots to spring up from each root, they should be trained to a single upright stem to the height of a foot, at which point the branches should radiate on all sides, in an upward direction, so as to form a handsome spreading top.

Currants, on account of their hardiness, are commonly totally neglected in culture, and are suffered to become overrun with grass and weeds, and to become crowded with suckers and numerous branches. Inferior fruit is always the result. To prevent this and increase the flavor and size of the fruit, they require proper and seasonable pruning, as well as cultivation of the soil. The leading requisite to be observed in pruning, is to cut away all superfluous shoots, especially those of less thrifty growth, and also old, unproductive branches, so that air and light may be freely admitted, and the fruit not too much crowded upon the bushes. Neill, author of the treatise on Horticulture in the Edinburgh Encyclopedia, says that Macdonald of Dalkeith House, "raises currants of the best quality. A good deal depends on the way in which he manages the bushes, especially during the ripening of the fruit. He prunes the bushes at the usual season of midwinter, shortening the last year's shoots down to an inch or an inch and a half. Next summer the plants show plenty of fruit, and at the same time throw out strong shoots. As soon as the berries begin to color, he cuts off the summer shoots to within five or six inches above the fruit. Sun and air thus get free access, and more of the vigor of the plant is directed to the fruit; the berries are found to be not only of higher flavor, but larger than usual." Kenrick says, "Mr. A. D. Williams of Roxbury, Massachusetts, practices winter pruning on perfectly similar principles, and with the most decisive results."

The *Red Currant* is the most highly flavored; but the *White*, being larger and not so sour, is by many preferred to the former. In the Catalogue of the Horticultural Society of London, are enumerated nine varieties of the red and four of the white currant. Loudon says, "the best are the *Red Dutch, Knight's large red, Knight's sweet red*, and *Knight's early red*. The best white currant is the *White Dutch*." But rich soil, clean culture, and good pruning, has doubled the size of our common varieties.

THE GOOSEBERRY

Is propagated by cuttings like the currant. To succeed well, it should grow in very rich soil. Pruning the gooseberry is of still more importance than that of the currant. The following directions are from Bridgman:

"The shoots retained for bearers should be left at full length, or nearly so; the first pruning should be done before the buds swell, so as not to endanger their being rubbed off in the operation. Cut out all superfluous cross shoots, and prune long ramblers and low stragglers to some well placed lateral or eye; retain a sufficiency of the young well situated laterals or terminals, to form successional bearers. In cutting out superfluous and decayed wood, be careful to retain a leading shoot at the end of a principal branch. The superfluous young laterals, on the good main branches, instead of being taken off clean, may be cut into little stubs of one or two eyes, which will send out fruit buds and spurs. Some persons, not pruning the gooseberry bush on right principles, cause it to shoot crowdedly, full of young wood in summer, from which the fruit is always small, and does not ripen freely with full flavor; on which account it is an important point in pruning, to keep the middle of the head open and clear, and to *let the occasional shortening of the shoots be sparing and moderate*. Between the bearing branches, keep a regulated distance of at least six inches at the extremities, which will render them fertile bearers of good fruit."

The gooseberry is cultivated with greater care and success in England than elsewhere; and Lindley enumerates 722 varieties, some of which have furnished specimens of single fruit weighing an ounce and a half. But most of the English varieties, and especially those of large size, are unadapted to culture in this country on account of mildew; and neither culture, pruning, nor any other remedy has been found that can be relied on as a remedy. There are some medium and smaller varieties, which are entirely free from it, and these chiefly are to be recommended here. Sufficient information however as to their names, has not been obtained for a list to be given.

J. J. T.

PLOWING ORCHARDS,

If well done, and the trees not run over nor lacerated, is found to be a difficult work. To make it easy, get a short one horse whipple-tree about fifteen inches long, and attach one of the horses by long traces to the plow; fasten the other horse before it, and let them go *tandem*. A careful boy or man rides the forward horse, and another holds the plow. After the intermediate space between the rows has been plowed in the usual manner by horses abreast, as near to the trees as convenience and care will admit, finish the rest with the tandem team, rigged as just stated. The long traces will allow the plow to run as near the trees as is needed, and the short whipple-tree can scarcely be made to touch a tree. Well tested by experience.

J. J. T.

THE GLANDERS.

MESSRS. EDITORS—Whilst writing, I will mention a fact for your Veterinary department. More than 30 years since the glanders of the most virulent kind, was amongst the horses of the neighborhood in which my father lived. Great numbers died off. His horse was taken, and under the belief that he also would die, my father commenced an experiment on him with a strong decoction of tobacco juice, given internally. In a short time the horse broke out all over his body in sores. These cured up in a month or so, and the horse was sound, soon fatted, and was, as long as I knew him afterwards, a sound and healthy animal. This was the only horse in all the neighborhood that recovered. Some farmers in this vicinity, noted for fine sleek horses, give occasionally Scotch snuff to their horses.

J. B. COOK.

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[*] These two varieties require protection in winter in the vicinity of Boston, by bending down the branches and covering them with earth; but this care is not generally needed in this State, except for the Yellow Antwerp.

LETTER FROM ALABAMA.

EDITORS OF THE CULTIVATOR—In several numbers of the Cultivator, you speak of potatoes, particularly as being useful as food for cattle. Now will you have the kindness to inform me what kind of potatoe you mean. We of the South, when we speak of potatoes, invariably mean sweet potatoes, not Irish potatoes. Had it not been for my lady, I would have gone to work in earnest to feed my cows on sweet potatoes. She suggested that the Irish potatoe was meant.

I deplore the death of Willis Gaylord. Such men are not the product of every age. How much more praiseworthy are the deeds of such a man, than those of the mere politician. Our State would be benefitted by such a man being within her borders. We have extensive resources yet to be developed, and it is necessary to have some one to call public attention to the important consideration of the full development of our agricultural resources. In other words, Alabama needs a Willis Gaylord.

In this connection, I would drop a word to the farmers of Alabama, knowing that many of them are subscribers to your valuable periodical.

Our State is considered one among the wealthy States of the Union, and this wealth is to be attributed to her agriculture. But few, if any, of the States, have been so exclusively engaged in the cultivation of the soil as this State. The profits of her agricultural products have exceeded those created by other pursuits of human industry. Of her improvement in the modes of cultivation, much cannot be said. The reason of all this is obvious. In the early settlement of the country, as indeed of all countries, the greatest inducements were held out to the settlers to engage in the occupation of tilling the soil, owing to its extreme fertility. By such tillage, even after deducting all the expenses of transportation to a distant market, their annual increase in wealth far surpassed what could have been accomplished by the most untiring labor of persons living in older countries. The early settler in Alabama, as is now the case in Missouri, Arkansas, Wisconsin or Texas, having many privations to contend with, looked to the fertility of the soil, 'the bright star of his hope,' as a recompense for the dangers and difficulties by which he was surrounded. And he but seldom looked in vain. Read the history of our early settlers, and you will read the history of many of the most influential and wealthy men in our State. They were not distinguished for their skill in farming, nor particularly for persevering industry in their employments. Still they prospered as 'a vine planted in a goodly soil.'

Two views are presented to us in contemplating the history of the early settlers of this State. They became wealthy, because of the fertility of the soil; and they were economical in the use of money.

If the farmers of the present day would grow rich, they must follow the example of these early settlers in cultivating a rich soil. In order to do so, their lands must be improved. Enrich the soil of Alabama, and you will have a country not surpassed by any on the globe. Every means to facilitate commercial, manufacturing, and agricultural prosperity are amply provided throughout the length and breadth of the land. In regard to commerce, we raise here an agricultural product which has never failed to bear a marketable price in any quarter of the globe. So valuable in this respect is it, that it has already, to some extent, become a medium of exchange between this country and Europe. I allude to cotton. This product of the soil of our own and the adjoining states, is now considered a fairer representative of gold and silver than the notes of the banks of those states respectively, although their faith and honor are pledged in behalf of the banks. This is not said with the view of disparaging state banks, but to show that this product which we cultivate at our very doors, is esteemed more valuable in the markets of Europe than a pledge of gold and silver, though that pledge be made by the most wealthy State of this Union. Having so valuable a commodity with which to freight our vessels, every harbor in the world is open to receive them.

The water courses of this State are well suited for manufacturing establishments, whenever these may be required. I understand that a contract has been entered into by some wealthy individuals to establish a spinning factory at the Falls of the Tallapoosa river. The water power is extensive, and no doubt at this spot will grow up a large manufacturing town. I am not an advocate for establishing large manufactories within the State at present. Our agricultural advantages are much greater than in the older States and in Europe, and they can engage much more beneficially in manufactures than we can, owing to the cheapness of labor there. If we, therefore, establish manufactories here, we bring high wages in competition with low wages—a want of skill in competition with skill carried to its greatest perfection.

When I speak of our agricultural advantages as compared with Europe, I have reference to the price of lands, by means of the cheapness of which, the great mass of our population may engage in tilling the soil. No one acquainted with the subject doubts, but that tillage is carried to greater perfection in Europe than in the United States, at least in the southern states. But if we will make the comparision, we will find that to the sum total of human pursuits, agriculture bears a greater proportion in this State than in most European countries.

With these multiplied advantages, let us use proper efforts to improve the productiveness of our soil. "So shall thy barns be filled with plenty, and thy presses shall burst out with new wine."

Nations or individuals, to become prosperous, must be economical in the use of money. The history of every nation proves that an extravagant expenditure of public money, has been the fore-runner of the decline of most governments. And the history of individuals shows that a wasteful use of money, is a too frequent cause of ruin to many.

I will not produce arguments to show that economy is a blessing and extravagance a curse. The experience of any man who has reached thirty years of age, and is possessed of an ordinary understanding will respond in the affirmative. A farmer, to be economical in the use of money, must by proper care prevent the necessity of paying out money in the way of expenses; or in other words, he must live within himself. In order to do this, it is not necessary that he should make all he needs. By no means. But it is essentially necessary that he should make his expenses conform to the amount of his annual income—just as a nation's imports should not exceed its exports.*

This may be considered an eventful era in the history of agriculture. The increased attention that has been given of late to the modes of cultivation, to the improvement of stock of all kinds, and to the interests of husbandry in general, promises a rich harvest to those who are deriving their support from these sources. Nothing has contributed more to effect this, than the establishment of agricultural societies throughout the country. From England, America took the example, and Alabama should follow in the footsteps of the older states in this laudable enterprise. Although the State Agricultural Society at Tuscaloosa departed this life in its infancy, still we have reason to hope that the people of the State will again be

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[*] What is called the sweet potato and the Irish potato are vegetables belonging to entirely different classes—and perhaps we are not quite *scientific* in calling them both potatoes. The potato, strictly, belongs to the class *Solanum*, (*Solanum tuberosum*, L.), while what is called the *sweet* potato, belongs to the class *Convolvulus*, (*Convolvulus batatas*, L.) In this section of country, we mean the first of these when speaking of the *potato*, either as food for man or beast. Personally, we know nothing of the value of the sweet potato as food for animals; but we were lately told by a gentleman from the South, that it had proved to be excellent, and it was his opinion that no vegetable could be so profitably cultivated at the south for feeding animals. It will produce abundant crops on the sandy soil of that region, where the common potato and most of the root-crops raised at the north would be good for nothing.

[*] It has been contended by some that a nation's imports should exceed its exports. The fallacy of this doctrine I have not time now to examine. The doctrine in the text is supported by all the writers on political economy I have ever seen. Will Mr. Watts, of Butler, favor the readers of the Cultivator with a defence of the contrary opinion?

aroused to the importance, the vital importance of these societies to the general interests of farming.

They add dignity to that occupation. All the learning and talents of the farming community are brought together, and from mutual action of mind and mind, each one receives a proportionate share of improvement. This principle holds true in mercantile, manufacturing or professional, as well as in agricultural communities. Even among politicians we perceive the operation of the same principle in that notorious invention, called the 'caucus system.'

I agree with Prof. Newman, "that no member of a civil community is, in the strict sense of the word, *independent*." "If there is any one truth," says he, "taught more clearly than all others in the science of political economy, it is the mutual dependence and close connexion of the different members of a civil community upon each other." "The eye cannot say to the hand, I have no need of thee; nor again, the head to the feet, I have no need of you." Notwithstanding this, the independence of a farmer's life has become proverbial. His of all others, is least dependent on commercial or manufacturing industry. His flocks and his fields yield him the necessaries of life, and the rural simplicity of his habits makes him require but few of its luxuries.

> "At night returning, every labor sped,
> He sits him down the monarch of a shed;
> Smiles by his cheerful fire, and round surveys
> His childrens' looks, that brighten at the blaze
> While his loved partner, boastful of her hoard,
> Displays her cleanly platter on the board;
> And haply too some pilgrim thither led,
> With many a tale repays the nightly bed."

Do we ask for an example in some great nation of the earth in respect to the attention necessary to be paid to farming? *England* is one. She is the mother of improved cultivation. Having signalized herself in fighting on every coast that is washed by the ocean—having reached the climax of parliamentary greatness, and honored her arms by the brilliancy of her intellect—

> "The land of scholars and the nurse of arms,"—

now thinks it no disparagement to her fair fame to strive for pre-eminence in agricultural improvements. Her Berkshires and her Durhams show the extent of her success in that department of domestic economy.

The spirit of emigration which has for several years characterized this and the adjoining States, presents a formidable barrier to extensive improvement of any kind. With many persons, not even useful and economical arrangements for domestic comfort are attended to. With such persons, the constant effort is to enlarge their fields. Each successive year brings an increase of acres, but a diminution of fertility, until the scene closes with a 'sale-day,'—the prelude to a removal to the great west. If this spirit prevail, Alabama will soon become an impoverished state, for her soil cannot always bear the burden of constant tillage without some return to restore its exhausted strength This spirit may be counteracted by exciting a zeal for improvement of the soil and its products. This will introduce a greater abundance of the comforts and luxuries of life, and one is loth to leave a place that is adorned with the monuments of his own industry. Attached to the soil—we love and venerate the institutions of our country.

> "Such is the patriot's boast where'er we roam,
> His first, best country ever is his home."

Will you give an account of where the best breeds of the Poland chickens (*crested* fowls—see Cultivator Feb. number, page 57) can be had—the same request I also make in reference to the Shepherd dog.*

I must close this rambling letter. I may at a future time send you another.

Very respectfully yours, * * *

Man at the best is but a composition of good and evil. Diamonds have flaws, and roses have prickles, the sun has its spots, and the moon its shade.

APPLIED CHEMISTRY:

In manufactures, Arts and Domestic Economy; edited by E. A. Parnell, author of "Elements of Chemical Analysis," &c. Publishing in monthly numbers by D. Appleton & Co. 200 Broadway, New-York.

Five numbers of this work have appeared, and they enable us to appreciate its importance to the people of the United States. The work is edited by E. A. Parnell, well known in London as the author of "Elements of Chemical Analysis." The reprint of the work by Appleton & Co. cannot fail to be advantageous to the arts and manufactures of our country.

The numbers before us contain some preliminary observations, and the history, progress and present practice of gas illumination, the preservation of wood, and the arts of dyeing and calico printing. These subjects are interesting to the general reader, and demonstrate the intimate connection between science and the practical arts of life. Chemistry particularly is applicable to all the arts as well as to agriculture. The subjects which are admirably well treated in detail in the numbers of the work before us, are not immediately connected with husbandry, yet we find that the cultivation of the earth supplies resin and oil which may be employed in producing gas lights, and dyeing drugs which are applied in the arts of dyeing and calico printing. The preservation of wood is interesting to the farmer, and the treatise on this subject shows the various and most approved methods of securing from decay, wood and timber for the construction of ships, houses, barns, fences, &c. We are given to understand that some of the future numbers will have a more direct bearing upon agriculture, and we patiently wait their arrival.

A PRACTICAL FARMER.

NORTH CAROLINA.

EDITORS OF THE CULTIVATOR—I have thought that it might be satisfactory to say a few things in favor of the claims of western North Carolina, to those inclined to move southward.

1. *Climate and Health.*—A glance at the map of North Carolina will show the location of Iredell county, and Statesville its county seat. From a few miles east of the town to the mountains, is a belt of country as healthy perhaps as any part of the world—as free from fevers as the mountains, and much less subject to inflammatory diseases. Its atmosphere temperate and pleasant.

2d. *Soil, &c.*—The general character of the soil is good, and readily susceptible of improvement. Wood land abundant, the growth of which is the different varieties of oak, of good size and quality, hickory, pine, poplar, &c. The soil is generally somewhat mixed with sand, resting on a clay subsoil, adapted to the culture of corn, wheat, oats, tobacco, roots, &c. The country is well watered, abounding in streams well adapted for machinery, &c. Price of land from $1 to 7 or $8, owing to location and other advantages.

3d. *Moral aspect, &c.*—There are comparatively few slaves in west North Carolina. Wealth pretty equally distributed. Hospitality and sociability characterize the people. The mass of the people cultivate their own farms themselves. Manual labor is not regarded as disreputable. Moral excellence and not wealth is, to a considerable extent, the test of character. Educational and religious privileges depend on the location. The settlements originally peopled by the Scotch-Irish from Pa., have flourishing Presbyterian churches and regular preaching, Sabbath schools, &c. They also have good common schools and academies. The state has commenced a system of common schools which will eventually greatly aid the cause of education. The Methodists and Baptists also have churches throughout the country.

By giving a place to the above in your columns you may oblige many of your subscribers. Should farther information be desired, it will cheerfully be rendered by corresponding with the Postmaster at Bethany Church P. O., Iredell county, N. C. W. A. D.

By energy and honesty men become prosperous and happy.

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* There will be plenty of the Crested fowls to be had here in the fall—at present we do not know of any to be sold in this vicinity. We have understood that a man a few miles from here breeds the shepherd dogs—we will inquire.

AGRICULTURE OF SEEKONK.

Messrs. Editors—I offer to you for insertion in your paper, a statement in regard to Seekonk, in Bristol county, Mass., its productions, the market for the same, cost of production, and the farm capital required there, for common cultivation, &c.

Production, &c.—The usual articles produced in Seekonk, are corn, rye, oats, potatoes, onions, carrots, hay and vegetables. These articles, for the most part, find a sale in Providence. Seldom is any thing sent to Boston, except poultry, and of late less of that than in former years. Much greater attention is now paid to the preparation of manure in the barn-yards; and compost heaps, with rock and seaweed manure, swamp and beach mud. This manure is worth $2.00 per cord. Manure in large quantities is brought from Providence at the cost of $3 or $4 per cord. Besides a large amount of *night soil*, also brought from that city. The land is and has been greatly exhausted by hoeing in winter rye, and leaving the land in corn hills without hay seed. There are but few sheep in the town, and but little flax or hemp is raised for sale. The cultivation of fruit as *such*, in the vicinity of Providence river, is not attended with much profit. The apples here raised are mostly made into cider. Beef and pork are raised for the consumption of the inhabitants merely. Seekonk furnishes yearly about 1,000 barrels of potatoes, and probably 1,000 bushels of onions to the merchants of Providence for shipping. There is greater attention paid to the repairs of buildings, &c. embracing the health and comfort of both man and beast. The cost of cultivating one acre of corn, with the operations of plowing, planting and hoeing, together with twelve loads of manure, at $1 per load, (the fodder being estimated to pay for harvesting,) will be about $20 per acre. In 1843, one farmer here planted three acres in corn, put forty loads of manure on it, plowed and planted it four feet between the rows, and three and a half feet apart, at the cost of $24 per acre. Cost of manure $40. Harvested therefrom 50 bushels per acre.

FARM CAPPITAL.

Live Stock.	
1 yoke of oxen,	$70 00
6 cows at $25 each,	150 00
2 horses at $75 each,	150 00
4 yearlings,	40 00
10 sheep at $1,	10 00
6 shoats,	18 00
12 fowls 25 cents,	3 00
3 turkeys, 75 cts.,	2 25
	$443 25
Farm Implements.	
1 wagon,	$75 00
1 cart,	50 00
2 harrows,	15 00
1 plow,	9 00
1 horse do.,	7 00
6 rakes at 42 cents,	2 52
2 dung forks,	2 00
2 pitch forks,	1 50
2 shovels,	2 00
2 wood axes,	2 50
4 hoes,	2 00
1 Iron bar,	83
2 oxchains,	3 00
1 set of horse chains,	3 00
1 bridle and saddle,	10 00
Ox yokes and bows,	2 50
3 scythes,	2 50
3 snaiths,	1 50
2 sickels, 42 cts,	83
1 cultivator,	4 00
1 churn, cheese press,	3 00
Garden spade and iron rake,	2 00
1 horse wagon, &c.,	60 00
Live stock,	$443 25
Farm implements,	261 68
	$704 93

Rockweed will cost here $4 per cord, which it is worth when pulled off the rock. Seaweed if carted two miles with four ox teams will cost $2 per cord.

In the vicinity of Boston four or five cords of manure per acre at least, and in some instances more are regarded as requisite to advantageous or successful farming—that is taking into view the permanent impovement of the farm; and by many this item ought to be marked as capital, and perhaps in reference to the actual cultivation of vegetables, &c. it ought to be included under capital, while in mixed husbandry I should be inclined to class it under the head of the necessary expenditures. Something ought to be set down for the necessary furniture, which depends very much on the pleasure, disposition, or objects of the farmer; though in my opinion it ought to be put at $50 to $75. In regard to repairs, blacksmith work, labor, &c. you have as good means of forming an estimate as myself.

Cambridge, April, 1844. Wm. Jennison.

More old men are found in elevated situations than in valleys and plains.

GRAFTING.

I noticed with some surprise in an article in the 5th number of the Cultivator, a recommendation to graft always on a short stump not more than an inch above a strong lateral shoot, which shoot is to be left growing for one entire year afterwards. Observation, it is stated, has proved its success.

Having inserted, in my day, many hundred grafts, I am compelled to say that however successful this method may have been, a different one has proved much more so. Why is it that in grafting a small tree, every nurseryman is always careful to rub off all the buds os shoots on the stock? If this is not done, the communication between these shoots and the stock being complete, and between the stock and the graft very imperfeat, all the sap will flow into the former, and the latter will dwindle and perhaps die. The sap must be thrown into the graft, or its buds cannot swell. They must swell, or the new leaves cannot be formed. And unless these are formed, the carbium or newly hardening wood cannot be sent down to make a permanent junction between the stock and graft. Who has not observed a graft, even after its buds had expanded, remain stationary in growth, by the side shoots around it abstracting all the nourishment from it, instead of imparting support to it? The side shoot, which "E." recommends, and the graft, are both feeders from a common fund or stock; but the former, for the reason just given, is rapid, hungry and voracious, while the latter is at first, a very sparing and delicate feeder. I imagine, then, that this side shoot is going to help the graft, would be about as absurd as to suppose that a strong hungry pig would fatten a weak and sickly one by eating from the same trough.

As for the alledged nourishment which the graft gets from the leaves of the side shoot, "E." himself shows unintentionally, that this cannot be; for why, as he says, does a closely cut wound heal over speedily, while a short stump does not heal? Simply because in the latter case there is a *fork*, and juice can no more flow from the leaves, down one branch, and then up another however short, than the waters of the Monongahela can flow down to Pittsburg and then up the Alleghany. X.

THE NEW VOLUME OF TRANSACTIONS.

An eminent philanthropist of this state, who has been for many years a most strenuous opposer of capital punishment, has lately remarked that he thought of changing his mind—as his communications for the press are so horribly mangled and murdered by the mistakes of the printers, he thinks if any body deserves hanging they are the men. It is not my business to say whether he is right or wrong; I have, however, just been strongly reminded of his remark by looking over the last volume of the Transactions of the State Ag. Society, where on page 504 the writer is made to say that he spreads several bushels of *potatoes* [instead of *plaster*] over his compost heap;—on p. 205, where the *exuded* sap, is printed "*excluded* sap;" on p. 449, where it is remarked that the soil is sandy, and *generally* loam, instead of *gravelly* loam as intended;—on page 454, where Gilson's Root *Shears* [*slicer*] is mentioned,—and others equally amusing or provoking, as the reader's temper may chance to be. X.

Editors Cultivator—Permit me to ask your respected correspondent "Junius," who writes so feelingly on the subject of applying pretty names to ugly cows, if he intends also to exclude ugly and unamiable human beings from the benefits of those good names? Or is a cross woman never to have any name at all? Now as I happen to know of some specimens of the latter class, that are infinitely more debased, sunken, and self-degraded, than any of the lower orders of animated beings, which though they perfectly fulfil the purposes of their creation, excite so much horror in the mind of "Junius," I wish to know whether he as arbiter-general of all female names, will permit such to have even a well-sounding name, as "Emma" or "Julia" or no name at all. I wish to avoid controversy, and hope he may answer "Yes," or "No," as the case may be, or at least write no more than I have done. Brutus.

BOSTON CENTRE-DRAUGHT PLOW.

MESSRS. EDITORS—I have read with much interest the communication of J. G. B. in your last, on the "Boston Centre-Draught Plow of Prouty and Mears," in which he notices some peculiarities, which, in his opinion, require obviating, although he admits his conclusions "are not the result of any experience with the plow, but are formed, simply by seeing the excellent plate in a former number of the Cultivator." Now, with all due deference to your correspondent, I must take leave just to observe, in a court of inquiry, no witness is permitted to proceed one step, after confessing that he knows nothing about the subject by *experience*, but merely as matter of *opinion*. But let that pass, and allow me to say a few words in defence of an arrangement which I have found, by the test of the fullest examination and repeated trial, to be perfect in all its parts.

And first, "the fastening extending down from the back of the standard," does *not* interfere with the operation in very deep plowing, and therefore the plow does not require the beam to be raised, which would destroy the symmetry and proportion of the most elegant implement that was ever constructed. I was, the past week, engaged on trial in the heaviest and most difficult soil in Lancaster county, Pa., against the favorite plow of that neighborhood drawn by three horses abreast, in turning in a first crop of clover of the strongest growth, which required to be dragged down before the implement could be made to touch it; taking then the whole strength of the team to accomplish it, with a furrow from four to six inches deep, but by no means subverting it so as to cover the crop; while with the Centre-draught No. 5½, new gearing, without dragging the crop, and by the aid of two of the horses only, it was just the easiest thing in the world to turn the crop completely under, to the regular depth of seven inches, the horses absolutely not feeling the labor or losing their breath, much less "turning a hair." The company, many of them neighboring farmers, desirous of seeing how large and deep a furrow so small a plow could be made to turn, the wheel was let down, when the furrow-slice, measured on the spot, was found to be 11 inches deep and 16 inches wide; the fastening extending from the standard not interfering with the operation in the least. And more than this, the plow carried over this enormous mass, burying the whole of the vegetable matter by the aid of a drag-chain, and placing it *hors-du-combat*, without any one touching the handles, for a considerable space, to the admiration of every one present. Here also was a trial of the strength of the wheel attached to the side of the plow, for the land was so rocky that it was often brought up all standing by large stones sunk below the surface as well as above it, and entangled by the heavy crop of clover, so that the wheel was often buried out of sight; proving that the single strap is sufficient for the purpose of permanency and security. This trial took place on the farm of Mr. Moses Burton, Salisbury township, about a mile and a half from the Gap, and in presence of many of the first agriculturists of the county, amongst whom were Mr. Caleb Burton, his brother and son, and W. Penn Kinzer, Esq. of Spring Lawn; and in the hands of these men, the plow did, indeed, "do all but talk." The same plow had been used the day before in turning the sides of the high road, no other land being to be obtained; and here, by the hands of a lad 12 years of age, the son of Mr. Mark Cooper near the village of Enterprise, the work was performed with perfect ease, the wheel and rod extending back beyond the standard, enabling *the child* to manage her with surprising skill and accuracy.

The observation, that different soils require differently constructed plows, is perfectly admissible as a general axiom; but the Centre-draught plow works on so very "different" a principle to that of every other, that to judge of its powers and capacity it must be seen and felt; and until then, I should despair of being able to convince your correspondent of the fact. The Centre-draught plow of Prouty & Mears is indeed a self-sharpener in the best acceptation of the term; for after five trials on the most difficult soils, the point of the share was scarcely rubbed, and by no means required turning; while the owners of many of the favorite plows in the neighborhood admitted, that on such soils, every second day at farthest, their points required renewing, at the cost of sixteen cents; expressing astonishment to find that a double point and share of No. 5½, at the charge of 62 cents only, are found to turn from 60 to 80 acres, and often more. Your correspondent's account of the mode in which the only sharpening process is conducted, by the renewal of the parts, is lucid and satisfactory; it is proper to observe however, that the wing or share of the Prouty plow is made to move also; it is therefore sharpened, as well as the point, by the same operation.

That Mr. Bergen's plow is the best for green-sward, "especially if the soil is old and tough," that your correspondent has ever seen, I have no doubt; but he must *see* the Boston Centre-draught perform that service before he can form an idea of the perfection which has been obtained in that all-important operation—it would be vain to attempt to describe it; the "age and toughness" of the sod being quite an indifferent circumstance. His remarks, regarding the proper angle of the mouldboard for turning soils of different kinds, with the admission, that with those in common use—not excepting the Bergen, I presume—some soils will always be found to adhere, are, I have no doubt, perfectly correct; and I consider it would be a much easier test to travel a hundred miles to convince him by occular and tangible demonstration that these do not apply to the Centre-draught, than to attempt to overturn his opinion by any thing that I have it in my power to say; I would therefore cheerfully take such a step to obtain a trial, he being constituted judge, with a jury of 12 honest and practical men of the neighborhood; it would then be easy to show the perfectly different principles upon which the Centre-draught plow is constructed, but which are at present so little understood: in short, it is "spade labor," which is now universally admitted to be "the perfection of good husbandry."

In conclusion I would add, while your correspondent recommends the Bergen plow for its superiority in *ordinary* soils, I claim it for the Boston Centre-draught with the new gearing, for those of every description, ordinary as well as extraordinary, heavy, light, sod or corn-ground, wet or dry, crop or no crop; and ask leave to use his very expressive and descriptive terms of commendation. "Its advantages are, lightness of draught, strength, economy in the cost of sharpening, and the capacity of performing the best work in green-sward; durability, for the friction being easy, the mould-plate will wear well, while the advantages of the improvements of the wheel and the new gearing attached to it," are emphatically its own, and cannot be applied to Mr. Bergen's plow—much as it might require its aid—without fraud and robbery; other "Patents" lying under the same predicament. Who was the inventor of the self-sharpening principle, is a question that cannot be solved at this time of day; I presume it was concocted long before Mr. Bergen's entrance into existence; I know at least a dozen who conceived themselves entitled to this distinction, the inventors of the Centre-draught, however, not claiming it, the patentees considering it honor enough to have *invented* the best and most important mode of applying it, and enabling its possessors to plow their lands at the expense of less than one cent per acre for blacksmith's bills; and by these and other improvements—the foremost of which is the new gearing, so faithfully and beautifully portrayed in your invaluable page—to save, by superior culture, after tillage and increase of crop, about the cost of a new implement on every 25 acres of land worked by it, whether the soil be ordinary or extraordinary in its texture and consistency.

Montgomery Co., Pa. CENTRE-DRAUGHT.

P. S. If your correspondent be really a practical man, desirous of "seeing" the operations of the Centre-draught, I would not consider the pleasure of an interview over paid for, by the expense of a journey of many miles to accomplish a wish that would then be mutual. I attach my real signature, which you will please make known to your correspondent in this case, and present him with my respectful consideration.

THE SUGAR CANE AND CORN-STALK SUGAR.

MESSRS. EDITORS—An article in the Cultivator, (May number,) page 150, calls for, and is deserving a reply from me; and although you are probably ere this, in possession of a more full explanation from me in Mr. Ellsworth's (the Commissioner of Patents) Report, page 159, I will briefly explain:

In attempting to make sugar from corn-stalks, we too, were disappointed in not being able to effect granulation. Probably if we had lowered the knives, or waited a few days for it to have ripened higher, it would have granulated, and the juice would have been sweeter; though 8 degrees specific gravity is a good average for cane.

The odor from the kettles while boiling, was very offensive, and the flavor of the syrup disagreeable and well expressed by Mr. Patterson of Tarentum, Pa. If, as you state, "soon after a critical period, the sap changes, and cannot be made to granulate," this would greatly hazard the crop, for a rainy season might prevent its manufacture at that period.

Again. Our crop was by no means extraordinary—2,750 pounds per acre is not extraordinary. It was good; well cultivated, and on good ground, though not manured, except the trash for ten years had been left to pulverize on the land instead of burning it off as is the custom here. There is a difference between plant cane and rattoon cane. It is considered good economy to cultivate rattoon cane when it will yield 1,000 pounds per acre or even less; because it requires so little cultivation or no planting, and ripens early. 1,000 pounds may be the average per acre of the crop in Louisiana. A good planter will make more. Plant cane on good land, well cultivated, will average from one and a half to two hogsheads, say from 1,500 to 2,000 lbs. per acre, often more. 4,000 lbs. have been made where the ground was well manured, on an acre. I am speaking of facts. I know sugar planters may deem it bad policy to make these statements; fearing lest other sections of the country may suppose sugar planters are getting rich too fast, and be induced to lower the tariff. But if it be so, why is not the cultivation more extended? Why not make less cotton and more sugar. There is ample good sugar land in the sugar district in Louisiana to supply the whole country. I hope the experiment on corn sugar will not be abandoned till it be fully tested on a large scale at the north. Let only those who are able to lose, first try it. I feel sure it will prove a losing business.

In comparing our poorest yield to your best, many may be deceived. SHUBAEL TILLOTSON.

New River, La., May 24, 1844.

THE VERMONT STUMP MACHINE.

EDITORS OF THE CULTIVATOR—When I first saw a draft of the Vermont Stump Machine, in the October number of the Cultivator, I resolved to make one, which I accordingly did the past winter. It appeared to me a very unwieldy thing, and as my land was uneven, I thought it not firm enough to answer the purpose. To obviate this difficulty, I made it somewhat different, and I think better. The machine is much smaller than the one described in the draft. The wheel is only 8 feet 5 inches, shaft 11 inches, upright parts 7 feet high, and standing 8 feet asunder. I framed a piece 5 by 7 across, just near enough the tops of the posts to allow room for the shaft and chain to work, braced it at the corners with old tire, 2 feet long, a $\frac{3}{4}$ bolt through each end, and through the upright and cross piece, which holds it firmly together. I then hollowed out the tops of the posts so as to lay the shaft in them. The wheel works outside of the post as near to it as possible. Thus the objection urged by a correspondent, that it would crush down, is removed; and even on land that is hilly, by going up and down, it will work pretty well. Some of my friends ridiculed the idea of drawing stumps with such an article; but their notions were changed when they saw it in operation. I consider it a valuable invention. The stumps that I undertook to draw had been cut some 4 years, and not large. After breaking some of our common log chains, I procured one made out of $\frac{3}{8}$ inch bar, which I think will stand a stronger machine than mine: but on putting a double team to the rope, I broke the arms of the wheel; so I let it stand, and planted my corn, intending to renew the operation again. The arms were only 2 by 6 inches. I think a machine can be made strong enough on this principle to draw any ordinary stump after being cut 3 or 4 years. If any one thinks it too much on one side, which might be the case if the wheel is large, let him put a wheel at each end of the shaft outside of the posts, which will balance. He then may apply force to one or both wheels as the case may require.

Chester county, Penn. 6 *month* 3, 1844. J. W.

N. B. I think the machine described in the February number of the Cultivator, is about the right size. If he would frame a piece across, it would not require propping on the side of a hill, nor would the oxen pull it to pieces so easily. The piece may appear in the way, but the shaft being much larger, it will not be much obstruction to the chain.

SOUR SOILS.

I have just read the article of "A. J. P." in the last number of the Cultivator, and I wish to invite his attention to one fact, which though not decisive perhaps on the subject, is certainly worthy of consideration. This fact came under my personal observation last year, and is as follows. On the farm of Dr. C. S. Button, of Newark, Wayne county, N. Y., there was laid, ten years ago, about 150 rods of lead pipe for the conveyance of the water of a spring, from a hill side over a valley, to his dwelling. The water ran freely for nine years, and then became obstructed. The pipe was examined at various points, and found perfectly sound and uninjured, except on a part of the hill-side, where an abundance of sorrel grew (*Rumex acetosella*); here it was strongly corroded, and in several places actually eaten through, which caused the obstruction. This fact was the more striking, as all the other parts of the pipe were so little injured by time that even accidental scratches upon the lead remained unaltered.

It can hardly be supposed that the corrosion was caused by the acid actually existing in the plant, brought into contact with the pipe, as the latter was buried from two to three feet below the surface.

A. J. P. states that lime, "even if applied in immense quantities," does not prevent the growth of sorrel. Lime, however, has been found greatly to lessen its growth. On the grounds of W. S. Dell of Junius, Seneca county, N. Y., which partake of the character of what is generally known by the term *sour soils*, and where sorrel grows abundantly, the plentiful application of lime has, with the exception of a few straggling plants, caused its entire disappearance.

There are some plants which are regarded as existing solely on sour soils; among these is the yellow pine, which immediately perishes if removed to those of a different character; and even when a body of earth is carried with its roots, it only survives just so long as the roots are confined to this body of earth. The effect of lime on such a tree in its native locality, would be interesting to know. Sorrel (*Rumex*) will grow on land where the yellow pine perishes. Hence perhaps the reason lime does not wholly remove it.

The preceding facts of course are not intended to decide this question, but rather to keep it in a state of suspense, until more is known. The great difficulty of determining the constituents of the soil, and their various combinations, are not always duly estimated; the single fact, that distinguished chemists have made out, as they supposed, some twenty different substances constituting that particular portion of soil known as vegetable mould, and are still at variance on the subject, shows that these are matters not to be settled in a day.

Macedon, N. Y., June 10. J. J. THOMAS.

TO REMOVE GREASE SPOTS from a book, apply a quantity of pulverized prepared chalk or whiting, to the paper on one side, and then warm and melt the grease by a hot flat iron on the other side. As soon as the grease thus becomes liquid, the chalk will absorb it.

THE SETTLER IN A NEW COUNTRY.

Messrs. Editors—I have seen in the Cultivator some inquiries as to the best mode of clearing land, and the general management on a new farm, and I am half inclined to give you my notions on the subject; merely premising that if I could wield such a pen as your correspondent Solon Robinson, whom may Heaven long preserve, I should feel much more confidence that this paper would not be consigned to your Baalam box.

It is now some forty-three years since I left the old homestead in the land of steady habits, and with tolerable spirits, but less money, made my way to one of the interior towns of this State, then on the verge of the white settlements, and into which some three or four families had the year before preceded me. A lot of 100 acres was selected, on which an axe blow had never been struck, and which was a mile from the nearest neighbor. Deep, dark, and majestic were these primeval forests; and a formidable undertaking it was to be buried in them, with the hope of working one's self out into the light of day, and the rays of the glorious sun. But few were the places in those days from which a glimpse of the country around could be seen, and where such glimpses could be had, nothing met the eye but one vast unbroken sea of foliage, with perhaps a few blue smokes curling up through the tree tops, and showing where some adventurer like myself had established himself.

The first undertaking was the house for the family. A fine clear spring determined its position; a small space was cleared of the underwood, and a house made of logs and covered with boards was soon constructed. Lonely were the first nights passed in that pioneer building, with the wind moaning through the tall trees that overhung the humble residence; the light from the wood fire that burned at one end of the earth floor, throwing its fitful flashes through the crevices, upon the massive trunks that stood like giant sentinels in the gloom; and the owls scared from their retreats in the hollow trees, or attracted by the unwonted apparition of such intruders on their solitudes, held a clamorous serenade of tu-whit! tu-whoo! in all its modifications, about the dwelling. It was truly a serious matter to contemplate the vast amount of labor that would be requisite to fell, burn, or remove the forest covering of the soil, and convert the wild woodlands into fruitful fields; but willing hands and stout hearts were brought to the work, and while the merry ring of the axes were heard on every side, the "opening" spread apace, and the fears of the women that some unlucky tree might crush in its downfall the rude hut, were speedily dissipated by the prostration of all from which such a danger could be apprehended.

It was the beginning of summer; the heavy foliage wore its freshest green, and the elm, maple, and linden, were successively laden with flowers. Never shall I forget the rich, the indescribable perfume which filled the air, as tree after tree was cut down, and day after day passed, before the blossoms had ceased to exhale their odors from their withered cups. A practiced woodsman had the direction of the 'chopping,' and under his guidance acre after acre was prepared for the burning. The slope of the land, the proximity and inclination of the trees, all had to be considered, before the chopping was done, as on these things the facility of 'burning' and 'logging' was mainly depending. Where it was possible, some huge tree was felled, and upon, and parallel with this, all that could be made to reach it, or conveniently be piled upon it, were cut for this purpose. The brush was cut from the trunks, and piled carefully and separately into heaps, experience proving that the neatness of the 'fallow' after the burning, was much depending on this operation. Some 'choppers' neglected this piling of the brush, merely felling the trees, or perhaps lopping the branches a little, trusting to a dry season and a thorough burn, to save this additional labor; but nine times out of ten, the labor saved in the chopping, was doubled in the final logging and burning.

After the chopping was completed, the brush dried, and all hands ready, came burning the 'fallow.' For this purpose a hot dry day, with but a gentle wind is to be preferred; since the fire burns the cleanest in a dry day, and no matter how still the day may be, there will always be wind enough as soon as the fires are well burning. In setting the fires it is best to begin on the leeward side; unless the whole is so dry that when once kindled the fire will run over the whole ground, when the windward side may be taken. If the brush is well piled, and fully dried, little will be left after the fire, but the trunks of the trees, and in many cases a large portion of the smallest of these will be consumed. If the trunks were not cut up into suitable lengths before the burning, this work comes next; if already cut up, the 'logging,' or the rolling the logs into heaps preparatory to their being burned, may commence at once. In logging, three men are required to one team, two to roll the logs and one to draw them. If chopping is neat work, logging is the dirtiest that occurs in clearing land; and the tow cloth frocks and trowsers, are very apt to call down the anathemas of the washer-woman. In cutting up the timber, after the brush is burned, a sufficient quantity of the best kinds for fencing must be selected, and cut in suitable lengths for rails. Chestnut, red elm, butternut, basswood, &c., are generally chosen, where they can be had, and lengths of ten or twelve feet make the best rails for worm fence, the kind commonly constructed in new districts of country.

In the clearing of land, the disposal of the ashes left by the burning of the log-heaps is a matter of some consequence. They are scarcely needed on the soil; indeed if left as they lie in masses after burning, they are positively injurious, every settler in a new country knowing that no wheat grows in the places where the ashes of the log-piles are left. It is the custom generally to gather the ashes, and sell them to the potash manufacturer, or else construct leaches on the spot, and convert them into what are called black salts, and then these are sold, usually at a respectable profit. It is perhaps the best way of disposing of them, to scatter them with a shovel over the unburnt spaces of the fallow, as cultivated soils soon need all the alkaline matter that can be furnished them, and ashes are among the cheapest and most valuable of the class.

In sowing wheat on newly cleared lands great care must be taken to see that the wheat is properly covered around the numerous stumps that occur. If left to the harrow alone, there will be several feet around each that will produce no grain, and will be pretty certain to be occupied by some pernicious weed. A man should follow the harrow with a hoe, and see that the whole surface of the ground is stirred, and the seed in every place covered.

The first half dozen years spent by us on our new farm, and during which we encountered those privations peculiar to the pioneer life, were years of hard labor it is true, but now that we at our ease look back upon them, we could hardly from our whole lives, select the same number, in which we have enjoyed more positive happiness. Those who have always resided in places long settled, are often heard to wonder that so many of those who settle and cultivate our new districts, should be willing, as soon as their farms are cleared, and they can begin, as it is called, to enjoy life, to pull up stakes and again plunge into the wilderness to undergo the privations from which they have but just escaped. I do not participate in such feelings. I am not certain, that even now, I could not be induced to seek a new home in the woods; indeed I am certain of it, could the activity, health, and spirits of the past be recalled. I should not, it is true, crave the privilege of again being obliged to go twenty miles to mill; fifteen miles to a store, or a blacksmiths; or eighteen miles to a post-office; but I should like to have the pleasure of again seeing nature in her wild but comely undress; to see the beautiful red deer scarcely frightened by the presence of man seeking the fallows and the fields, as if inviting protection; to see the elements of society combining into a healthy and rational organization; to participate in that kindly, brother-like feeling, which is always found among the settlers of a new district, and which I regret to say so often is lost in that stony selfishness which usually attends the accumulation of wealth; and to witness the building up of those associations which attend, and at the same time promote civilization. A BACKWOODSMAN.

SYMPHYTUM, OR COMFREY, AS FOOD FOR MEN AND CATTLE.

MESSRS. EDITORS—A hasty and partial description of this vegetable, was circulated by many papers in the autumn of 1842. I wish now for the public benefit, to exhibit *more fully what I know, and what I believe on the subject*.

The botanic name of this plant is *Symphytum*, a word of Greek origin, signifying *springing forth in company*, which is descriptive of its growth, both root and herb; *but not of its nature*. The word *officinale* is sometimes added in books, signifying that a species or preparation of it, has somewhere, or at some time, been kept for sale in the shops of the apothecary. It is *perennial*; but how long I do not exactly know; but, perhaps, till the ground near, is filled and choaked with roots, It will then die, and afford the soil an abundant and rich manure. It is very hardy and vigorous; never, to my knowledge, injured by frost, drouth, vermin or insect; of course the crop is very sure. Various species of it grow in an uncultivated state in some foreign countries. Of late I have been informed, by good authority, that it is a native of this country, and found wild in various places on congenial soil, near runs, in unimproved mountains and woody lands; especially in the vicinity of Williams College, Mass., and in some places in the neighboring States, Vermont and New York. The green leaves are often used as pot-herbs. It is found in many New England gardens by single root, and used much in syrups to *nourish the feeble, and parry off consumptions*. The liquor, produced by boiling the dried leaves, is of a dark color, moderately tonic, restringent and exhilarating, much like *the black tea, but more nutritious*; of course, a very good substitute for people who will still use hot and exciting drinks. The root, cleaned, broken, dried and ground in a coffee or corn-mill, is a very mucilaginous and nutricious flour; resembling slippery-elm, oat-meal, arrowroot and sago. It has much the appearance in various respects of good, light colored rye-meal, and is peculiarly easy of digestion. A lady who could keep no other food on her stomach, was sustained three months on pudding of comfrey flour, made by pounding the dried roots in a mortar. Another, whose voice failed by disease, had it soon restored by the green root cut and simmered with molasses. Many years ago, I began to chew the root for cough and the good of my lungs, in my much public speaking, during the cold winters in the mountainous regions of New Hampshire. I pounded some fine for porridge and liked it well. Afterwards, at two different times, I had 4 lbs. ground at a corn-mill, to use with other flour or meal in gruel for family colds, coughs, and bowel complaints; and to give to neighbors for various diseases; especially of the lungs and bowels. As food, it operates slowly but powerfully, against the more common chronic complaints. It makes a very conforting and healing poultice for external bruises, wounds and sores. It is my belief that, if used freely with other articles of diet, it would have a strong tendency to prevent, not only coughs, consumptions, dyspepsy, diarrhœa, and costiveness; but also rheumatism, cramp, contractions of the muscles, sinews and cartilages; and also, many of the sore and destructive consequences of using ardent spirits, tight-lacing, hot drinks, over eating, over working, &c., and many other means of self-destruction, practiced by many people. Should the taste at first be in any degree unpleasant to any, like almost any kind of new food, then let a trifle of some pleasant condiment, slightly varying the taste, be intermixed, till by use, it shall itself become pleasant, as it did to myself. It is very easily cooked, requiring only a little scalding or baking. I often put a spoonful or two, into my dish of milk, and liked it well, with no other cooking. People may cook this, as they do other articles of food, *according to convenience or fancy*. I would recommend to use about one-fourth part of comfrey meal, with three-fourths of wheat, indian, barley and buck-wheat, for bread, pastry, wafers or dough-nuts, and a larger portion for gruel or porridge, or soups, or griddles, or puddings; *but not with rye*. With the other ingredients, you may use it for custards instead of eggs, probably to great advantage. What portion is soluble and nutritious matter, I have not ascertained, but think it about equal to that of rice, which is said to be about 90 per cent. I would now for mixing with my own food, gladly exchange two pounds of good wheat flour for one of comfrey-meal. It has not, to my knowledge, been cultivated as common aliment for man or beast, till done by myself. But it will probably yet prove one of the best and cheapest articles of healthful diet, now known; not outdone by the potatoe or Indian corn. It would be well for any who have ground, to go considerably into the cultivation of it, for experiment and profit, by root and herb, and to keep on hand some of the root, hay and meal, to show as specimens. Any arable soil will, especially that rather moist and warm, produce a crop according to its strength. Its blossoms afford excellent stock for honey. Its top seed is not abundant, and is gathered but slowly. It will produce a good or full crop much sooner by the caps of the roots, cut or broken from one to two inches below the place whence the tops proceed, planted about even with the surface of the ground, 8 or 10 inches apart, than by the natural seed. I think the best time to dig and replant is about the time of early plowing in spring; that the said root-seed might be well preserved through winter in a cellar, for planting in spring; and that by properly dividing the said caps, and by strict economy, *double the quantity of ground* dug over, may be replanted by the seed produced—you may dig *annually*. But the roots will be small, and the tops light. It takes two or three years for the ground to be well filled with roots. Which of these terms would be the most economical, and whether cutting the tops for hay, has any effect on the growth of the root, I have not yet ascertained. I have quit tilling the soil altogether. I cannot therefore give results of late experiments of my own, nor supply others with seed, as requested. What are its qualities for fattening domestic animals, whether by herb, green, or dry, or by root, green or dried, and ground, I know not; but presume good. Wash the roots soon after dug, break them shortish, spread them thin under cover, and without farther attention and without injury, it will become dry enough to be ground in a coffee or corn-mill. If you find difficulty in drying the tops, or any other herbage, for hay, without wetting or crumbling, heating or rotting; then, after drying by sun as much as convenient, put such herbage, whether comfrey, turnep, beet, or cabbage leaves, or potato tops, or clover, or weeds, or any other succulent herbs, into small piles or stacks of 40 to 100 lbs. each, according to the then stage of drying; and, if occasion require, before stowing it in the barn, pitch it over lightly, *each into another*, putting top for bottom; and then let them remain out, till sufficiently dry for preservation.

Allow me in this connection to suggest to all economical farmers, the expediency of having on hand a sufficient number of caps for such piles, *made umbrella-like* of coarse shirting, of 1¼ yard each, cut in two square pieces, and then diagonally, and sewed together with preparation for about four weights to be hung at the bottom of each, to keep it in place at time of wind. These would cost but about twelve cents apiece, would, with due care, last many years, *and be immediately beneficial by the farmer's convenience, the saving of his labor and the quality and the quantity of his hay.*

If I have erred in any thing in relation to this article, I wish to be corrected by any candid and faithful physician, chemist, or dietetic philosophers; for I wish to deceive none on the subject.

I will now state some facts with regard to the production of symphytum, root and herb. April 1841, I dug from 18 square feet of ground of moderately good tilth or heart, besides the said seed caps, one large bushel of green root of two years growth. In this proportion an acre would yield 2420 bushels. This when washed, dried and ground weighed ten pounds; which would be 24,200 lbs. the acre. About 8 pounds of the meal I used the following winter, in my own food, and was by no means glad when it was gone. *As to the herb for hay.* At two cuttings on 15 square feet of soil, in 1842, the second year from planting, July 15th and Sept. 1st, I obtained *four pounds* of good well-dried hay, better I think than good clover; which would be 5 tons and 1616 lbs. the acre. It is, I think, after the roots become considerable in the ground, capable of producing larger crops of hay than this. But let others try it for themselves, *root and herb;* and tell the world the results, as I have done.

Comfrey needs no tilling except the digging of the root and re-planting the said seed-caps for another crop once in two or three years. Whatever grass or weeds may grow with it, should be let alone, till mowed with the herb for hay. EZEKIEL RICH.

Troy, N. H., Jan. 1844.

CULTURE AND USE OF PUMPKINS.

MR. TUCKER—I have now read your excellent "Cultivator" for some years, and feel bound to make to you a frank acknowledgment that the benefit I have received from it, has been on a moderate calculation fifty times the amount of subscription. I know that I am within the mark. I will also add that I have been a considerable planter for twenty-five years, and continue to get something that is highly beneficial yet, from every number. In your No. 5, May, 1844, I find some judicious remarks regarding the *Pumpkin crop*. For this plant our climate and soils (lime) are singularly favorable. Limestone *prairie*-soil, excellent—lime-stone *woodland* superior. Our best cultivators of the pumpkin, plant them *eight feet* apart, one vine in the hill, in the intermediate space between two hills of corn, four and a half feet apart. Break the ground up twice *before* planting, *during frost* if possible—one plowing and two good hoeings makes a fine crop. When at maturity any young *Miss* might step from pumpkin to pumpkin, over the ground. A shovel-full of *ashes* thrown on each hill after planting, is excellent. We have no insect that disturbs them. A shovel-full of manure *on* the ashes superior.

As regards using or feeding. Using in any *way*, or to any *animal*, without *boiling*, or better, *steaming*, is absolute waste—and then using them *alone*, another *waste*. A short process with us is to boil or steam the pumpkin—let them get *cold*—put some shelled corn (yellow) into a cask of water until it swells—with a paddle or common pounder, mix the *corn* and *pumpkins* together. This for hogs; with *peas* the same way. For hogs, pour the *water* over the mess—*so save all*. For steers and milch cows cut up oats, or rye, or rice, or barley, *in the sheaf*, fine; mix as before mentioned—salt moderately the mass.

Chemical science and common observation has settled, that by some rather hidden cause, in a number of cases, two vegetable substances, containing apparently little nutriment *separate*, by amalgamation, after *boiling* or steaming, produce a singular *nutritive result*. *Turneps* are a long time fattening, if ever, a beef. *Cotton seed*, almost all *oil*—about the same. *Boil them both*—mix together—nothing better or quicker to fatten, or make *fine* beef.

A steer or hog with us, will starve to death on Irish potatoes alone. Boil them, and he rapidly fattens. Mixed with meal or peas, also boiled, and nothing superior to fatten—from well tried experiment much better than either separately used, paying with ample interest for all the trouble and expense.

Now for keeping pumpkins until June, as we do. Build under an *open* shed a rail-pen—(rails chestnut, one set will do for tweny years) lay the first bottom rails 12 inches from the ground—spread pumpkins so as not to touch; scatter dry shucks amongst them and next the rails, loosely—then over them lay rails 9 inches apart, so as not to rest on the layer of pumpkins; then more pumpkins—another layer and shucks loosely as before, and then rails, &c., until the pen is as full and high as you wish. In gathering, cut them off the vines, leaving a piece of stem; handle so as not to give the *slighest bruise;* haul for this purpose, on a *low-wheeled* wagon.

By following these directions, the full and great value of pumpkins will be discovered; and further, that whether as regards the health of the animal fed, or the economy of feeding, they are an *extremely valuable crop*. Pumpkins and Irish potatoes together, as above, a superior feed—excellent for *poultry* and *pigs*. Almost the same theory will apply to *turneps*. Sprinkle clean hickory ashes freely over both messes. I keep sifted young *hickory ashes* always by me, like *salt*. I know from full and fair trial the value, not only as regards rendering food to animals *nourishing*, but equally as segards preserving their *health* and vigor.

South Alabama, May 18, 1844. JOHN WILLIAMS.

GREEN CORN IN WINTER.

EDITORS OF THE CULTIVATOR—Will you or some of your numerous correspondents, have the goodness to make known, through the columes of your valuable paper, the best method of preparing green corn for winter use? In the month of January last, I purchased in Philadelphia a small quantity, put up in a round tin box, 6 inches long and 8 inches in circumference, that required no other preparation for the table than merely to be heated and seasoned to the taste. It was in all respects exactly like green corn fresh from the stalk, in August—a most incomparable luxury. Any instructions in this or other methods of preparing the article for winter use, would doubtless confer a favor on a large proportion of your readers. D. H. M.

Norristown, Pa., June 19, 1844.

Those who have had experience in preserving corn in the manner above stated, will confer a favor by giving us the particulars of the mode.—EDS.

HISTORY OF THE DRAG RAKE.

Judge Larrabe of Shoreham, Vt. made and used a rude one with a straight handle 10 or 12 years, and it was hardly noticed. But Coat's patent revolving *man rake*, fully proved the utility of the drag rake, and several were made in this vicinity. One with a long crotched and bowed handle made by Cyrus Barnum in 1837, was preferred. The next and next succeeding year, A. F. Cram of this town, added the stakes to the head to keep the hay from sliding over, and brought it to its present shape. He made about 100 of these, and moved away. They were well liked, & in 1842, were much inquired for, but none were in market. In 1843, I, in connexion with a neighbor, made and sold over 600. As an evidence of their credit where known, I state, that we retailed to the farmers of this town over 50 last season, at $1,50 each. Mr. Cram attempted, but failed to get it patented, (but not because he was not entitled to a patent.) It is however, known in this vicinity by his name. CLARK RICH.

Shoreham, May, 1844.

DURAND CORN—EARLY RIPENING.

MESSRS. EDITORS—For the benefit of the readers of the Cultivator, I will say that in 1842, a frost occurred here on the night of June 10th, which cut down most of the corn on low grounds. Capt. Vose, of this town, had a piece of corn near the river, which was all cut down. He waited some eight or ten days to have it start again, but it did not, owing probably to the germ of the grain having been frozen. He plowed the field again, and came to me and obtained half a bushel of seed corn, which he planted on the 20th of June. The corn soon came up, and grew rapidly, and Capt. V. informed me that he had a good crop, with little or no soft corn among it. L. DURAND.

Derby, Conn., June, 1844.

WHITE WILD GEESE.

MESSRS. EDITORS—In your May No., I noticed a paragraph in reference to wild geese having been seen on the coast of Massachusetts, which were entirely white. I had before heard of the existence of such geese. A man by the name of Cooper, who some years since was in the employ of the Hudson's Bay Company, told me he had frequently seen such geese in the high northern regions—that in their winter migrations they generally passed down the Pacific coast, which was the reason why they were not oftener found on the Atlantic. Occasionally, he said, a flock got lost or for some cause took an unusual direction, and this will account for their having been seen in Massachusetts.

Schenectady, June, '44. C. H. Tomlinson.

CONVERSION OF SINGLE TO DOUBLE FLOWERS.

Messrs. Editors—The conversion of a single into a double rose, by enriching the soil, is familiar to every one. The growth of organs half stamen and half petal, as if hurried unfledged from their nestling places, or as if a change of fashion had overtaken them in the progress of their development, are frequently seen in peonies. But nature sometimes displays the beautiful and wonderful in a series of variations upon a favorite theme;—as the following statement will illustrate.

Among the shrubs and flowers of a lady in Moscow, Western New-York, there is a rose bush, which continues in bloom from the early appearance of flowers through the whole summer. Some of its buds are purely white, others are of a rich crimson color. Besides these there are roses whose petals are a part wholly white, and the remaining ones as wholly crimson—and these admixtures are in all proportions. Again the petals of some flowers are chiefly white with red streaks, and others are chiefly red with white streaks.

The soil is chip manure and loam; and nothing is known of the shrub, except that it was a shoot from some of the princely clusters in the garden of Mr. Sam'l M. Hopkins of Geneva. J. N.

FARMERS' AFFAIRS.

Union, as well as knowledge, is important among all classes; and among none more important than among farmers. Who can calculate the beneficial influences exerted by agricultural societies and cattle-shows? The people among whom agricultural fairs originated in this country—the hardy farmers of Berkshire, Massachusetts—cherish those exhibitions with increasing interest: And who will doubt that great good is produced by what thus meets with increasing favor after thirty-five years' experience among such a community as the people of old Berkshire? The history of the first efforts for holding fairs in that place, and the extent to which that model has been copied in other states, would form an interesting chapter in the history of agricultural progress: And certain are we that no man familiar with the facts in that chapter, would ever again doubt, if he has ever doubted, the importance of societies and cattle shows in promoting emulation and improvement among farmers.

By the by, the history of cattle-shows in Berkshire, and the influence that has radiated from the efforts made there some thirty-five years ago, might form an interesting portion of the exercises at the Great Jubilee at Pittsfield, in August, when the sons of Old Berkshire are to gather together from various states, to renew the acquaintances formed in early life, while cultivating the farms around their ancient homesteads in that well known county—a county, honored perhaps beyond example in the honors which her enterprising sons have secured for themselves in all quarters of the Union, wherever enlightened enterprise has led them. Rho.

HAND MILLS.

Messrs. Editors—I see in the June No. of your Cultivator, an account of a new cast mill, to be worked by men or horses, which is spoken of very highly. In 1828 I saw in Florida a cast mill, made, as well as I recollect, upon the same principle pretty much as the new coffee mill, with a hopper that would hold one peck or half a bushel of corn, which was worked by a crank; and on the opposite side of the mill there was a balance wheel of cast-iron about three feet in diameter, which was screwed on to the other end of the same piece of iron that the crank was screwed on, which mill made excellent meal or hominy, and very fast for so small a mill, and which could be worked very easy with the assistance of the balance wheel when put in motion, and could be worked by any boy of ten years old. As I have ever been anxious to procure such a mill, I wish to ascertain whether there are any such made at any of your northern factories, and the price and probable expense of getting one to Wilmington, N. C.

A Subscriber.

Halesville, N. C., June 20, 1844.

We do not know of a mill like the one here inquired for—that spoken of in another part of this paper, as invented by Mr. Arnold is somewhat similar.—Eds.

SULPHATES OF AMMONIA AND SODA, AND NITRATE OF SODA.

These are very useful preparations and essential materials for manures; they may be used separately or collectively, and but a few experiments are required to detect the great advantages which they are respectively exercising. The Sulphate of Ammonia is according to the subscriber's ideas, best employed in a liquid state, say 2 or 3 lb. for a barrel of water, and by sprinkling over the ground morning and evening the effect is visible within three or four days, and Mr. Gilbert of Jersey City, has made the same observation with the cauliflowers; mushrooms may readily be raised in a week; there is no doubt but the advantages in using these preparations are two-fold. 1st. In planting corn you make it sprout quickly, and the grub-worm which is the greatest enemy to the farmer and inclined to attack the planted seed which at once begins to sprout.

2d. The plant certainly produces an early crop in every instance, and in a pecuniary respect of much service. The Sulphate of Soda may be used in a liquid state, but I prefer it in lumps mixed up with dung or horse manure, as it will then gradually decompose and form with the ammonia developed from the dung the various production of salts; it is invaluable for an early potato crop. The Nitrate of Soda is by itself too powerful to use, and may be wixed with the Sulphate in proportion of 1 lb. of the latter.

All the three salts may be used in solution or in a dry state and will prove very efficient, say:

2 lbs. Nitrate of Soda,
3 lbs. Sulphate of Ammonia,
5 lbs. Sulphate of Soda,

All mixed up and dissolved in one hogshead of water, if intended for artificial guano; to the above composition 1 bushel of bone dust may be added and it will be found highly useful. L. Feutchwanger.

New-York, June, 1844.

CALVES WITHOUT HORNS.

Messrs. Editors—I raise calves without horns, and think them quite preferable to calves with horns,—they are not liable to injure one another, and less shelter will answer for the same number, provided you do not put them in stalls. When the calf is from two to four weeks old, tie the legs, the same as if you intended to kill him. Cut off the hair on and around the horn—have an iron, an inch or more in diameter, square at the end, heat it to a red heat, and sear the lump down even with the surface of the head, and put on a plaster of shoemaker's wax, or some other adhesive plaster, to keep the air from it, and no more is necessary to be done. The calves do not suffer the least inconvenience from it. If the lump is not seared down close, there will sometimes grow a loose nub of a horn. J. S.

The Wheat Crop in Northern Illinois.—The editor of the Prairie Farmer under date of May 28th, says: "From every quarter, we notice the reports are, that wheat is likely to come in luxuriantly. We can but repeat the opinion we have before expressed, *that the price of wheat is to be lower for years to come, than for years back*, in proportion to other articles; for the sufficient reason that so much more is produced. The folly of exclusive wheat raising is apparent."

☞ The *S. Carolina State Ag. Society* hold their next Exhibition at Greenville on the 2d Wednesday of Sept.

FOREIGN INTELLIGENCE.

By the last packet at Boston, we received from our kind friends in England, an unusually large supply of foreign Agricultural Journals, among which are the *Farmer's Magazine* for May and regular files of the *Mark-Lane Express, New Farmer's Journal, Gardener's Chronicle, Agricultural Gazette, Farmer's Herald, &c.*

State of the Weather, Crops, &c.—Accounts state the month of May was unusually cold in England, as well as in this country, but in respect to moisture, the weather was the reverse of what it was here—there being no rain of any consequence in England during the month, and but very little during the month preceding. The severity of the drouth had injuriously affected many of the crops. Some of the late spring grains had vegetated but very imperfectly—the pastures were in many instances dried up—in several districts the animals had to be supported by foddering, and the stock of hay was being rapidly consumed. It is hoped, however, that the drouth is at an end. Rains had fallen in some places on the last days of the month, and there was a prospect of more. In Scotland, there had been some deficiency of rain, but the wheat and other crops looked rather promising.

Extract of a letter received in New-York, dated London, June 3:—"Our weather has been singularly dry and free from all moisture for the last ten weeks—so much so as almost to have checked farming vegetation, with the exception of the autumn sown wheat—as for barley, oats and beans, they are just above ground, and the latter are in blossom, not six inches high. Of hay, compared with last season, the crop will not be one-fifth in quantity. In short, we must be large customers of your Western States, if matters continue as at present."

The introduction of live stock into England, which has taken place to some extent under the new tariff, has, it is said, resulted in a general loss to the speculators. Some of the animals, imported in store condition, had been put to stall feeding, but in no instance have they thriven well; on the contrary the change of diet had such an unfavorable effect upon them, that in the course of a few weeks they have been attacked with disease and rendered almost valueless.

Farm laborers were getting ready employ at from 10*s.* to 12*s.* per week.

The Mark Lane Express of June 3, says:—From the United States, and Canada, immense quantities of salted beef and pork, together with hams, cheese, bacon, &c., have come in, yet the demand for those articles has improved, and prices have been well supported. For instance, American cheese has sold at from 34s. to 48s.; beef, 30s. to 38s.; pork, 36s. to 40s. per cwt.; tongues, 24s. per keg; smoked hams, 52s. to 56s. per cwt., duty paid; beef, for ship's use, 80s. to 90s.; prime mess, 65s. to 70s. per tierce; and prime mess pork, 45s. to 52s. 6d. per barrel, in bond. At these rates, a good business has been transacted, with every prospect of higher figures.

American Seeds in England.—At a late meeting of the Council of the Royal Agricultural Society, Mr. Colman presented samples of several kinds of seeds which he had received from America, and which were distributed among 30 members of the council for trial, and their reports respectively on the results of their cultivation. Among the seeds were millet, broom-corn, herds-grass, or timothy, (*Phleum pratense*,) and several varieties of Indian-corn. Mr. Colman is strongly inclined to think that the early kinds of Indian corn may succeed in the southerly part of England. Mr. Colman also presented two plows, one made by D. Prouty & Co., Boston, and the other by Ruggles, Nourse and Mason, Boston. The committee of arrangements have made preparations for the trial of these plows with those of English manufacture, at the coming show of the Royal Agricultural Society at Southampton. Mr. C. likewise presented American grain-cradles and scythe-snaiths, of improved construction, besides turnep-weeders, manure-forks, &c.

Agricultural College in England.—At a public meeting lately held at Cirencester, (Eng.) in furtherance of an agricultural college for the education of young men in the theory and practice of agriculture. Earl Bathurst, Lord Ducie, and other noblemen, as well as tenent farmers, took part in the proceedings. More than one half the necessary funds have been already subscribed or promised. A report from a committee who had visited the agricultural colleges of France, Switzerland, Prussia, &c., was read, stating that all those institutions were flourishing, and their beneficial influences were becoming more widely extended and acknowledged.

Defect in Potatoes.—Several European writers seem to entertain the notion that the failure and poor quality of the potato-crop for a few years past, is owing to the degeneracy of the variety from age. They also recommend *unripe* potatoes for seed, for the reason, as is alleged, that they will vegetate more readily and vigorously than ripe ones. We do not think that either of these theories is supported by facts, in this country.

Guano.—That is said to best which is brightest colored—being freshest, or last formed. On some of the islands in the Pacific, it is said its smell is perceptible at the distance of fourteen miles. There are places where it is seventy feet thick.

The Alpaca in Great Britain.—It has been stated that this animal, which has within a few years been introduced into Great Britain, has not proved to be very healthy there. A late foreign paper says there can be no doubt as to the climate of England and Scotland being suitable, and that the difficulty lies wholly in getting them there—the animals always becoming sickly on their voyage from Peru. It is said they contiue healthy till they reach the Cape of Good Hope, when they begin to droop and frequently die. The account to which we allude, says there is a pair of these animals in Stirlingshire, (Scotland,) which have been kept there for eight or nine months, and stood the severe winter without injury, and more hardy than the native sheep, required less food, and subsist where sheep would die. They are said to be now in perfect health, very docile, following their keeper like a dog, and are very elegant and interesting. The weight of their fleeces was 17¼ lbs. The owner anticipates that the time will come when the rough hills and heathy mountains of Scotland will be covered with them, and that they will become a source of wealth to the proprietors of the Highland districts, where they will thrive on those coarse kinds of herbage which neither horse, cow, or sheep will touch.

Rot in Sheep—It is well known that sheep affected with the rot, have insects in their livers called *flukes*. There has been much speculation in regard to these insects—whether they are the cause or the effect of the disease, or whether they are produced spontaneously in the liver, or proceed from eggs taken into the stomach of the sheep, are points on which writers are not agreed In an English paper we notice an extract from a lecture lately delivered by Mr. Brightwell, in which he spoke of these insects. He says—"The vulgar notion seems to agree with the scientific one, viz: that the eggs or larva of insects are drunk in the water. The strongest proof of this I know, is in the relation of the woman at or near Cork, who had larva of the church-yard beetle in her stomach. By an absurd notion she drank a mixture of water and clay from a priest's grave! I believe there are doubts whether the larva within animals ever become insects or arrive at the pupa state. In the case just noticed, I think it is said they did so; if not that foolish woman must have taken great draughts at at various times, to produce the vast quantity of larva which at various times came from her stomach. Although larva may come from animals' stomachs with the excrements, and afterwards become perfect insects, still I cannot see how they can pass from the liver. Whether my views on the rot in sheep's livers be right or wrong, I am safe in saying that the animals originally belonged to high and dry districts, and the nearer their pasturage comes to that, the less liable will they be to the rot, both in foot and in liver."

Preserving Grass for Fodder.—Pr. Johnston says: "A method has lately been tried in Germany which seems in a great measure to attain this object. Pits are dug in the earth from ten to twelve feet square, and as many deep. These are lined with wood, and puddled below and at the sides with clay. Into this the green crop of grass, clover, or vetches is put, just as it is cut. Four or five cwt are introduced at a time, sprinkled with salt, at the rate of one pound to each cwt., and if the weather and consequently the crop be dry, two or three quarts of water should be sprinkled on each successive layer of four or five cwt. is spread evenly over the bottom, is well trodden down by five or six men, and rammed as close as possible at the sides with wooden rammers. When the pit is full the topmost layer is well salted, the whole then covered with boards, or a well fitting lid, which has a quantity of earth laid above it for the more perfect exclusion of the air. The grass speedily heats and ferments, and after the lapse of about six days, the whole has sunk about one-half of its original bulk, when the lid may be removed and the space filled with fresh grass. When thus fermented, the grass has the appearance of having been boiled, has a sharp acid taste, and greedily eaten by the cattle. The pits should be kept coverd for at least six weeks, after which they may be opened successively as required, and be kept open till their cantents are consumed, without suffering any injury from contact with the air. One experimenter says, that by giving only 20 lbs. a day of this salted fodder, along with chopped straw, he kept his cows in condition during the whole of the winter; another states that, on a daily allowrnce of the same quantity, his cows gives a rich and well-tasted milk."

We are not prepared to say how this plan might sucsucceed. It syems to be somewhat similar to that sometimes practiced for keeping brewers grains.

The Upas tree—The story of the "Bohon Upas, in the Island of Java," which constituted one of the reading lessons in a school book very generally used in New-England some thirty years ago, will be recollected by many. The poisonous qualities of this tree were represented as so wonderful, that no animal could with safety approach it within the distance of half a mile, and birds, when attempting to fly over it, were said to fall down dead. Criminals, when under sentence of death, were said to be allowed their choice, either to visit this tree, and collect some of the gum or sap, or suffer immediate execution—the manner of execution being shooting with arrows, dipped in the sap of the upas. In a late number of the London Gardener's Chronicle, we find the following notice of this tree:—"A living plant of this celebrated tree has been lately presented to the Horticultural Society by the East India Company, and is now growing in the Chiswick Garden. It is in perfect health, and, notwithstanding the fables of Dutch travellers, perpetuated by Darwin, may be approached with safety. It is, however, so virulent a poison that no prudent person would handle it without proper precaution."

Insects in Wheat.—In a lecture on the "diseases of wheat" lately delivered in England by Rev. Mr. Sidney, mention was made of the "wheat midge" and "ear cockle," magnified representations of which were exhibited. "The former is a fly something resembling a gnat; the latter is a small eel, the larvæ of which are deposited inside the grain in a cottony substance, and they are so minute that many thousands exist in a single grain of wheat. These animalcules are very destructive, and the chrysalis of the insect is supposed to come to life in the farm yard where the refuse of the threshing floor is thrown, as it exists in the chaff. As a means of preventing this evil it is recommended that the chaff should be sieved, and that the dust, in which the chrysalis of the insect is always to be found in great numbers, should be taken away and burnt." We believe this "wheat midge" is the same insect which has been improperly called the "weevil" in this country.

American Produce.—The following extract from a letter just received from a farmer, who emigrated from the Cotswolds to the United States of America, has been sent us by a correspondent who is of opinion that the facts communicated tend to show, that if agricultural produce was allowed to be imported into this country, free of duty from such a boundless country as the United States, the British farmer and grazier would be entirely superseded in the home market. The writer of the communication, we may add, is located in the Ohio state, and his letter is dated December 6. "Cattle and sheep," he says, "are as good as the average in England; of sheep, the Merino breed appears to have been early introduced, and followed by the Leicester and Southdown; the Merino is not a bad sort, but I think the introduction of our English breeds a great advantage. Oxen are worth from *6l.* to *6l.* *5s.*; cows and calves, from *2l.* to *4l.*; and other stock in proportion. Fat wether sheep, 18lb. per qr., 6s.; a man may buy a good flock of store sheep for 4s. 2d. each. Fat pigs, those above ten score, 2s. 6d. per score; under that, 2s. 3d. The large hog is worth most money, as the fat parts can be turned into lard, and more made of it than the pork or bacon could fetch. There are thousands of sheep killed, the legs salted and dried, and the remainder boiled or fried to obtain the tallow. Butter sells at 3¼. per lb.; cheese, at 2d, to 2½d. The average price of hay is 20s. per ton; good cider, 9s. the 100 gallons—so abundant was the crop that the apples will not all be used. I sold two loads of wheat at 3s. 10½d. per bushel; oats fetch 11½d. I think you would be surprised to see how things come forward in the spring. I had oats sown the 12th of May, and cut in July. I expect you will get some of the Ohio wheat, as a great deal of it goes to Canada, which is not more than 100 miles distant by water."—*Glouc. Chr.*

Warbles in Cattle.—A few applications of strong brine will at once destroy warbles in cattle, in whatever stage they may be found to exist; after which the animal will thrive better, and when it comes to be slaughtered, both the hide and carcase will be more valuable.

The Egg trade—To give an idea of the extent of this branch of trade, it may be stated that the Princess Alice, from Dublin to Fleetwood, on Sunday week, brought 38 tons, or about 70,000 eggs. The whole were dispatched by railway to Manchester, Birmingham and London.

White Crows.—We were shown to-day, at a house in the Kirkgate, a brace of crows, nearly as white as snow. They are this year's birds, and were taken out of the same nest in company with a brother or sister of the ordinary color. When anxious for food, they caw their vernacular in splendid style, run about the floor, and are as well-grown as birds can well be of the same age.—*Dumfries Courier.*

Good Farming.—It may be laid down as a standing rule, and as a guide to direct our exertions, that all good farming, the whole of that process by which bad land is to be converted into good, or land naturally good and productive is to be continued in that state, is comprised in the three following operations of husbandry. 1. To carry off all stagnant and superfluous water by means of judicious draining. 2. To return through the medium of manure, the strength and fertility which has been extracted from the land by cropping. 3. To eradicate all noxious weeds, that the strength of the manure may be thrown into the crops and not into the weeds.—*Rawstorne s Remarks on Lancashire Farming.*

Deanston Farm.—We took the opportunity, while at Stirling, of vising the farm of the celebrated Mr. Smith, of Deanston. In the plantation adjoining the improved fields, the original state of the soil may be seen and compared with the same soil in its improved state. The contrast is very great. There are no open drains or ditches on the farm, nor open furrows or gaws of any kind. The plow used here has a moveable mould-board, which the plowman turns over at the land end, then enters at the same place, the earth being always thrown to the same side. The fields are thus laid out quite level, no land lost with open furrows, and no time spent in going round ridges in turning. This system answers well with Mr. Smith, who reaps his crops with a reaping machine, and does not require ridges as a guide in harvest. At the entrance to each field the ground is paved about four feet within the gate, and to the road outside, to prevent the ground being poached with carts or cattle. The division fences (thorn hedges) all run parallel. A pump-well is fixed at the corner of four fences, and supplies, by means of troughs in each adjoining corner, water to four fields at once. The drains, have never in a single instance, required to be opened and relaid. They are formed entirely of broken stones. The grass lands, in some places, were beginning to fog, and seem, in our opinion, to be in need of lime. This farm (we believe about 150 acres in extent) is an excellent example of the benefits of furrow draining, combined with that part of the system which is Mr. Smith's own, subsoil plowing. But the whole success of the system, as shown by the increased produce of this farm, cannot be entirely ascribed to draining and subsoiling. Great part of it is due, no doubt, to the high price got for the produce consumed at the Deanston cotton works, where upwards of 1,000 people are employed, and which is within one hundred yards of the farm offices; and most farmers will be inclined to think that much of the fertility of the farm is due to the manure supplied by the village (which adjoins the farm), where this large family of human beings live.—*Dumf. Cour.*

SHEEP ON THE HIGHLANDS OF SCOTLAND.

On the wild mountain ranges of Scotland, where the ruggedness of the soil does not admit of cultivation, immense flocks of sheep are kept. In the late foreign papers we notice an account of a "club" formed by the farmers of a portion of this region, the object of which is to ascertain and record the prices of the cattle, sheep, and wool of the district during the past year, and to collect any other useful information. We have undoubtedly much land in this country now lying waste, which might be appropriated to the grazing of sheep with as much profit as is yielded by these Scottish lands. The following extract will interest many of our readers:

"The usual calculation is that, in the North Highlands, five acres of pasturage are required for two sheep; whilst south of the Frith of Forth three acres will carry two sheep. Scarcely any hill pasture in Scotland, in its natural state, will carry one sheep to the acre. The extent of land thus occupied by many farmers is immense many of them counting "hirsels" to the number of from 3,000 to 5,000, and even 10,000, whilst some go much beyond this; Cameron, of Corriehoyle, for instance, whose holding lies in the Lochiel country and away by Glencoe, counts his 40,000 bleaters on the wild mountain sides and deep valleys of the far north. Mr. Cameron, who was once a common drover, may thus be reckoned as, next to Prince Esterhazy, the greatest flock-master in the world. Farms of the kind of which we are speaking, are nearly all let upon leases of nine or thirteen years, whilst the leases of the arable farms in Scotland run from 15 to 19 years. The locality of Mosspaul is wild, stern, and rugged—the "Wisp" [name of a mountain] itself rising immediately behind the inn, to the height of 1,950 feet above the level of the sea, whilst "Alps upon Alps arise," all around closing in a narrow valley, at the foot of which there runs a mountain stream called the Ewes, and along which lies the road to Edinburgh, hemmed in on each side by immense hills, which rise almost perpendicularly, and strongly remind the passenger of the accounts he has read of the far-famed Kyber Pass. The inn of Mosspaul itself, a solitary dwelling amidst the mountains, stands at an elevation of 620 feet above the level of the sea, and is built on the very confines of Roxburghshire—the stables, barns, &c, which adjoin being in the county of Dumfries. For miles and miles around and along the road, the property is owned by the Duke of Buccleugh, and is divided into holdings, such as we have already indicated—many of the farmers being owners of from 3,000 to 5,000 sheep.'

BLIGHT IN PEAR-TREE.

Dr. Mosher, of Cincinnati, has presented to the Horticultural Society of that city, a paper on this subject, in which he states his belief that the blight is caused by a species of aphis. He first examined with a lens the blackened leaves and branches, extending his observations to the bark and wood, without discovering any satisfactory cause. He always cut off the affected branches, but no sooner was this done, than others were attacked in the same manner. At length, on examining some healthy branches, adjacent to those which were diseased, he discovered the enemy. The insects could hardly be seen by the naked eye, but by the aid of a lens, were magnified to the size of a quarter of an inch, and were busily engaged with their proboscis, feasting on the vital juices of the tree. The leaves, being thus deprived of the necessary sap for nourishment and elaboration, soon perished and turned black by the heat of the sun, while all that part of the branch and trunk below, dependent upon the elaborated sap of the deadened leaves above, shrunk, turned black and dried up. The fruit became shrivelled, and shared the same fate. Dr. M. thinks the only remedy is to cut off the affected branches and burn them. Particular care is required to take off every limb on which the enemy can be found. Cutting off those which are already deadened, will be of little avail, as the insect has then begun depredating on other branches, though the consequences may not yet be obvious.

HOLLOW HORN.

A writer with the signature of "*Grazier,*" in the Louisville Journal, describes very particularly a case of hollow-horn in a cow. He has no doubt that the disease is occasioned by "hard keep." He says he has frequently seen cattle bought from persons who had almost starved them, become fat, and to all appearance healthy; but would suddenly exhibit all the symptoms of the hollow horn. Boring the horns, he thinks is only a palliative, not a cure—as the matter in some cases cannot be discharged at a gimblet hole. Boring was tried in the case he speaks of, but without effect. The horns were finally cut off, and the cow got well. In conclusion, he says, "Hollow horn, if treated as above, will *certainly* be cured, and the animal rendered as useful as ever, either for milk, for work, or for fat." We would suggest whether this is not rather a *large* conclusion to be drawn from a single case? We have known this remedy frequently tried, accompanied with all possible care, but without success. In desperate cases, no remedy is infallible. *Preventives* are best; but if animals become diseased, they should be attended to as soon as attacked.

RICHNESS OF MILK, &c.

A writer in the Louisville Journal, speaking of the experiments of Mr. Bement in making butter, given in the March number of the Cultivator, says:

Mr. B. expresses surprise that a cow whose milk produced little butter, as showed by the lactometer, or little cream, (I have forgot which,) made the fattest calf. A word as to the cause of this. Though not able to use technical terms or to give a chemical analysis of milk, I believe I can be understood. The component parts of, new milk, as far as dairy analysis shows them, are butter, cheese, and whey; and in the milk of individual cows there is a wide difference in the proportions; and cows that give little butter *may* make it up in cheese, and those that give little butter and little cheese in proportion to their milk *must* make it up in whey. I do not recollect of ever seeing a comparative statement of the nutritive qualities of butter and cheese, but I have found in feeding calves from the bucket, instead of suckling, that the abstraction of the butter from the milk made less difference than I had anticipeted, and that the substitution of a pound of molasses was an equivalent for every pound of butter withdrawn. And I think it possible that a cow where the *caseous* part abounds in the milk is as likely to make a fat calf as one whose milk is composed of *butteraceous* matter and serum.

No proper test has been found to prove the quality of milk, which, as it comes from the cow, is a little heavier than water. The tube lactometer only shows the cream, which does not determine the richness; and beads are useless, as water administered to new milk would lessen its specific gravity and might be mistaken for cream.

ORTHOGRAPHY AND ETYMOLOGY.—"MOLASSES," says Webster; "is an incorrect orthography of *Melasses.*" The word is said by Bordley to have been derived from *mel*, honey, and *assinus*, an ass—from the circumstance of asses being used in grinding sugar-canes.

THE CULTIVATOR ALMANAC FOR 1845.

The Almanac which we issued late in the season for this year, met with such success, that with our limited edition, (30,000 copies,) we were unable to supply the demand for it. This success has induced us to issue an edition for 1845, and to enable us to supply all demands for it, we have had the work stereotyped, and are now ready to supply orders from any section of our country. We subjoin a list of the

CONTENTS OF THE CULTIVATOR ALMANAC FOR 1845:

1. Astronomical Calculations, by David Young.
2. "The Circle of Fruits," a beautiful engraving, representing the time of ripening of the various kinds of Fruits, by which a succession is furnished the year through.
3. Useful Recipes.
4. Hints for the Months.
5. Plan of a Farm House.
6. Village Door Yards.
7. Crested Fowls.
8. The Shepherd's Dog.
9. A Cheap Hen House.
10. Raising Melons, Cucumbers.
11. Pruning Orchards.
12. Improvements in Agriculture.
13. Hay Box for feeding Sheep.
14. "A stitch in time saves nine."
15. The Common Horse Rake.
16. Remedy for smokey chimneys.
17. Culture of Pole Beans.
18. Hanging Gates.
19. Grafting.
20. Merino Sheep.
21. Experiments.
22. Protection of Vines from Bugs.
23. Cutting Straw, Hay, &c. for Fodder.
24. Hints to Young Men.
25. Prevention of Accidents from Bulls.
26. Hot Beds.
27. Culture of Millet.
28. Speed the Plow.
29. Plan of a Barn.
30. Coulter for cultivating corn.
31. Agricultural Readers.
32. "Did'nt I drum well?"
33. Flowers.
34. Propagation by Layers.
35. Early Fruit.
36. The Cultivator.
37. Agricultural Papers.

☞ *It is printed* in the style and of the same size as *the Cultivator* Almanac for 1844, and illustrated with *THIRTY ENGRAVINGS*, and sold at the low price of $2 *per 100*—or $15 per 1,000. ☞ Booksellers or others, can have editions printed with their imprint, and occupy the last page with an advertisement, for $5 extra on the first 1,000 copies.

CHARCOAL.—I wish some one would give us a feasible mode of pulverising charcoal. Reducing it to powder with flails is out of the question, except for a few bushels. Will Za. Drummond, Esq. of Va., tell us how he manages it?

JAMES BOYLE.

AG. PUBLICATIONS.—We must study our profession; we have many judiciously conducted periodicals, and many scientific works, and no man who has a proper pride in his profession but reads some agricultural paper with all the zest that ever a politician devoured a partizan journal. These productions from practical farmers, amuse, interest, and instruct. They excite us to increased exertion;—inspire us with confidence in undertakings which otherwise would be abandoned upon the first failure;—give us plans, the most approved, for all our farm buildings;—make suggestions which are often of the greatest importance:—indeed, they act as "a friend in need,"—as a wise counsellor, a judicious, experienced adviser. These papers are of as much importance, and are as necessary to the planter in the successful prosecution of farming as the political newspaper is to the statesman, or the "reports of cases" to the lawyer.—*Bowie's Address.*

CURE FOR UNRULY MILKERS.—Make a pen of just the size that the cow can comfortably stand in and no more. This you can do in the corner of your yard, by setting down three posts, and boarding them up fence-like, leaving them open at the end to drive in the cow. Let a space be left open at the side where you wish to milk. Put your cow into it and fasten her in by stretching a chain across the end of the pen behind her. Then take a piece of rope, say fifteen feet long, and tie one end of it to a post behind the cow, and near its length distant from her: tie the other end to the leg of the animal, just above her foot, draw it back as much as it would naturally be for her to be milked. Then sit down and milk the cow at your leisure. It will take a man an hour and a half to make the pen; and when once made, it is very little more than to milk without. She may object going into it the first and second time, but will afterwards give no trouble.—*Selected.*

GREAT SALE OF ELECTORAL SAXON SHEEP.

THE undersigned will sell at vendue the two flocks of *Pure Electoral Saxon Sheep*, belonging to the estate of the late Henry D. Grove, as follows:

1. That at Grainger, Medina co., Ohio, consisting of about 400 sheep, on the farm now occupied by them, on the 30th of *September next*.

2. The home flock, at his late residence in Hoosick, Rensselaer county, N. Y., consisting of about 350 sheep, on the 15th of *October next*.

A rare opportunity is offered to those who may be anxious to improve the quality of their flocks. The following is the opinion of the distinguished manufacturer who has usually purchased Mr. Grove's wool, of the character of these flocks:

"The purest blood in this country was introduced by the late Mr. Grove in his own flocks, the wool from which I have been familiar with since their importation in 1827. In point of fineness and admirable felting qualities, this wool is unsurpassed by any flock in this country, and the fleeces average about half a pound each more than any other I am acquainted with of equal fineness.

SAM'L LAWRENCE.

Lowel, April 9, 1844."

Terms of sale, cash.—Reference, Sam'l Lawrence, or either of the subscribers.

Buskirk's Bridge, April 20, 1844.

ELIZA W. GROVE,
W. JOSLIN,
my1.—6t. S. A. COOK.

FINE FARMS FOR SALE.

THOSE very superior Farms situated near Galway Corners, in the county of Saratoga, collectively known as the Earl Stimson Farm, will be sold cheap and on terms most accommodating to the purchasers as to credit. The property consists of about 340 acres, is so situated as to be conveniently divided into three or four farms, all having the necessary buildings, and will be sold together or in parcels, to suit purchasers. Each farm is properly divided into pasture, tilled and wood land, and is in the highest state of cultivation, fenced in the best manner and with the most durable materials. The property comprises among other buildings, a large and convenient hotel, which is a favorite resort of families in the summer on account of the superior healthiness and beauty of the country. The farming buildings of all kinds are most extensive and convenient for all the purposes of agriculture and the raising of stock. The premises also include a country store, a most eligible location for a country merchant, having been occupied as such for about forty years. It is within two hours drive of Ballston, Saratoga, and Schenectady. The farm is well known among leading agriculturists, and in the agricultural periodicals, as the Pattern Farm. For terms, &c., apply to J. OAKLEY,

Oct. 1.—tf. No. 75 Nassau street, New-York.

FIELD SEED STORE.

THE subscriber continues to keep constantly on hand at his long established Seed Store, a supply of the best quality and kinds of Field Seeds, viz:

Red Clover, of the large and small growth,
Timothy, Red Top, or *Herd's Grass, Orchard Grass,*
Lucerne, or *French Clover, White Clover,*
Trefoil, Kentucky Blue Grass, &c. &c.

Also, the different varieties of Wheat, as White Flint, Red Chaff, Mediterranean, and English—for sale in lots to suit purchasers at moderate prices, by ISRAEL RUSSELL,

Feb. 1. 1844—mar. oct. 26 Front-street, New-York

N. B. The following description of some superior English Wheat sown in the month of October last, the product of which will be for sale at the above Store, is given by a respectable English farmer in the State of New-Jersey, who sowed about eleven bushels, a sample of which can yet be seen. "It is called the Uxbridge White Wheat, and is the most noted Wheat they have in England, it being of fine quality, always commands a high price, as the flour is used by the biscuit bakers in London; it is great for yielding, and puts out a much larger ear than any wheat I have seen in this country. I saw when in England, three years ago, on my brother's farm in one field, 120 acres, that yielded 40 bushels and upwards to the acre. It grows very strong, and is not liable to be laid by heavy rains. I will warrant it free from any soil whatever. I did not see in the eleven bushels, a particle but Wheat; and I have sown it on Clover seed, on purpose that there shall be nothing but Wheat; and I will put nothing in the barn with it, so as to put it beyond the possibility of a doubt of its having any thing in it or getting mixed with other Wheat, which through carelessness is often the case. I have grown a great deal of it myself in England, and know from experience that for yield and quality, there is no Wheat to compete with it. Its general weight is from 64 to 67 lbs. per bushel. It is smooth chaff, and easy to thrash, which is not always the case with smooth chaff Wheat."

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☞ ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.

BEMENT'S AMERICAN HOTEL,

No. 100, *State-street, Albany.*

THE subscriber most respectfully announces to his friends and the public generally, that he has taken a lease for a term of years, the American Hotel, No. 100, State-street, Albany, which has been thoroughly repaired, completely renovated, and newly furnished throughout; and in quality of beds, cleanliness of rooms, will compare with any other establishment in the city.

In location, this house has many advantages, being situated in the centre and on one of the most beautiful and airy streets in the city; within a few moments walk of the Eastern and Western Rail-Road depots, and the landings of the steam-boats; about midway between the Capitol, City Hall, public offices, the banks, post-office, and business parts of the city, renders it very convenient for the man of business.

The subscriber places much reliance on the continuance and support of the *Agriculturists* throughout the union, who may visit the city, and pledges himself to spare no exertions, to render their stay agreeable, should they favor him with their company.

Three Hills Farm will be carried on as usual, under my own superintendance, by a careful manager, and the breeding and rearing improved stock, will be continued as heretofore. C. N. BEMENT.

Albany, July 1, 1844

TO FARMERS, HORTICULTURISTS, &c.

GUANO.—The subscribers offer for sale 200 bags, about 220 lbs. each, of this valuable and economical manure recently imported from Peru. For particulars as to its quality, uses, &c. beg reference to the Cultivator of May and June, and the June number of the Boston Magazine of Horticulture. WIRGMAN & NEWMAN,

July 1—2t. 41 Front-street, New-York.

E. VAN SCHAACK'S MAMMOTH VARIETY STORE,

44 *Market-street, Albany, N. Y.*

THIS establishment has recently been greatly enlarged, embracing three sales rooms, each 60 feet in depth, and now presents the greatest variety of goods and largest assortment of *Wooden Ware, Baskets, Enameled and plain iron Hollow Ware, Shaker manufactures Brushes, Combs, Pocket Cutlery, Scissors, Razors, Fancy Goods, Perfumery, Toys, &c &c.* to be found in the country.

Ladies and gentlemen passing through the city, will confer a favor on the proprietor by calling to examine the assortment, though they may not wish to purchase. Merchants supplied on the most reasonable terms. E. VAN SCHAACK.

N. B A good assortment of Garden and Flower Seeds, Roots, Herbs, &c. constantly on hand. July 1—1t.

KENTUCKY BLUE GRASS AND HEMP SEED.

GEORGE, LAPPING & CO.

Seed and Agricultural Merchants, Louisville, Kentucky,

KEEP constantly on hand a good supply of Kentucky Blue Grass and Hemp seed, which they are willing to sell to eastern dealers on favorable terms. They are also dealers in Millet, Clover, Timothy, Orchard Grass, &c. july—2t

TO FARMERS AND GARDENERS.

THE subscriber is now preparing synthetically the guano as by the analysis of Dr. Charles T. Jackson of Boston, and will be able to furnish it at 5 cents per lb.

The price of Sulphate of Soda is half a cent per lb. by the barrel of about 200 lbs.

The price of Nitrate of Soda is 5 cents, and the price of Sulphate of Ammonia, is 7 cents per lb.

Compound chemical whale oil soap has stood the test of three years use, and is found beneficial either as a wash on trees, and with a syringe over the fields where the marauding insects, such as the ants (either black, red or white) curculio, turnep beetle, coccus, rose bugs, leaf lice, peach, apple and pear tree insect, caterpillars, &c, have hitherto made their ravages upon the exotic and indigenous plants, roses, geraniums, cactus, rhododendron, camelia, orange, lemon, pear, apple, cherry, apricot, nectarine and peach trees, grape vines; and in the fields, the wheat, rye, rice, cotton, sugar, tobacco, cabbage, turneps, potatoe, cauliflower, salad, celery and other plants. For further particulars apply to DR. LEWIS FEUCHTWANGER,

July 1—1t. No. 60, Maiden Lane, New-York.

AGRICULTURAL IMPLEMENTS, &c.

THE undersigned are Agents in this city to sell the following celebrated machines, viz:

Hussey's Premium Corn and Cob Crusher.
Dickey's " Fanning Mill.
Platt's " Portable Grist Mill.
Hovey's Premium Straw Cutter, (Spiral knives.)
Warren's " "
Hull's Stalk and Straw Cutter.

Being proprietors of the now celebrated "Warren's Improved Portable Horse Powers and Threshing Machines," for one, two and four horses, they continue to manufacture and sell them with increased success and satisfaction. Of the two horse machines, one correspondent states, "after a fair trial with barley and wheat with two horses I can thresh in a clean and thorough manner, at least 30 bushels of wheat in one hour, with comparative ease to the horses: and this day, without driving them at all hard, in sixty minutes, 200 sheaves of wheat of a large size were threshed out in a clean and excellent manner, which is about 15 bushels. The straw, after threshing, is easy bundled; and as it comes out whole and unbroken, I consider these machines on that account important; and as only three hands are required to do the work well, I think the great saving of labor such an item as to make them what is much needed by many of our farmers in this section of country."

The prices for these machines are very low, viz:—two horse power alone, only $50—two horse power and thresher, together, $[illegible]—[illegible] horse power and thresher, $60—four horse power and thresher, from $100 to $110. Cash payable in this city on delivery. Liberal deductions made on all machines and implements to dealers.

L. BOSTWICK & Co.

July 1—1t. 146 Front street, New-York.

PARTNER WANTED.

A GENTLEMAN in the Rock River country, Ill., owning a tract of land capable of supporting ten to fifteen thousand sheep, is desirous of engaging a partner to embark with him in the sheep and wool growing business. His location is unsurpassed for all the requisites for keeping sheep. The region is elevated, commanding a view of the surrounding country for the distance of ten to twenty miles—presenting to the eye some of the most beautiful scenery imaginable. Sheep have proved healthy there—showing an increase in weight of 10 to 20 per cent on being brought from Ohio and Indiana.

FARM FOR SALE.

☞ The same gentleman offers for sale another farm, near the one mentioned, and lying, also, on Rock River. It is believed to be one of the most desirable situations in the western country—combining all the varieties of surface required for utility, convenience, or beauty, with land enough for feeding eight or ten thousand sheep, and other stock in proportion. There is now native meadow on which hay of excellent and nutritious quality may be cut, equal to wintering ten thousand sheep. On it is a farm house and some fencing. The whole is bounded on one side by Rock River, and on the other by a never failing creek of pure water, equal to driving a flouring mill. But two miles distant, is a thriving village, where may be found abundance of shops and useful artizans. The place is perfectly healthy, and for beauty and scenery is rarely equalled; and in the hands of a person of taste and means, is capable of becoming perfect for the useful and ornamental. There is a grove of 90 acres on the place, situated on the bank of Rock River, which stream, it is believed, will shortly be made navigable to the Mississippi.

SHEPHERD WANTED.

☞ The owner of the above mentioned farms, wishes to procure the services of a good practical shepherd, of industrious, prudent habits and good judgment. (A scotchman would be preferred.) It is not wished to confine his attention to *one* flock; but rather that he should have a general oversight of *several flocks* which the gentleman proposes keeping—all within a circle of some six to nine miles. It is desirable that he should be familiar with the diseases of sheep and modes of cure—the best food and other treatment most likely to ensure success. He should also be capable of keeping such accounts as are useful, touching the stock, &c. For further information, apply, *post-paid*, to the Editors of the Cultivator, Albany. July 1, 1844

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. I. ALBANY, AUGUST, 1844. No. 8.

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5,00—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage.

☞ Complete sets of the *First Series* of "THE CULTIVATOR," consisting of ten vols., quarto, are for sale at the office, and may be ordered through the Agents of the paper throughout the country. Price, stitched,—vols. 1, 2, 3 and 4, 50 cents each—vols. 5, 6, 7, 8, 9 and 10, $1,00 each—for the whole set, $8,00.

OFFICE IN NEW-YORK CITY, AT
M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,
where single numbers, or complete sets of the back volumes, can always be obtained.

☞ This paper is subject to newspaper postage only, being one cent within the state or within 100 miles of Albany, and 1½ cent for any greater distance.

THE FARMER'S MUSEUM,
(*Each no. containing 16 pages,*)
Is made up of selections from this paper, and published monthly at 50 cents a year—Fonrteen copies for $5,00—Thirty copies for $10.

THE CULTIVATOR.

MONTHLY NOTICES.

COMMUNICATIONS have been received since our last, from J. J. T., J. Hitchcock, J., G. B. Smith, A. J. P., R. Chambers, D. J., Naturalist, S. W. Jewett, Jas. Bates, Nathan Howard, L. A. Morrell, J. Richardson, Rho., D. Y., James Hall, T. J. Lewis, S. Y., Alfred Kennedy, J. P. Norton, S. Walen.

Our thanks are due to T. H. WEBB & Co. booksellers, Boston, for a copy of the 6th edition of Judge Buel's "Farmer's Companion." Though this work has reached its 6th edition, it is not so generally known as it ought to be. It would be a valuable addition to all our School District Libraries.——To ALEX. WALSH, Esq. Lansingburgh, for the "New Sporting Almanac for 1844," a beautifully illustrated English annual.——To COLLINS, BROTHER & Co., booksellers, New-York, for Dymond's "Principles of Morality," abridged for the use of schools, by Caroline M. Kirkland.——To A. G. CARLL, Esq., Cor. Sec. Queens Co. Ag. Soc. for the Transactions of that Society for 1843.——To P. L. SIMMONDS, London, for his Colonial Magazine, No. 5. Nos. 1 and 2 were previously received.

☞ Mr. KENNEDY'S and Mr. JEWETT'S papers came too late for this month.

A. J. P.—"Yes," we shall be glad to receive the promised paper.

A. M. W.—Small bills of the Alabama banks are received in payment for subscriptions to our paper.

F. H., Gorham.—Your letter has been forwarded to the gentleman interested, in Illinois.

E. S. Jr.—The kind of Subsoil Plow you inquire for, can be obtained of Pruyn, Wilson & Vosburgh, in this city, and we presume also at the Seed and Implement store at Rochester. Price, $10 to $15.

R. A. B.—For Dorking Fowls, address H. T. CHAPMAN, New-York, who will have them for sale in the autumn. He could probably furnish the other articles wanted. We believe his price is $5, for a cock and two or three hens.

"A SUBSCRIBER."—We gave in our May number, p. 179, all the information we possess in relation to the machine for ditching, mentioned in Mr. Ellsworth's Report.

☞ A gentleman recently called at the Cultivator office and paid for the paper for one year, directing it to be sent to "*Julius A. Carpenter*, Kane co. Ill." We cannot send it till we know the *post-office* to which it should be sent. Will the person who paid the money, furnish it?

AMERICAN HOTEL.—It will be seen by an advertisement in this paper, that Mr. BEMENT, of the Three Hills Farm, has taken this well known house, and resumed the business from which he retired several years since, when he removed to his farm. "The American" has been thoroughly refitted and newly furnished from top to bottom, and we venture to say that those who visit it, will find no reason to complain of mine host or his appliances.

SAMPLES OF WOOL.—We are indebted to Maj. SANFORD, of Orwell, Vermont, for samples of wool from his flock of Merinoes—a notice of which, together with a portrait of one of his bucks, will appear in our next. We should be glad to receive samples from the fleeces of Col. RANDALL of Cortland, and Maj. REYBOLD of Delaware, notices of both of which will be found in another part of this paper.

POUDRETTE.—We have been requested to call attention to the advertisement of Mr. Dey, in this paper. Those who wish to secure a supply of this article, can now have an opportunity of obtaining it on advantageous terms.

VETERINARY.—REUBEN CHAMBERS, Bethania, Pa., recommends the Thompsonian medicines for the diseases of animals. Those disposed to try them, can obtain them of any Botanic physician. We are not disposed to entertain a discussion as to the comparative merits of the "life-destroying lancet," and the "glorious system" of Dr. Thompson.

THE WHEAT CROP, in this and the adjoining counties, has been very seriously affected by the fly, described in another part of this paper. In this, and Schenectady county, very many fields are entirely destroyed, and we learn that this is the case in some parts of Vermont.—*In Western New-York*, the crop is said to be far better than for many years past, equal in yield per acre, to the great yield of 1833.

CROPS IN OHIO.—By a gentleman from Muskingum county, O., we learn that much of the wheat on the rich and bottom lands, has not filled well. The straw was very heavy, but the prevalence of wet weather after it came into head, caused much of it to fall down. There is also considerable rust, so that on the description of land mentioned, the crop will be altogether a light one. The *hill land* wheat is generally good, and it is thought there will be as much (or more) produced in the State this year, as there was last year. There was considerably more ground sown than for the last year's crop. The prospect is fair for heavy crops of corn and oats.

THE CROPS IN QUEENS COUNTY, L. I.—Extract of a letter from S. YOUNGS, Esq., dated Oyster Bay, July 15.—"Last week we finished gathering our hay and winter grain, and sincerely may we return thanks for the most favorable and propitious weather not only while harvesting, but for the whole season, having had frequent showers and warm weather, which is essentially requisite to our sandy soil, and the "Common Parent" is now truly teeming with the most luxuriant and abundant summer crops we were ever blessed with. Corn, oats, potatoes, &c., never looked better. Hay was not as abundant as in previous years; the drouth last season having killed all the young clover, which made it requisite last spring with many farmers to plow their new mowing grounds and plant corn on them. The fly made bad ravages with our wheat, all was injured, and many farmers have not more than half a crop. We are making preparations for our County Agricultural Fair, which will be held in October."

THE HAY CROP.—In most of the New-England States the crop of hay will be less than usual. From Maine, we learn that the crop, though fair, will not be so good as that of last year. In this State, so far as we have heard, it is good.

"**THE ECONOMY OF FARMING**, from the German of Prof. Burger, with copious notes from other German writers, by E. GOODRICH SMITH."—We are glad to hear that this work, which we noticed on its first appearance, in our last vol. p. 140, is well received abroad, orders for 200 copies of it, having been received from England. It contains a vast amount of the practical details of German agriculture, which have not before appeared in an English dress, and should be in the possession of every reflecting farmer. Price, 50 cents.

PROLIFIC SHEEP.—Mr. E. Chesebro of Guilderland, informs us that he has *ten ewes*, a cross of the South Down, which have reared this season *twenty-one lambs*—all good ones—from the same ten ewes, he last year reared fifteen lambs.

SHELTER FOR SHEEP.—Mr. Shanklin, of Tennessee, wishes to know the method of making shelter for sheep. As far south as Tennessee, almost any shelter that will turn rain, will answer. Where the climate is more rigorous, and protection from cold is requisite, better shelter must be made. Some crotched sticks placed in the earth with poles or rails laid over and covered with straw so as to shed rain, will do for a year or two pretty well. A dry spot should be chosen for erecting such hovels, and they should be barricaded against the wind on the most exposed sides. *Framed sheds*, with or without hay-lofts over them, may be made by any carpenter. Under these, the feeding racks or boxes may be arranged to suit the convenience of the farmer or shepherd.

HORN-PITHS.—The value of horn-piths for manure is spoken of in a late report of the N. Y. Farmers' Club, published in the N. Y. Farmer and Mechanic. The piths were put in trenches a foot deep, and the vegetation on these trenches was most extraordinary, and the manure "is believed capable of enduring twenty years." There is no doubt that these piths are a powerful manure, and yet there are probably tons of them wasted in this neighborhood every year. We saw a large pile of them the other day lying on the side of a hill, near one of our principal streets, which had been thrown there merely to get them out of the way; and if they were not manuring the ground, they were certainly manuring the *air* to a considerable extent. Around some of the slaughter-houses, also, there is an immense quantity of manure lying waste, or sweetening the water of our springs and water-courses. What is the use to talk of importing *guano*, or buying *poudrette*, when the means of obtaining abundance of the best of manure are accessible at home?

NEST EGGS.—Mr. N. Howard, Stephentown, N. Y., informs us that he prepares nest eggs in the following manner:—"Take walnut, or some heavy wood, turn in a common lathe, eggs in proper shape, as large as a turkey's egg; whitewash them, and when dry, they are fit for use. They are durable, and the lime quality is agreeable to the hens. Mine lay to such nest eggs, as well as to those of their own laying."

BARBOUR CO. (ALA.) AG. SOCIETY.—This efficient Society seems to be going forward with their work in the right spirit. At a recent meeting, resolutions were adopted, on motion of Col. ALEX. MCDONALD, recommending a more efficient action on the part of their State Agricultural Society, and also recommending the organization of Farmer's Clubs.

GOOD WHEAT.—The Delaware Journal states that F. Leonard, Esq. harvested this season, from three acres of marsh ground near Wilmington, 120 bushels wheat, weighing 62 lbs. to the bushel.—Mr. H. Capron states in the American Farmer that he has raised on a field of 20 acres, an average of 43 bushels per acre, of the Mediterranean wheat. He thinks this demonstates pretty clearly the success of improving the worn out fields of Maryland. *So think we.*

CLOVER SOD.—Mr. Helem Sutton answers several inquiries in relation to the crops and soil of Seneca county in this State, through the medium of the New-York Farmer and Mechanic. He says, "it is considered by farmers who make money by the business, that a clover sod is best for all spring crops, and rather best for summer fallow, and safest for enriching a farm."

CHARCOAL.—In reference to the effect of charcoal, Mr. S. says, "my farm was in the earliest settlement of this country, owned by a man who burned charcoal, and I find on those old beds always large wheat and bright straw, even if the rest of the field is poor, rusted and shrunk; and in fact all kinds of grain on these coal beds are good."

"**KEEP IT BEFORE THE PEOPLE**"—That the outrages perpetrated on PROPERTY IN THE SHAPE OF TREES, are at last arousing legislative and judicial vengeance. The robberies practiced openly upon gardens and orchards and door-yards have long and keenly annoyed those who devote care and labor to the cultivation of fine fruits and the embellishment of their homesteads. This species of pilfering, so common with children, exerts a pernicious influence on the minds of the young and the old; for those who plunder their neighbors this way while young, are commonly more or less tainted with thievish propensities in maturer life. "Train up a child in the way it should go, and when it is old it will not depart from it." Mark, then, the influence of example—of good or evil example—upon the minds of youth:—"We do not know," says the N. Y. Express, "when we have been more pleased with a judicial decision than that which we find recorded in one of our late London files. A boy, fifteen years of age, was convicted, and heavily punished for breaking a bough from one of the trees in a public garden. The sitting magistrate, in passing sentence on the offender, took occasion to use the following strong and sensible language: "that although the damage in this particular instance was small, yet the practice of breaking trees occasioned great damage, and the inhabitants of the different squares were put annually to great expense, in consequence of these depredations. *Persons had no more right to take a branch from one of these trees, than they had to go into one of the ho[illegible]s and steal a piece of plate.*"—We hope this will be 'recorded for a precedent,' in every court in this country."

PRESERVING BUTTER.—Mr. G. Fox of Hartford, Conn., in a letter to Mr. Ellsworth, published in his last report, says—"There are many things required to insure good butter. The butter itself must be well made; that is, worked enough, and not too much, and salted with rock salt. This being well done, and the buttermilk all expelled, the butter may be packed in good white oak, well seasoned casks, well filled. In cool climates larger casks can be used. In hot climates it is best to have small casks—say from twenty-five to thirty pounds; so that too much need not be exposed while using. Then put these small casks into a hogshead, and fill up the same with strong pickle that will bear an egg, and the butter may be shipped to the West Indies or Europe, and kept perfectly sweet. I have never found saltpetre or sugar of any benefit. Butter of my packing has opened as good in the West Indies as it was in Connecticut. I will remark, that to keep butter in ice-houses, when it remains frozen, will answer, if the butter is to be continued in the same temperature; but if it is exposed to warm weather after being taken from the ice-house, it will not keep as long as if it had not been exposed to so cold a temperature."

Detection of acids in soils.—Dr. C. T. Jackson says in the New-England Farmer that "the petals of the spider-wort, or *Tradescantia Virginica*, a common and bright blue flower, seen in many grain fields and gardens, will furnish, on being bruised and squeezed in a linen cloth, a rich blue juice, which has the property of turning *red by acids* and *green by alkalies*. The pulp, after being pressed, may be treated with a little alcohol, and will yield still more coloring matter.

Good Cow.—Wm. Bellows, of Walpole, N. H., writes to the Mass. Plowman, that N. Giles, Esq. has a cow, "probably half Devonshire and half native," from whose milk there was made "from June 17th to 24th (fourteen milkings,) sixteen pounds and ten ounces of butter, which will keep till next spring." In skimming the milk, it is only necessary to cut round the edges of the pan, and the cream may be all lifted in an entire sheet. The cow, it is stated, has had nothing but pasture feed in summer, and "nothing but hay in winter, and this with roots and pumpkins while they last, is high feed enough."

Apple-tree borer.—A writer in the Mass. Plowman, from whose initials (T. W. H.) we take to be Dr. Harris of Cambridge, says—"The apple-tree borer seems to have fled from this place. Neither beetle nor worm can I find among my own trees or those of my neighbors. Wishing to get a dozen or more of the *borer-beetles* to send to some friends abroad, I have been looking for them, in their season, during two years, without success." A copy of Harris' Treatise on Insects is offered to any person who will forward a dozen of the beetle of the apple-tree borer. It is directed that they be taken without rubbing, and thrown into scalding hot water, which will kill them in one minute.

Potash water for Trees.—The Boston Cultivator says a pound of potash to a gallon of water makes too strong a wash for apple-trees—he has known trees so much injured by it that the bark had to be scraped off that it might not bind the tree. A pound of potash to a common pailful of water, he thinks sufficiently strong.

Bees.—D. Wakeman gives in the Cleveland Herald, his mode of catching the bee-miller or moth. He says: "I took two white dishes (I think white attracts their attention in the night,) or deep plates, and placed them on the top of the hives and filled them about half full of sweetened vinegar. The next morning I had about fifty millers caught; the second night I caught fifty more; the third night being cold, I did not get any; the fourth night being very warm I caught about four hundred; the fifth night I got two hundred." Were all these *bee-moths?* (*Galleria cereana.*) We should like to know.

CATTLE SHOW AND FAIR
OF THE
NEW-YORK STATE AGRICULTURAL SOCIETY,
At Poughkeepsie, Sept. 17, 18 *and* 19.

The trial of Plows will take place on Tuesday the 17th—General Exhibition, on Wednesday and Thursday, the 18th and 19th.

All persons who intend to compete for the Society's Premiums, must become members, which they can do by the payment of $1 at the time of entering their articles for exhibition.

All members of the Society will be furnished with a Member's Badge which will admit them and their families to the Show Yards. Tickets for admission, to those who are not members, 12½ cents.

The List of Premiums to be awarded at this Fair, was published in our Feb. number, p. 55. Since then, the following alterations and additions have been made:

Cattle—Best Ayrshire Bull, 3 years old, $15.—Second best, $10.

Jacks—Best, $15—2d best, $10.

Mules—Best pair, $15—2d best, $10.

Sheep—In the Classes for Sheep, the prizes are for the best *three* Ewes, instead of the "best Ewe," as heretofore published.

The following is a list of the Judges appointed to award the several Premiums:

On Farms—J. P. Beekman, Kinderhook; J. S. Wadsworth, Geneseo; Thomas Hillhouse, Albany.

On Trial of Plows—Caleb N. Bement, Albany; John Wilkinson, Union Vale; L. B. Langworthy, Rochester.

On Farm Implements—T. V. W. Anthony, Fishkill; Geo. W. Patterson, Westfield; Alvan Bradley, Whitesboro.

On Cattle, Class I—Alexander Grant, Dover; Anthony Van Bergen, Coxsackie; G. V. Sacket, Seneca Falls.

On Cattle, Classes II and III—Henry Whitney, New-Haven, Ct.; Dr. J. A. Poole, New Brunswick, N. J.; Thomas Hollis, Butternuts.

On Cattle, Classes IV, V, VI, VII, VIII—Adam Ferguson, Watertown, Canada West; George Randall, New Bedford, Mass.; Elnathan Haxtun, Beekman.

On Oxen and Fat Cattle—L. C. Ball, Hoosick; John T. Norton, Farmington, Conn.; Henry A. Mesier, Fishkill.

On Stallions—Lewis F. Allen, Buffalo; Theodore S. Faxon, Utica; John A. King, Jamaica.

On Breeding Mares—John C. Stevens, New-York; George Fordon, Geneva; Gen. A. T. Dunham, Watervliet

On Matched Horses—John M. Sherwood, Auburn; Wm. T. Porter, New-York; Duncan Robinson, Fishkill.

On Jacks and Mules—Jeremiah Johnson, Brooklyn; Noah Gridley, Amenia; Dr. Samuel McClellan, Nassau.

On Sheep, Class I—Henry Rhodes, Trenton; Wm. A. McCulloch, Greenbush; Elias L. Barton, La Grange.

On Sheep, Class II—Sanford Howard, Albany; Edward T. Hallock, Milton; William Fuller, Skaneateles.

On Sheep, Class III—Edmund Kirby, Brownville; Henry K. Morrell, Caroline Center; Hugh T. Brooks, Wyoming.

On Swine—H. S. Randall, Cortlandville; Samuel Youngs, Oyster Bay; Samuel Wait, Montgomery.

On Butter—Alexander Walsh, Lansingburgh; Z. Barton Stout, Richmond; R. L. Pell, Pelham.

On Cheese—Hon. Elijah Rhoades, Syracuse; W. A. S. North, Duanesburgh; Tobias L. Hogeboom, Ghent.

On Maple and Corn-Stalk Sugar—F. J. Betts, Newburgh; Myron Adams, East Bloomfield; Morgan Carpenter, Stamford.

On Silk—O. Hungerford, Watertown; J. R. Barbour, Oxford, Mass.; Daniel Stebbins, Northampton, Mass.

On Domestic Manufactures—Hon. Samuel Works, Lockport; Ransom Cook, Saratoga Springs; Joseph Arnold, Kingston.

On Vegetables—Wm. Wilson, Albany; T. Bridgman, New-York; D. B. Futler, Hyde Park.

On Fruits—J. J. Thomas, Macedon: J. F. Sheaf, Poughkeepsie; Albert Heartt, Troy.

On Flowers—James Lennox, New-York; A. J. Downing, Newburgh; M. B. Bateham, Rochester.

On Plowing—Joel B. Nott, Guilderland; Elon Comstock, Rome; Martin Springer, Brunswick; Henry Staats, Red Hook; Warner Abbot, Otisco.

On Discretionary Premiums—Hon. Robert Denniston, Salisbury Mills; Hon. Abram Bockee, Federal Store; Samuel Ackerly, M. D., Richmond, L. I.; J. J. Viele, Lansingburgh; J. B. Duane, Duanesburgh.

On Cattle, &c. from other States—Hon. Levi Lincoln, Worcester; James Tallmadge, New-York; James Gowan, Philadelphia; H. L. Ellsworth, Washington; J. W. Thompson, Wilmington.

Feasting.—George Egerton, eldest son of Lord Francis Egerton, M. P. for South Lancashire, lately attained his majority, on which occasion he gave a public dinner, at which several thousand persons were present; 4,000 lbs. of meat were cooked, and 17 cwt. of plum pudding. There were 1,500 gallons of ale, 54 gallons ginger beer, 36 gallons lemonade, &c.

A DAY IN THE COUNTRY.

VISIT TO LINDENWALD.

We lately passed a beautiful summer's day in the vicinity of Kinderhook. Among other places of interest, we visited *Lindenwald*, the seat of ex-president VAN BUREN.

Lindenwald, formerly the residence of Judge Van Ness, is pleasantly retired, and commands a very agreeable landscape view, the most prominent features of which are the Catskill mountains, whose elevated summits are often veiled by the shadowy cloud.

We found Mr. Van Buren at home, and accompanied him in a walk over the farm. When he entered on the occupancy of this place on his retirement from the Presidency, three years since, it was much out of order: the land, having been rented for 20 years, and been under cultivation for the period of 160 years. Several of the buildings had become poor, the fences were old and were rotting down, and bushes and grass of wild growth had taken possession of much of the farm. During the short time it has been under Mr. Van Buren's management, the place has been greatly improved, and a course is now fairly begun by which a handsome income may be derived from it. The garden and pleasure-grounds have been enlarged and newly laid out—hot-houses have been erected—and a large number of fruit and ornamental trees, shrubbery, &c. have been planted. The green-house contains a collection of exotic fruits and plants, among which were some fine grapes just ripening. In the garden we noticed fine samples of all the fruits of the season, and some of the finest melons we have ever seen, (so early in the year,) in this latitude.

Among the objects which give beauty and interest to the grounds, are two artificial ponds in the garden. They were easily made by constructing dams across a little brook originating from springs on the premises. Soon after they were made, (three years ago,) some fish were put into them, and they are now so well stocked, with trout, pickerel and perch, that Mr. Van Buren assures us they will afford an abundant supply for his table. This is a matter well worthy of consideration. There are many situations where such ponds may be made, and, with a trifling expense, the luxury of *catching* and *eating* a fine trout or pickerel may be had at any time.

Several of the fields have been enclosed with new fence, and several buildings erected; among which are a very tasty farm-house, and a barn calculated for storing 150 tons of hay after being pressed.

But perhaps the most important improvements which have taken place on the farm, have been made on a tract of *bog land*, thirteen acres of which have been thoroughly reclaimed, and are covered with luxuriant crops of grass or oats. Three years ago, this land was almost worthless. It was first drained by ditches. The stumps, bushes, &c. were then cut out and burned, and the ashes spread on the land. It was afterwards sown to grass—using a mixture of timothy and red-top seed—three pecks to the acre. The whole cost of reclaiming was thirty-eight dollars per acre, and the land will now pay the interest of a hundred to a hundred and fifty dollars per acre. In this Mr. Van Buren has set a good example, which we hope will be followed by other farmers in the neighborhood who have lands similarly situate.

The *potatoe crop* is one of considerable consequence on this farm, as well as on others in the vicinity. Mr. Van Buren raises the variety called *Carters*, produced from the *ball* a few years ago by the Shakers. He considers these far the most profitable kind known. They yield well, and their quality is thought equal to any. Mr. Van Buren assured us that all which could be raised would readily command fifty cents per bushel, by the quantity, in New-York. All the crops appear to be well managed, and are promising. Leached ashes were tried here last season with excellent success. Great benefit has also been found from plowing in clover.

Mr. Van Buren keeps but little stock, a considerable object being the sale of hay, which a large portion of the farm is well calculated to produce—the horses for carriages and farm-work, with a yoke of oxen, and a sufficient number of cows to afford milk and butter for the family, comprising about all. We did not see the cows, but were informed that they were grade Durhams, and were excellent for the dairy. We were shown a good three years old Durham bull, whose head and limbs denote good blood, and whose mellow skin indicates that he is a thrifty animal.

All the improvements of which we have spoken, have been planned and executed under the immediate supervision of Mr. Van Buren, who finds in these useful enterprises a salutary exercise for the faculties of the mind and body, which seems to be highly enjoyed. In this pleasant retreat, removed from the cares of state, and the turmoil of political wars, he,

> ——"With a choice few retired,
> Drinks the pure pleasures of a rural life"

VISIT TO THE PRESIDENT OF THE N. Y. S. AGRICULTURAL SOCIETY.

In the village of Kinderhook, is the residence of Dr. J. P. BEEKMAN, President of the New York State Agricultural Society. Dr. Beekman's *home place* is not large, (embracing only about 100 acres,) his principal farming operations being carried on at three other farms, situated from two to three miles distant. His primary objects are wool and grain. He has about one thousand sheep, mostly of Saxony blood. Their wool is very fine, and Dr. B. expects to realize sixty cents per pound for the clip of this year. We were shown the fleeces, which averaged two pounds ten ounces each, were very clean, and put up in good order. We saw none of the sheep, excepting a few bucks, and those we had not an opportunity of closely examining, but from their appearance, should think some of them were excellent animals.

Dr. Beekman gives his sheep generally no grain or roots—feeding in winter principally on hay, which he is careful to have cut at the proper time and well cured. To some of the feeble sheep, he sometimes gives a few oats. He finds his mode of sheep husbandry attended with very good profits. He sells no hay—finding that he can, in the average of seasons, turn it to better advantage by feeding sheep, besides the great benefit the sheep are to the land. The return for his hay is usually ten dollars per ton. Every farmer can see that this is profitable farming, because hay at ten dollars a ton, *on the farm*, is a profitable article.

Dr. B.'s course of farming, on his sheep farm is very simple—the routine being merely grain, hay, and pasturage—the latter affording the best possible preparation for wheat—and the fertility of the farm has been constantly increasing under this management.

Plaster has been extensively used for many years, particularly on clover amd Indian corn, with the best effects; but its effects are not now as visible as formerly; and *leached ashes* have taken its place in a good degree, the latter being now found most useful.

ERADICATION OF COUCH GRASS, *(Triticum repens.)* Many of the farms about Kinderhook are overrun by this pest. Dr. Beekman has hit on a good plan to eradicate it. He has found that if he can keep the ground thickly covered for a year, with some other crop, the couch-grass dies—it is *smothered* out. The plan is this: if there is a piece of ground on which this grass has become troublesome, it is pastured with sheep till July—then evenly turned over with a plow, and sown immediately to buck-wheat. The crop starts quickly, gets the lead of the couch-grass, and soon covers the ground. The next spring, the ground is planted to potatoes—they, also, thickly shade the ground, and continue to do so for nearly the whole season, which pretty effectually does the work for the couch-grass.

LIME ON SORREL.—To ascertain, if possible, whether lime will kill sorrel, Dr. Beekman had several loads of good lime spread on some land which was much infested with this plant. It was spread in the central part of a field thick, that the effect, if any was produced, might be seen. After a lapse of two years, *no* effect whatever has been discoverable, either for or against the sorrel, or any other plant. The soil is rather light, inclining to gravel. On some other descriptions of soil, the lime would probably have produced beneficial effects as a manure.

Dr. B. keeps very particular accounts of his farming operations, and is able to calculate accurately the "loss and gain." He has sometimes rented his lands, reserving the right to direct as to their management—giving to the tenant, as the custom is, one third of the crops—*the tenant* performing all the hand-labor, and the landlord furnishing the necessary implements, teams, seed, &c. and paying the taxes. At other times he has managed his farms himself, hiring all the labor. On comparing profits, he found he made from $150 to $200 a year more, under his own management, than when the land was rented. We have no doubt that similar results would generally follow, under *good* management, and we would recommend the example to some farmers within our knowledge, who under the idea that they cannot make their lands profitable in their own hands, or with a view to "save trouble," resort to a system of renting, by which, in a few years, their farms correspond to Solomon's description of the garden of the slothful.

There is considerable Indian corn raised in the vicinity of Kinderhook, and in general the present crop looks well. We noticed some farmers practice very thick planting. In some fields the rows were only three feet apart, the hills eighteen inches apart in the rows, and four stalks to the hill. We do not hesitate to say this is too thick. Dr. Beekman's crop was planted at wider distances in the row, (by six or eight inches,) with not more than three stalks to the hill. The prospect is fair for a good yield—in fact he generally gets from fifty to seventy bushels to the acre.

The wheat crop in this neighborhood is generally very poor. It was much winter-killed, and has suffered some from rust, and much from the worm, or maggot in the head, and some from the Hessian-fly. Rye is good.

The farmers of Kinderhook are generally forehanded, and some of them evince as good management as is to be met with anywhere. Money is *made* here by farming—many instances were mentioned to us where men who had begun the world by "hiring out by the day," had, in the course of twenty or twenty-five years, accumulated property to the amount of forty to sixty thousand dollars, wholly by farming.

RELATIVE PROFITS OF FREE AND SLAVE LABOR.—Dr. Beekman related the following history in illustration of this point. During the period in which slavery was tolerated in this state, a gentleman owned a farm at Kinderhook consisting of 750 acres, in the cultivation of which he employed ten slaves. The products of the farm were always insufficient to support the family and carry on the farm, and had it not been for the business of blacksmithing, which was carried on by the owner of the farm, (but with a set of hands kept expressly for the purpose,) he could not have made a living. When the gentleman died, the farm was divided into three parts, among the heirs. In the mean time slavery, in this state, was abolished. The farms were carried on by *hired* labor; the owners raised larger families than their father did—educated them better—lived better—and each, from one third of the original farm, accumulated a handsome fortune.

APPLICATION OF MANURES.

The value and necessity of manures to successful farming, is now generally admitted, but there is still much that is faulty in the modes of applying them: and while it is acknowledged that there is still much to learn respecting their operation, there are a few principles that experience teaches are worthy of more notice than has yet been given them.

One of these is that in the same soil, some varieties of the cultivated plants require more manure for their growth and perfection than others. Every farmer is aware of this; he knows that corn requires more manure than peas or beans; and that some of the tap-rooted quick growing plants, will, with a small allowance of manure at the outset, give good crops on soils where the grasses, or wheat and barley, would be a failure. Few, however, have inquired into the reason of these facts, or allowed them to have their proper influence in the application of their manures. The causes of this difference in the requiring of manure, are several; one of them is their adaptation to drawing nourishment from the air, instead of depending solely on the soil for it. Quick growing plants with broad leaves, and few roots, or those single and deep penetrating, possess this power in a remarkable degree. Only examine the root of the common pea for instance, and compare it with that of corn or wheat, and this difference will be manifest at once. The root of corn spreads in every direction; it clearly requires a large and rich pasture; its double sets of roots seem provided at once for support and nourishment, and it is remarkable that the last throwing forth of the roots, like those from the vines of some of the cucurbitæ, takes place precisely at the time when large supplies of nutriment are required for the formation of the fruit. The root of the pea on the contrary is very much smaller in proportion to the bulk of the plant; it does not spread like those of corn and wheat, but it penetrates to a considerable depth, and seems more adapted to provide the moisture than the nutriment of the plant.

Another cause why plants do not require equal supplies of manure, is to be found in the fact of their not all consuming the same time in arriving at perfection. As a general rule, it may be said that the longer a plant is in the soil before it matures its seeds, the more the soil is exhausted. Of this, winter wheat is a well known instance as compared with summer wheat; but perhaps a still better example is that to which allusion has already been made, that of corn and peas. The last requires not more than two-thirds the time of the former for maturity, and the exhaustion of the soil by it, cannot be compared with the former. Buckwheat too, is of remarkably rapid growth, and hence it has been selected as one of the best plants known for the process of green manuring. Used in this way, it evidently returns to the soil more than it takes from it, fertilizing, instead of impoverishing, and leaving a much larger supply of organic matter for the use of the future crop, than existed previously.

A cause not remotely allied to the one just considered, is found in the well known result, that where the seeds are to be matured on the soil, more manure is required, or in other words, the exhaustion of the soil is greater, than where such maturity, or the formation of seeds does not take place. Thus while a crop of turneps or beets exhausts the soil comparatively little, these same plants when transplanted for seed are of the most exhausting kind, as every grower of seeds knows; and the same may be said of most of those roots that do not matura their seeds the first year. Clover is also a well known example of this. If clover is cut before it is mature, the roots seem scarcely checked in their vigor, new shoots are rapidly thrown out, and the exhaustion which has taken place is evidently of the slightest kind. On the contrary if clover is allowed to mature its seed, the effect which the process has on the exhaustion of both the soil and the plant, is of the most striking kind; so great indeed that an attempt at two crops of seed from the same plant is rarely if ever known, and a course of other crops and reseeding usually follows, where clover seed is grown.

From these considerations, which we are not able at this time to pursue farther, it would seem that the application of equal quantities of manure to all crops is a useless expenditure. That we should ascertain those upon which manure produces the best effect when applied, and not let the mere convenience of the application, determine its use. It is true there are few cultivated soils on which manure is not advantageous, but there are some crops to which large applications of strong or unfermented manures would be fatal. Thus corn will be the better for a quantity that would destroy wheat; and the pea requires less than the potatoe, as a direct application. There are some plants that require the stimulating or forcing, that characterizes the action of fresh manures; while that action to others, would be an injury instead of a benefit. Of this, the vigorous and productive corn grown in or around old yards, or deposits of manure, and the lodged, rusted, shrunken wheat of similar places, is a conclusive and instructive example. We are convinced that the best application of manures is a subject which has received too little attention from our farmers; and while he is to be commended who applies all the manure within his reach, more profitable results would be realized by many, were they to be applied more in consonance with the laws which govern the growth and nutrition of the several plants cultivated.

CUTTING BUSHES AND THISTLES.

From a time the memory of man goeth not beyond, our forefathers have recommended the "old of the moon in August" as the best time to kill bushes by cutting them. The time recommended may be a good one for this latitude, though we are not *lunatics* enough to believe that *lunar* influence has much to do with the effect of that operation. All may have noticed that there is a time in the summer when the growth of shrubs and trees stop, the wood hardens, and the buds of the next year form. According to our experience, it is at this particular juncture, when the sap undergoes a change, "turns," as the phrase is, that bushes are most likely to be killed by being cut. This change may take place earlier or later in different latitudes, or in different seasons, and hence we think it cannot depend on the position or phases of the moon.

The best mode of exterminating briars, that we have ever known, is to mow them close to the ground with a stout scythe, soon after the growth for the season has stopped, and afterwards pasture the ground with sheep. The sheep is very fond of the briar when it first starts from the ground, and if a sufficient number are turned on to eat the briars as fast as they appear, two seasons will generally exterminate them. They will not generally start much the same season they are cut, but it is important they should be fed down.

Plowing briars, we have found rather to encourage their spread. Many of the roots run below the reach of the plow, and every piece of a root will send up a new shoot, so that the more they are cut, the more they grow, unless the roots are brought to the surface and carried off or dried and burnt.

Bruising bushes has sometimes a better effect in killing them, than cutting, and for this purpose a tool called a "bush-whacker" is used. In killing whortle (or "huckle") berry bushes, sometimes troublesome in the rocky pastures of New England, this tool may be preferable to the scythe.

We have had the best success in killing Canada thistles by mowing them when they were just past full bloom. The root will then die down to a great depth, and if the land is in grass, the sward will often spread over the thistle-patch and give the next year a crop of good clean hay. We have not seen the digging of thistles (that is the Canada thistles) attended with much advantage. The roots run very deep—we have traced them three feet below the surface—and a very small piece only may throw up a new shoot. The other kinds of thistles, which are only annual, or at most biennial, are easily killed by cutting them off with a hoe, or a tool made for the purpose, just below the crown. This should be done as soon as they can be readily seen, for they often occupy the ground to the exclusion of the grass, and besides, where they are large, the grass which grows near them, cannot be eaten by stock, on account of the annoyance occasioned by their prickly branches and leaves. We have sometimes seen cattle forced to leave the best part of the pasture by these pests.

DISEASE IN COWS.

Mr. JOHN RICHARDSON of Connecticut, inquires the name of, and remedy for a disease which has lately broken out among milch cows, which is described as follows: "The first symptom is a stiffness in the limbs, which increases till the animal is hardly able to walk. The feet appear feverish, the hoofs grow long or shrivel up, the animal appears week across the hips, rises with difficulty, is soon very poor and of little worth through the season. Some have died, but they generally recruit in the fall after becoming dry." From this description we cannot say what the disease is, and are therefore unable to prescribe a remedy.

The same writer inquires what are *warbles* in cattle. They are worms in the skin, produced from eggs deposited by a species of gad-fly (*Œstrus bovis.*) Every farmer has seen them. The cattle dread the fly, and may frequently be seen running to the woods or bushes to avoid its attacks. The worms seem to occasion the cattle but little inconvenience, excepting that when they are nearly full grown, and are exposed to cold storms, their backs sometimes become sore from water soaking into the holes which the worm makes for its egress in the skin.

GUANO.

We have received from Mr. E. B. Brown, a small specimen of Guano just imported into Connecticut from the bird islands of Africa, and we shall be glad to receive the larger quantity promised. It can be sent in a box or cask, via New-York. Mr. B. makes some inquiries in regard to the mode of using it. In England it has been used for nearly all crops. Its comparative value is variously estimated. Some reckon a bushel equal to a "cart-load" of stable-dung. From fifteen to thirty-five bushels are recommended per acre—or from two to four hundred pounds. It is usually sown on the surface, or not buried very deep. It is a very powerful manure, and grass and other crops are said to be sometimes "burnt," by applying too much. The London Gardeners' Chronicle gives the following directions for the application of this substance:

"1. It should never be applied in contact with seeds, as it kills them as soon as they begin to vegetate.

2. It should be mixed as equally as possible with about four times its bulk of finely pulverized earth, or peat-ashes, (cold.) If sand is used, about twice its bulk will be sufficient.

3. The quantity per acre may vary from two to four cwt., according to the nature and quality of the land. Recent experiments have shown that a quantity which proved highly beneficial in poor soil, became deleterious upon land previously rich.

4. The best time for applying it is shortly after vegetation has commenced, and immediately before rain, or during damp warm weather.

5. The best mode of application is, to divide the quantity per acre into two or three equal parts, and sow them broadcast at intervals of about ten days or a fortnight.

6. For small allotments it may be more convenient to use it in a liquid state—in which case, mix 4 lbs. guano with 12 gallons of water, and let it stand for 24 hours before being used. The same guano will do for mixing again with the same quantity of water, after the first is drawn off."

THE BEE MOTH.

Mr. THOMAS J. LEWIS makes the following objections to "Howell's Bee-protector," noticed in our June number. He says he invented the same plan several years ago, but was obliged to give it up as worthless. "1st. Suppose there are six or more bees on the vibrating board next the hive, so as to depress it and allow them to enter, the bee moth will then have the same facility for entering as the bees, and there is no knowing how long it may be before the bees, or perhaps the bee-moth, will allow the entrance to close again. 2d. Should there be seven or more bees loitering on the other end of the board, which will close the entrance, then those upon the inside of the hive would have to call a meeting and appoint a committee of eight or more to counteract their weight, to let themselves out. 3d. On account of the necessary delicacy of its structure, it would be very liable to get out of order and prevent its operating from moisture swelling the wood or rusting the pivots, and dirt would be apt to collect from the inside on the end next the hive, keeping it open all the time. 4th. The confinement to which the bees would be subjected by any such apparatus, or even a wire screen placed before the entrance at night, is very annoying to them, as has been proved by that gifted Apiarian, Mrs. Griffith of New-Jersey, the original inventor of the Charlieshope hive."

Mr. Lewis has considerably studied the habits of bees, and believes that he discovered several improvements for their management, which when perfected and proved, he intends to bring before the public.

☞ The 17th annual Fair of the American Institute will commence on the 6th October, at Niblo's Garden.

CLEAN CULTURE

It is a fact that ground which is kept from vegetation of any kind will not dry up so much as that on which a crop is grown. There are many who doubt this, but if they would make a proper examination, their doubts will be removed. Make an experiment—take a piece of ground in the garden, and hoe it over every day, or often enough to keep all kinds of vegetation from starting. Sow another piece adjoining, with grass, or some kind of grain. After a drouth of two or three weeks, examine both pieces by digging into them with a spade or shovel. The earth of the grass or grain plat, will be found dry like ashes, to the depth perhaps of a foot or more. The other plat will be dried in only two or three inches—below that it will be found quite moist. Examine the ground in an orchard in a dry time, and if it is not naturally a wet piece of ground, it will be found dry to a great depth. If there is a tree in your corn-field, see if the ground is not much dryer near it than on similar ground away from the reach of its roots. The fact is, the roots of vegetation bring up the moisture from a greater depth below the surface, than it could be done by simple evaporation. This may be known by noticing how much more moisture is required to support a crop of corn when the stalks are nearly full grown, than in its earliest stages.

Now, from all this we deduce an argument in favor of *clean culture*—that is, a culture which permits no useless vegetation to grow among cultivated crops; the advantage of which would be to give the crop the whole benefit of the moisture and other nutriment of the soil, instead of giving a portion to the worthless weeds.

In a dry time, we frequently hear farmers say—"it will not do to work my corn or potatoes, they need all the grass and weeds to keep the ground from drying up." Now, this, as we have shown, is all a mistake—the grass and weeds make the ground dry faster and deeper. But it is alledged that corn has been injured by plowing or working it when the weather was very dry. We admit that this effect may have followed under particular circumstances. That is to say, if corn gets too large before it is worked, injury may be done. The reason is, that the roots have become extended, and the plow cuts off so large a portion of them, that the remainder cannot supply the stalk, and it soon withers. This is the way the "*fired*" corn, sometimes spoken of at the south and west, is generally produced. But it is only when the roots of corn have become widely extended, and are torn and mutilated in the operation of working it, that any such consequence follows. If the crop is worked, as it ought to be while it is small, no fears of injury need be entertained.

GOOD SHEEP.

Merinoes.—We copy the annexed notice of the produce of a select flock of Merinoes, owned by one of the vice-Presidents of our State Ag. Society, from the Courtland County Whig. They must be good sheep surely to produce fleeces worth $2,40 each. Such sheep ought to be exhibited at our State Fair. Will Col. Randall please send us samples of the wool?

"Profitable Sheep.—Henry S. Randall, Esq. of Cortland, has a flock including lambs, of 60 full blooded merino sheep. Their fleeces this season averaged a trifle over 5 lbs. of thoroughly washed clean wool, entirely destitute of any gum excepting the dark crust on the extremities of a few of them, and this wool sold readily to Dickinson & Hibbard of that place, for 48 cts. per lb. cash. There were no wethers in the flock and there were but two bucks to swell the average.

"A smaller and exceedingly choice lot of yearlings and two year old ewes fleeces, averaged the extraordinary amount of 5 lbs. 10 oz. to the fleece. A two year old buck (from which more than half a pound had been taken in samples) sheared 9 lbs. 12 oz. We understand these sheep have been selected with much care from the best flocks in this state and New England, and are not probably surpassed or hardly equalled by any flock in the United States. Their winter keep (a question of some interest in connexion with such an enormous product of wool) we learn on inquiry to have been as follows:—60 sheep fed hay morning and night—at noon daily received three bundles of oats and barley until Christmas, after which they received four bundles of oats. They received no hay at noon throughout the winter. The grain was cut greenish, and was considerably shrunken. This, with a comfortable shed and plenty of pure water, constituted their entire keep. Mr. Randall reared 102 per cent of lambs! We wish more of our farmers possessed such sheep."

Leicester Sheep.—The Delaware Republican gives the following account of the clip of the celebrated flock of Leicester or Bakewell sheep, owned by Major Philip Reybold, of that state. From all we have heard, we are led to believe that this flock of sheep is one of the most valuable in the country. We should be glad to have from Major R. an account of their blood, and his mode of breeding and management. Will he not send a sample of his flock to our next fair at Poughkeepsie?

"Last week, we learn that Major Reybold, of this county, commenced shearing his large and valuable flock of Leicester sheep. On Friday he invited several of his agricultural friends to witness his operations, and partake of a "fatted lamb" of that famous breed. One hundred of the run of his flock were sheared under the inspection of Isaac Reeves, Capt. Maxwell, Dr. J. W. Thompson, and C. P. Holcomb, Esq., and averaged about 7¼ pounds per fleece; some weighing nearly 9 pounds; few under 6, and generally from 7 to 8 pounds; a most extraordinary yield. Major Reybold's home flock consists, we are told of about 600, and as many more divided among his different farms.—We are informed, that out of ten shearers, six were grown up sons of the Major, all married men except the youngest, who certainly deserves to be.—Our friend describes the scene as one of the most patriarchal and interesting he ever witnessed: and of Major Reybold's whole farm, dairy, and agricultural arrangements as in the highest good taste and prosperity. The fine mutton of Mr. R. has been long celebrated. His great clip of long wool, we should think, under the present tariff will bring him handsome prices, and be admirably calculated for the manufacture of mouselin de lains and combing puposes. Success to him, and the agricultural spirit pervading Delaware."

AGRICULTURAL PAPERS.

A "Plow-Boy" has reached us from Cincinnati. He is an ingenious and spirited little fellow, and makes his interesting visits monthly, at a charge of only *twenty-five cents* a year! The *funny* letters, made out of ox-yokes, spades, rakes, scythes, reaping-hooks, &c., are worth ten times the cost, for aiding and strengthening the organ of *genius* in *other* boys! Conducted by A. Randall.

The New-England Farmer, Boston, has commenced its twenty-third volume. Next to the American Farmer, Baltimore, this is the oldest agricultural paper now in existence in this country, and is certainly one of the best. Edited and published (weekly) by Joseph Breck, Esq.

The Valley Farmer, Winchester, Va., No. 1 of the first volume, has reached us. It is well printed, filled with useful matter, and deserves encouragement. One dollar a year in advance. J. B. Bentley, publisher.

The New-York Farmer and Mechanic, is published semi-monthly at 208 Broadway, New-York, edited by S. Fleet. Terms $1 per year. It contains the report of the doings of the N. Y. Farmer's Club, which are highly interesting and useful, and is in all respects well conducted.

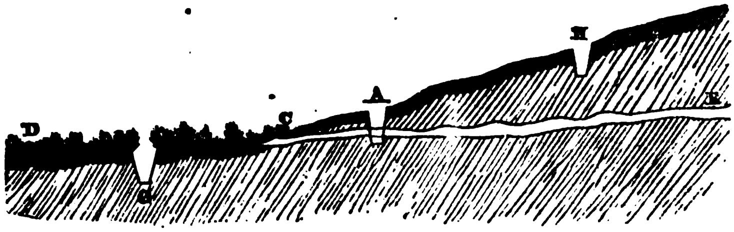
Disease in Poultry.—Turkies and dung-hill fowls which are kept closely confined, are often affected with a disease of the eyes and head, sometimes called "*sore head.*" It sometimes destroys the sight. Some suppose it to be contagious. We have known fowls to have it, which had their liberty in the day time, but roosted at night in a building or room fitted purposely for them. We observe that Mr. A. P. Cummings, at a late meeting of the Farmer's Club, New-York, gives it as his opinion that the ammonia of the dung injures their eyes. He removes the dung and scatters on the spot plaster of Paris freely.

THOROUGH DRAINING.

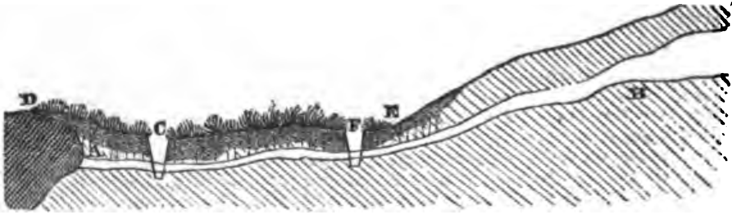
Draining land fully and completely, is one of the greatest improvements of modern agriculture, and few things better display the advantages of a combination of science with art, than a well conducted system of draining. The necessity of draining land, arises from several causes, all of which have more or less influence on the productiveness of the soil, or the value of the crop. Although moisture is absolutely necessary to the growth of plants, an excess of it is always injurious; and the extent of the injury is usually in proportion to the stagnancy of the water in which the roots are immersed. When soils are filled with water, air is excluded, and the consequent decomposition of animal and vegetable matter, so essential to the formation of the materials required for the growth and sustenance of plants, is almost entirely prevented. Soils also, containing an excess of moisture, are of necessity cold, and consequently unfit for many kinds of crops which would grow well were the requisite dryness and warmth given. The difference of temperature between a soil saturated with water, and the same when containing no more than is essential to the success of vegetation, varies from 6 to 8 degrees, according to the carefully conducted experiments of Dr. Madden and Prof. Johnston. When it is remembered that this difference in temperature would be decisive of the fate of some crops, Indian corn for instance, the importance of a proper drainage will be seen at once. A soil containing an excess of water, usually has a dense subsoil, a shallow soil to cultivate, and cannot easily be deepened, as drier soils can. They are therefore liable to pass from the extreme of too much moisture, to that of excessive drouth, and as the roots of plants are unable to penetrate the dense subsoil, wet lands, or those liable at times to have an excess of water, usually suffer much more from drouth than deeper, drier ones do. There are other reasons for draining land that will readily occur to the practical farmer, but these are sufficient to show the great utility and necessity of freeing all soils intended for cultivation of their surplus water.

An excess of water in a soil can usually be traced to one of two causes; that which rises from springs, in the soil itself, or that which falls upon it in rain or snow. Except in some peculiar districts of very level country, or where the natural drains for the surface water have been obstructed, it will be found that excess of water usually arises from springs; and so general is this cause, that there are very few farms in our country, in which there is not more or less land that would be benefitted by draining. The formation and direction of springs, is determined by the geological character of the country, the nature and dip of the strata, and their composition, whether of rock, clay, gravel, &c. Water from the surface, falls or percolates downwards, until it meets with some impervious strata, and along the surface of this it flows, until it reaches the outcrop of that strata, or sinks through creeks and fissures to some still lower strata or level. When the water reaches the outcrop of an impervious strata, springs are formed. If the quantity of water is considerable, it flows off in streams; if small, it only makes the ground wet and cold, frequently forming swamps, or otherwise rendering the soil unfit for cultivation.

Figures 65 and 66, from Low's Practical Agriculture, will show the nature of such strata, their action in forming springs, and the method of cutting them off by drains, better than a column of description.



In fig. 65, the strata below the line from D. to E. denotes an im-impermeable strata. The strata from C. to E. is the one containing the water, flowing out at C. The strata above is pervious and the water sinks through it into the one below. From D. to C. is seen the swamp made by water from the range of springs at C. H. is a drain cut so high as to produce no benefit, as it does not reach the water bearing strata. A. is a drain that cuts that strata, but will not effectually cut off all the water, as the distance from C. to A. is too great. Experience has proved that in all such cases of wetness caused by springs, the true course is to cut the drain "between the wet and the dry," or a little above, as at C. on the cut. The drain G. will carry off all surface water, and being in the lowest part of the ground, the drains that cut off the springs at C. may be conducted into it.



In fig. 66, is shown the manner in which several series of springs are formed on the same slope, or sometimes on the same level, and the necessity of cutting off each series by a separate drain, if we would effectually drain the soil. Thus it is easy to see that a drain at A. would be of little use, as not touching the source of the evil at all. Cutting off the springs at D. would have little effect, as those at C. and B. would continue the difficulty; and a drain at B. would only take off the water furnished by the upper water strata. The only thorough remedy is to cut as many drains as there are series of springs, to spread their water over the land.

Fig. 67 (see next page,) shows a front view of a sloping ground with a succession of wet or springy places on the surface, rendering it unfit for cultivation, and the manner in which the drains for conducting off the water and rendering the soil dry, were placed. The lower cut is a section of the same ground, exhibiting the impervious, and the water bearing strata, in succession, with the drains. In this instance, the water from the drains is conducted into a brook flowing at the foot of the sloping ground.

It not unfrequently happens that the land to be drained is level, and surrounded by hills or elevated grounds, from the base of which issue the springs that saturate and render useless the soil of the flat part. Most of the bog meadows, as such low lands are usually termed in this country, are made in this way; and experience shows that when drained and rendered fit for cultivation, they are the richest and most productive of our soils. This indeed could hardly fail of being the case, as they have from time immemorial been the depositories of the vegetable matter and wash of the adjacent lands. In some cases, these low lands have a natural outlet or drain; if not, the most favorable point for one must be selected, which, if possible, should be at the lowest part of the grounds, that all the drains necessary, may have a sufficient descent for the easy flow of the water. If this is not the case naturally, then the central or main drain must be made sufficiently deep at its outlet to permit the water to pass off without difficulty. The quantity of water to be carried off must determine whether the main drain is to be an open or covered one. If the quantity of water is large, an open drain is to be preferred; but if otherwise, it will be better that like the

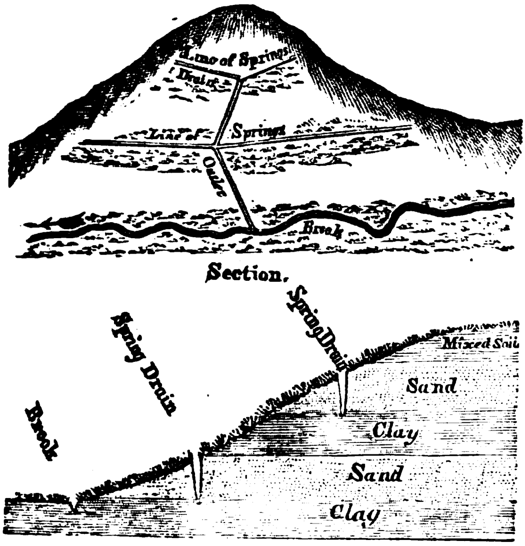


Fig. 67.

minor ones it should be covered, offering as it will in that case, less obstruction to cultivation. The liability of all large drains, such as central ones should be, to frequent obstructions from deposits of matter from the side drains, renders it necessary that in making them this fact should be kept in view, as open drains can be more readily cleared than covered ones, if by accident they are obstructed.

Fig. 68, represents one of these low meadows. D. shews the central drain, L. S. the drain passing around it at the base of the hills to cut off the springs, and O. marks the outlet which conveys the water into the brook B. The cross section given, shows the nature of the strata, with springs rising from the porous layer marked S. into the surface swamp. It is evident then, that a drain around the meadow will not make it dry; to do this, drains must be cut from these springy places to the center or side drains. It sometimes happens that the clay or impervious strata underlying the bog, rests on a porous one that would readily admit the water to flow off could it reach it. A knowledge of the geological structure of the district, will enable one generally to determine this point. When such is the case, if a well or boring is made through the impervious strata as at C. the several drains may be conducted to that point, and the whole made perfectly dry. No boring of this kind should, however, be attempted until the nature of the strata below is understood; as in some cases, instead of sinking, water would be found rising to the surface, and increasing the evil it was intended to obviate.

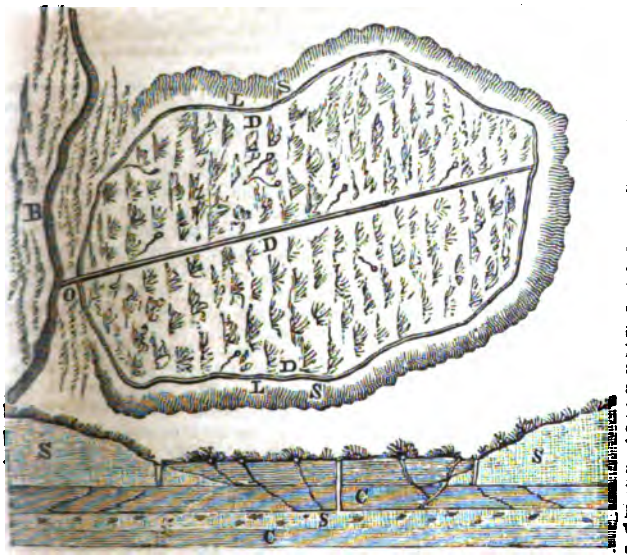


Fig. 68.

Thus far our remarks have had reference to the necessity and proper management of drains where the water arises from springs; but there is a large portion of our soils, where from the compact or clayey nature of the subsoil, the rain or surface water does not pass away freely, but remains until carried off by evaporation, or the slow process of absorption in such a soil. Such soils are of necessity cold, as all evaporating surfaces rapidly carry off heat, and the vegetation on them will always be sickly and defective, since the roots of all cultivated plants, if constantly submerged, cannot perform their functions in a proper or healthy manner. They will also be shallow, and resist all attempts at deepening, as clay, in water, even if disturbed by the plow, will soon run together, and become as compact as before. The only way then, to bring such soils into a state fit for production and easy cultivation, to make them deep and fertile, is to thoroughly drain them, as a preparatory operation. It has long been known that soils in which a considerable proportion of clay existed were among the strongest and best, particularly for wheat; but they were so difficult to cultivate, owing to their stiffness and their capability to retain moisture, that lighter soils have received, and justly, a decided preference. Thorough draining, as practiced in England and Scotland, and adopted to a considerable extent by some of the best farmers in this country, has materially lessened the labor of cultivating such soils, and in many cases doubled their value and productiveness. Once drained, they can be deepened,and made permeable to atmospheric influences, the action of manure is greatly increased, and the labor of cultivation proportionably reduced.

The number of drains necessary, their nature and depth, will be depending on the compactness of the soil, the tenacity with which water is retained, or the quantity it annually receives from the surface or otherwise. As a general rule, the drains should be so near each other, that no water will rest on the surface, between them, for any time after rain, or which will not readily pass from the soil into them. The distance may vary from 30 to 60 feet; but so long as the water does not readily leave the soil, or any unnecessary moisture is retained, we may be assured that the full benefit of draining has not been attained. The soils to be benefitted by the system of draining now under consideration, are usually nearly level, and when first cleared are covered with a covering of partially decayed vegetable matter, called muck. Perhaps there is no surer indication of a retentive and cold subsoil, than a thick surface covering of 'muck,' and yet the new settler, unacquainted with the science of agriculture, would be very likely to consider the presence of this substance as one of the most favorable indications of richness and fertility. In commencing a system of draining, one of the first steps is to ascertain their proper direction by leveling. This is in most cases readily determined by the eye alone, but where any doubt can exist, or important consequences are depending on the result, certainty should be secured by the spirit level or square. In no case where considerable water can be expected to flow in them, should the descent be great; as in such case, the wear of the current will soon destroy them, or render them useless. A greater number of drains, by which the water can be conducted in safety into an open one, or one of sufficient capacity to allow it all to pass off without danger, is the better way, where the water is in large quantities, or liable to collect in that state.

The necessity of relieving soils of their surplus water has long been understood, and open drains to remove it from the surface have long been used, but thorough draining, by cutting numerous deep drains, making a water-

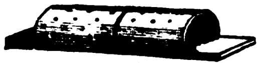


Fig. 69.

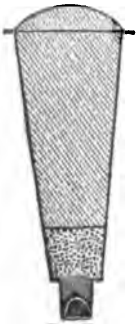


Fig. 70.

course at the bottom of these, and covering them in such a way as to form no obstruction to culture, is of comparatively recent invention and adoption; and has effected a complete revolution on soils of this class, where the location, and prices of labor and products have rendered such a course proper. The depth of drains should not be less than 30 or 36 inches, and in some cases it may be advisable to go deeper than this. The modes of constructing and filling drains should be determined by the nature of the soil to be drained, and the means of filling at command. In Scotland and England, draining tiles are to a great extent used. These are made in pieces of 14 or 16 inches in length, arched and perforated, and provided with a sole on which the arched pieces rest, and over the surface of which the water flows. Tiles have not been used to any extent in this country; where other materials are so abundant, it is not probable they soon will be. Figure 69 exhibits a specimen of drain-tile, and figure 70, a section of drain in which the tile has been laid. In laying tile drain, more care is required in the filling in immediately above them than where other materials are used. Clean gravel is the best material to use for a few inches above the tile.

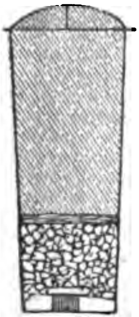


Fig. 71.

The most common, and the least costly mode of filling drains, is shown in figures 71 and 72. In these, the workman places a row of stones on each side of the bottom of the drain, leaving a free space adapted to the usual flow of water in it, over which, and resting on the side stones, are placed larger ones, either flat or round, as most convenient. On these stones, a thin layer of straw is commonly thrown, or fine hemlock or pine branches may be substituted. This is to prevent the loose earth as filled in, from choking the drain by falling between the openings of the stones. On this straw or brush, the earth is thrown with a shovel at first, but afterwards the plow may be advantageously used for filling the drain. When filled, the earth should be heaped a little on the drain, or in settling, a hollow will be left, which will collect the water in a channel, and injure the course below. Properly made in this way, and adapted to the make of the ground and the quantity of water, drains will last for ages, rarely if ever becoming obstructed in the least, never being in the way of any kind of culture, and keeping the soil dry and in good condition.

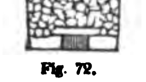


Fig. 72.

There are some low lands which require draining, so abounding in quicksands, that a stone drain cannot be constructed, their weight soon sinking them, or the sand speedily filling the water-course, and rendering them useless. In such cases we have known a drain constructed of pine plank, one being laid for the bottom, and two others thickly notched at top and bottom, placed roof-like on this bottom one. With such an inclination as to ensure a current, this drain operates admirably, neither sinking or filling, and will last for many years.

Various other matters have been used for the filling of drains, where stone could not be conveniently procured. Of these, pine or hemlock brush, or small trees, appear to have been the most valuable and durable. Judge Buel, in reclaiming and bringing his farm into culture, constructed drains of which the figures 73 and 74 are a specimen. The ditches were made 18 or 24 inches wide, and three or four feet deep. The brush used was pine saplings, cut into lengths of five or six feet, and these were placed diagonally in the trench, the buts down and towards the outlet. When completed, the ditch was apparently filled. The brush was then well trod down, and the earth thrown in upon it. Fig. 73 shows the trench when first filled—fig. 74 after the earth is thrown on. Drains constructed in this manner, have thus far answered an excellent purpose. When brush is to be used, the walls of the drain must be cut perpendicular.

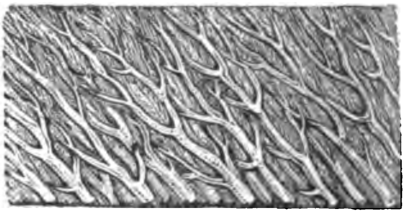


Fig. 73.

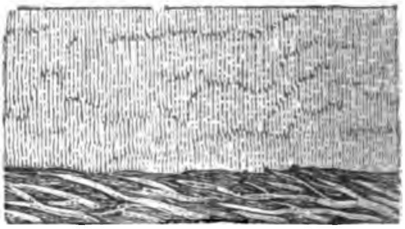


Fig. 74.

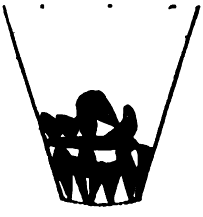
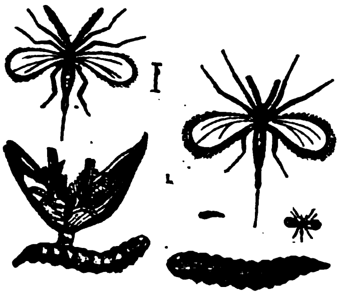


Fig. 75.

In the 2d vol. of the Cultivator, page 56, is a paper on draining by Mr. Ryder of Sing-Sing. His plan differs somewhat from any of those noticed above. He directs his ditch to be made three feet wide at top and three feet deep, and one foot wide at the bottom. He then selects such stones as are thin and flat, and sets them on the bottom of the drain, their thinnest edge or one corner downwards, and close to the edge of the drain. Others are placed against these in the same manner, until the drain is filled across. On these, thin flat stones are laid; and on these, others which will admit the passage of water are placed, and above all, the earth is filled in as before directed. Mr. R. thinks that the bottom of the drain should be the lowest in the middle, as shown in fig. 75, which gives a very good representation of the bottom of the drain as made by him, with its water way of stones.

There are other modes of filling drains adopted; but the above will give correct notions of the methods most approved, and which have been ascertained to be successful. But the *method* of draining is not of so much consequence as the draining itself. Let the soil be but freed from water, and it will be seen that a most decided improvement has been effected; an improvement great as it will be permanent. Millions of acres, within a few years, have, from a state of worthlessness, been converted into the most valuable and productive lands of Great Britain by draining, and multitudes of instances may be found in our agricultural papers where equally favorable results have been obtained from the process, in this country. Indeed, we have never learned a single failure, or heard an individual who had commenced the system of draining, and tested its effects, that did not speak of it in terms of unqualified approval. It is only in connection with thorough draining that the subsoil plow can exhibit its full efficacy in deepening and ameliorating soils. Unless the water can pass off readily, the land when moved by the subsoil plow, will soon run together and become compact; but where the water passes off as it falls, the soil remains permeable, the roots of plants penetrate it easily, the fine mold and soluble humus penetrate and combine with the earths, and in a few years, the whole, as low as the plow moves, will be changed from its hard pan nature to mellow fertile soil.



INSECTS IN WHEAT—(Fig. 76.)

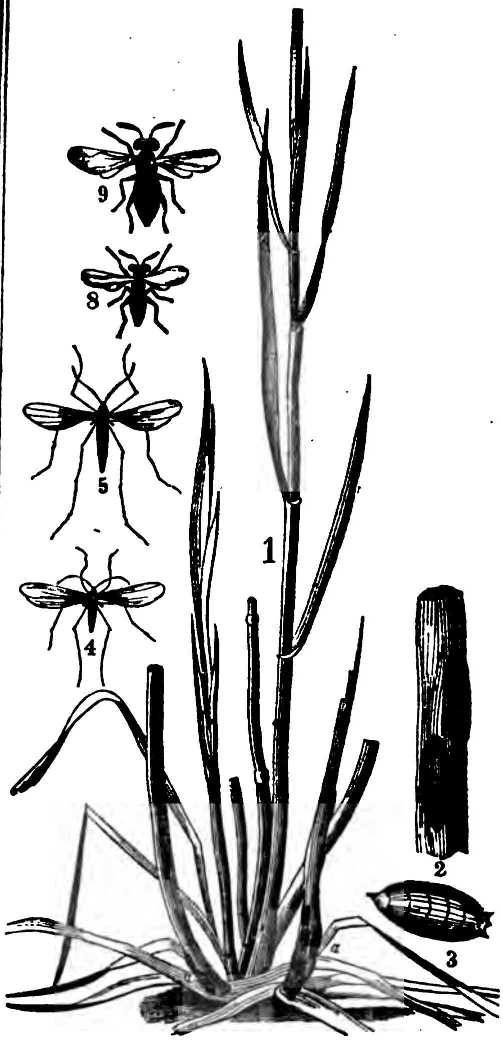
Some fields of wheat in this neighborhood have been much injured the present season by the yellow maggot, the larvæ of the wheat midge, (*Cecidomyia tritica,*) sometimes improperly called the weevil. The parent of this maggot is a small fly, less in size than the common muskitoe, which deposits eggs between the scales of the chaff about the time the wheat is in blossom. The eggs are generally, but not always, deposited next the kernel, and the larvæ subsists on the juices which would otherwise nourish the grain. The consequence is, the kernel is more or less shriveled, according to the number of insects which infest the head. We have seen as many as half a dozen maggots around a single kernel, and the whole number in the head could not have been less than fifty, leaving not one sound, plump grain. It is sometimes said that this insect eats into the kernel; but we think this is a mistake—we have seen no instances of the kind—the worm is a simple maggot, not at all calculated for gnawing or boring.

This insect was first noticed in this country about the year 1831 or '32, though it had been known in Europe many years before. In those parts of this country where it was at first most abundant, we believe it has been for a few years past diminishing, We are informed that this is the case in Vermont, New-Hampshire and Maine. It seems to have been, in its first appearance, most destructive to spring wheat, but lately has attacked the winter wheat. No successful remedy has yet been suggested against its attacks. Some have advised the suspension of wheat culture for a few years in the infected districts. Perhaps this would be the best course, as the enemy would thus be starved out and annihilated. It has been remarked that in spring wheat, the early sown is generally most affected, from the circumstance of its coming into bloom about the time the fly is ready to deposit its eggs. Hence where spring wheat is grown, the plan of sowing *late* has been followed with advantage. That sown the latter part of May or first of June, has generally escaped this fly, but it is very liable to rust when sown so late.

In regard to winter wheat, the *earliest* sown is generally most exempt from attack—it gets past bloom and out of the way before the fly is ready to deposit its eggs. Mr. Thomas Hillhouse, an extensive farmer of this neighborhood, informs us that the portion of his wheat which was sown the first week in September is saved, while all which was sown after the 25th of that month, is nearly lost. Mr. Hillhouse thinks, that in a season like the present, the wheat must be sufficiently early to pass out of the "milk" before the 20th of June, to be safe from this insect.

Some of the worms pass into the pupa or chrysalis state, in the head of the wheat, and are winnowed out with the chaff, but it is probable the greater number undergo transformation in the ground; for this reason it would be bad policy to sow wheat on the same ground two years in succession. Kollar says there is a parasitic insect allied to the family of Ichneumons, which preys on the midge, and seems designed by nature to keep it within proper bounds. We have not seen this parasite, and do not know that it has been found in this country.

Fig. 76, at the head of this article, copied from Kollar, shows the wheat midge in different stages, both of the natural size and magnified. One section of the cut shows several of the larvæ within the chaff which encloses the wheat kernel.



Explanation of Fig. 77.

1—Wheat stalk with the larvæ of the Hessian fly deposited—three of the stalks punctured by the Ichneumon, *Ceraphron*—natural size, 3-20ths of an inch.—*a. a.* larvæ and pupa.
2—Section of the wheat stalk, with the larvæ magnified.
3—Larvæ advanced to the pupa state, magnified.
4, 5—Male and female Hessian fly, *Cecidomyia destructor*, magnified.
8, 9—Male and female Ichneumon, *Ceraphron destructor*, magnified.

THE HESSIAN FLY, (*Cecidomyia destructor,*) fig. 77. This fly has been known in this country for the last sixty years, and is probably the cause of more injury to the farmer, taking the whole country together, than any other insect. The parent fly resembles the *C. tritici*, just described, though their habits are widely different—the one depositing its eggs in the head of the grain, and the other near the root of the young plant. The infected plants may be readily known while small, by their dull lead color. Soon after the wheat appears above the ground, the Hessian fly deposits its eggs on the upper or inner side of the leaf near the stem, usually above the first or second joint. The eggs are very small, and can scarcely be discerned by the naked eye. In the course of four or five days, if the weather is favorable, the larvæ, which are of a reddish white color, make their appearance, and work their way into the sheath formed by the leaf around the stem. They remain in the larvæ state a longer or shorter time, according to the state of the weather. They do not change their habitation to pass into the pupa state, but go through their transformation in the place where the larvæ has been nourished. The pupa is enveloped in a dark brown case, and from a little resemblance to a flax-seed, this stage of the insect has been called the "flax-seed state." As soon as the fly comes out, it prepares for another generation and dies.

In the more southern portions of the country, the fly often attacks the early sown wheat in the fall, and a generation is sometimes produced before winter. The larvæ produced in the fall, are supposed to be uninjured by frost, and that they are brought forward to maturity by the warmth of spring. In the fly state, it is said a very slight degree of frost will destroy the insect.

Thus far, the best remedy against the Hessian fly, has been late sowing. By this means, the farmer avoids raising a crop of insects in the fall, to be ready to go on with their work of destruction in the spring. The injury occasioned by the fly, is most severe on poor and indifferent land. On rich soils, the injury is much less; the vigor of the roots continuing to push up new stalks, after the fly has stopped its work. Where the fly is known to prevail, it is advisable to sow wheat only on good land, and by no means to sow the same land twice in succession. A top-dressing of ashes, or any substance calculated to give a quick growth, would be a great advantage to wheat attacked by the fly. Burning the stubble has been recommended. Some kinds of wheat are more exempt from injury by this insect than others. The Mediterranean wheat has been considered "fly-proof," and has on this account been considerably cultivated in some parts of Pennsylvania, Maryland, Ohio, &c. Its security against the fly is said to be owing to the lower part of the leaf, or the sheath, adhering so closely to the stem that the larvæ cannot work its way in. In some cases it may be an object to sow this variety of wheat, though from its thick skin and dark color, it is not considered so valuable for flour as some other kinds.

Many years ago there was much controversy in regard to the economy of the Hessian fly, but the matter seemed to have been pretty well settled until the publication of Miss Margaretta H. Morris's communications on this subject in 1840. She contended that the egg from which the fly is produced, is deposited in the kernel, and as a security against the ravages of the insect, recommended procuring seed wheat from uninfected districts. This has been tried in repeated instances, but did not prevent the crop from being destroyed by the fly. Miss Morris is undoubtedly mistaken in her notions of the habits of the fly. The larvæ of which she speaks, as having been seen in the kernels of wheat, must have been that of some other insect.

The Hessian fly is assailed by several parasitic insects, the chief of which is the *Eurytoma destructor*, (*Ceraphron destructor* of Say.) "This," says Dr. Harris, "has often been mistaken for the Hessian fly, from being seen in wheat fields, in vast numbers, and from its being found to come out of the dried larvæ skin of that fly. In the month of June, when the maggot of the Hessian fly has taken the form of a flax-seed, the *Eurytomia* pierces it, through the sheath of the leaf, and lays an egg in the minute hole thus made. From this egg is hatched a little maggot which devours the pupa of the Hessian fly, and then changes to a chrysalis within the shell of the latter, through which it finally eats its way, after being transformed to a fly. This last change takes place both in the autumn and in the following spring. Some of the females of this, or of a closely allied species of *Eurytoma*, come forth from the shells of the Hessian fly, without wings, or with only very short and imperfect wings, in which form they somewhat resemble minute ants. Two more parasites, which Mr. Herrick has not yet described, also destroy the Hessian fly, while the latter is in the pupa or flax-seed state. Mr. Herrick says, that the egg-parasite of the Hessian fly is a species of *Platygaster*, that it is very abundant in the autumn, when it lays its own eggs, four or five together, in a single egg of the Hessian fly. This, it appears, does not prevent the latter from hatching, but the maggot of the Hessian fly is unable to go through its transformation, and dies after taking the flax-seed form. Meanwhile its intestine foes are hatched, come to their growth, spin themselves little brownish cocoons within the skin of their victim, and in due time are changed to winged insects, and eat their way out. Such are some of the natural means, provided by a benevolent providence, to check the ravages of the destructive Hessian fly. If we are humiliated by the reflection that the Author of the universe should have made even small and feeble insects the instruments of His power, and that He should occasionally permit them to become the scourges of our race, ought we not to admire His wisdom in the formation of the still more humble agents that are appointed to arrest the work of destruction."

THE DARK AGES.

The learned of the present day talk most complacently of the dark ages, those times when the great mass of mankind was not only ignorant, but contented with their ignorance, and looked with most suspicious glances on any one who dared to think or act a little in advance of the multitude. The cause of this is easily explained. Knowledge in an individual, is a constant reproof to those who have it not; and always produces in them, one of two effects, a desire for similar acquisitions, or an intense hatred of the possessor. We are accustomed to speak as though these dark ages had passed; but the following from the Farmer's Cabinet will show that so far as agriculture is concerned, there are places where the dark shadows are still lingering. We hope for the honor of our country, such places are not numerous. The extract is from the letter of a gentleman, who was endeavoring, in connection with his ordinary business, to obtain a few subscribers for that valuable paper.

"I have lately taken a ride of twelve miles from —— and returned by a different road. I saw but one building that could be construed into an apology for a barn. 'How do you manage without barns,' said I to one of the best farmers I met with. 'Oh,' said he, 'we have no use for barns, we have nothing to put in them.' 'How do thresh your wheat ?' I inquired: 'We do not make any wheat.' 'Your rye then ?' 'We do not make any rye.' 'What do you do with your hay ?' 'Neither do we make any hay,' was his reply. 'What do you give your horses during the winter ?' 'The tops and blades of the corn.' 'And how are your cows provided for ?' 'We let them take their chance in the fields among the stalks; they make out to live till spring.' The same farmer told me he had not manured an acre of land, nor a hill of corn for nine years! 'And what,' I asked, 'is an average crop of corn ?' 'A barrel to the thousand hills.' 'And how many hills do you reckon to the acre ?' 'Two thousand.' 'And how many bushels to the barrel ?' 'Five.' 'Then your crop of corn is ten bushels to the acre.' 'Yes, we are satisfied with that, and half of us do not get that much.' 'Have you marl here,' I inquired. 'Yes, we have plenty of it three or four feet below the surface, but it is too much trouble to dig it.' I mentioned your Poudrette—'O,' said he 'a dollar and fifty cents a barrel, would make it cost too much.' Seeing a little girl busily engaged in shaking a quart bottle, I asked what she had in it ? She answered *cream*, and that she was making butter! I conclude, therefore, that a farmer who has a horse and cart—a wooden plow, rope traces, and a corn-husk collar, and a quart bottle to churn his butter in, feels himself amply prepared for conducting a farm in these *diggins*, without wasting a dollar a year in paying for the Farmer's Cabinet!" "A most legitimate conclusion truly," adds the Editor.

It is astonishing what an obstinate adherence to antiquated and ruinous opinions may occasionally be found among farmers. We know a man who resided on a fine farm some fourteen or fifteen years, and who glories that he has never sown a bushel of plaster and scarcely a bushel of clover seed upon it during that time. The practice of manuring he discountenanced wholly; and as a natural consequence, his farm originally of the best quality, had become so reduced, that he was obliged to dispose of it to satisfy his creditors. Such men should have lived centuries ago, or perhaps, so far as the march of improvement is concerned, they might find a suitable residence in the district described by the correspondent of the Cabinet.

Foreign Correspondence.

MR. NORTON'S LETTERS—No. II.

Laboratory of the Ag. Chem. Association,
Edinburgh, July 1, 1844.

MESSRS. EDITORS—I regret that my excursions during the last two or three weeks, though most interesting in other points of view, have not generally been through a highly cultivated part of the country, and have not therefore given me many new facts of importance in Agriculture. While in Yorkshire, however, for a few days, in company with Prof. Johnston, I visited the farm of Mr. Bates, so well known as a successful breeder of Short Horns. As you have undoubtedly had descriptions of his stock from those far more competent to judge of their merits than myself, I will only say that they seemed to me more nearly perfect in many respects, than any animals I have ever seen. I was especially struck with the knowledge which Mr. Bates evidently possesses of the subject to which he has devoted much of his life. Every American agriculturist who visits England ought to see this stock, as affording a notable example of the effect of care and judgment in breeding. From Mr. Bates' courteous manner and hospitable attentions to our party, it would seem safe to ensure a kind reception of any gentleman who should visit Kirkleavington.

Since coming to Edinburgh I have received several numbers of the Cultivator, and in those for May and June I noticed paragraphs founded on statements in English papers, respecting Guano from the islands of the North Sea, intimating that they were expected in a great degree to supercede those from Africa and Peru, and also that like deposites might be found on Newfoundland and other islands of the North American coast. Prof. Johnston has kindly furnished me with information on this point, which may be interesting and useful to your readers. I enclose the results of analyses of two specimens sent from the Hebrides as samples of these guanos, and by way of contrast, those of some of the best from Africa and South America.

Analyses of the Hebrides Guanos.

	No. 1.	No. 2.
Organic matter and water, with a slight trace of ammonia,	70.44	75.51
Common salt, sulphate of soda, &c.,	3 57	3.50
Phosphate of lime, of alumina and of iron,	1.63	2.43
Carbonate of lime, magnesia, &c.,	1.47	1.13
Siliceous matter, (pieces of quartz, and a little mica,)	22.99	17.43
	100.	100.

A momentary inspection will satisfy us that no extraordinary fertilizing properties are possessed by these deposits, and the analysis also proves, not only that the rains and storms have carried away the ammoniacal and other soluble salts if ever there, but that the phosphates never were present in large quantity, for they being insoluble would still have remained. It is thus evident that these so called guanos, consist chiefly of vegetable remains and quartz, and contain a very small proportion of the dung of birds, even in the Shetland caves, whence some specimens have been brought. That they are not to be compared to the true guanos as to fertilizing properties, the following analyses will show. The ammonia separately, is not determined in any of these. It usually amounts to from 4 to 12 per cent.

Analyses of two Guanos, both African.

	No. 1.	No. 2.
Water,	17.41	16.79
Organic matter and ammoniacal salts,	55.33	52.83
Common salt and sulphate of soda,	4.92	4.90
Phosphate of lime and a little phosphate of magnesia,	16.23	22.86
Carbonate of lime, magnesia, &c.,	3.54	1 50
Siliceous matter,	0.57	1.13
	100.	100.

Analysis of two Guanos; No. 1 from the Island of Ichaboe on the African coast, and the other from Peru.

	No. 1.	No. 2.
Water and volatile ammonia,	15.27	3.14
Organic matter and ammoniacal salts,	51.44	63.52
Salts soluble in water, consisting of sulphate and muriate of soda,	5.50	5.02
Insoluble siliceous matter,	0.57	1.16
Phosphate of lime and a little phosphate of magnesia,	21.11	22.20
Carbonates of lime, magnesia, &c ,	6.11	4.96
	100.	100.

The Peruvian guano, No. 2, is remarkable for the small quantity of water present, and both of the two last for the very large proportion of phosphates. Is it wonderful that those manures, compounded almost entirely of substances so beneficial and essential to all crops, should be sought, as is the case in this country, with great avidity. The supply does not equal the demand. A cargo of 1000 tons which arrived at Liverpool a short time since, sold at once, at from ten to ten and a half pounds per ton. Such as the dry Peruvian, No. 2, would readily bring thirteen pounds, or sixty-two and a half dollars, and this too while nearly four hundred vessels are engaged in, or fitting out for this business. The above analyses were selected from about seventy which have been made of different specimens, during the past year, in this Laboratory. From the great demand, it follows, of course, that adulteration is practiced, and this too most extensively. One person purchased some, which was found to contain about 70 per cent of chalk. With the addition of a little ammonia to give the smell, and of some finely ground spent tan-bark to give the color, it is quite easy to imitate the appearance of guano sufficiently well to deceive the unpracticed.

It is hoped that this revelation will not open a new branch of speculation to any of my ingenious brother Yankees, for our reputation in that way is quite high enough here already. Yours very truly,

JOHN P. NORTON.

By the arrival of the Acadia steamer at Boston on the 18th ult., we are furnished with our regular files of the Mark-Lane Express, New Farmer's Journal, Farmer's Herald, Gardner's Chronicle and Agricultural Gazette, to the 3d of July—also the Farmer's Magazine, London, and the Journal of Agriculture, Edinburgh, for July. By this arrival, we also received for the first time, the Irish Farmer's Gazette; the Ayrshire Agriculturist, and the Doncaster, Nottingham and Lincoln Gazette—valuable papers, which we shall be glad to receive regularly hereafter.

THE WEATHER, CROPS, &c.—In England, the weather had continued generally dry, up to the 25th of June, about which period copious showers occurred in many places. Wheat is generally good, but *spring* grains and grass have suffered much from drouth, and will give but a poor yield. The scarcity of grass has occasioned the markets to be crowded with *store* stock, the prices of which range very low. Some anxiety is still manifested among the English farmers, in regard to the increased importation of foreign live-stock. Large exports of the finest English animals have been made, showing that the continental graziers and flock-masters are using every effort to improve their stock in order to compete successfully with those of Great Britain.

American beef, pork, and cheese, was selling in the English ports in considerable quantities at fair prices.

In Scotland and Ireland, there has not been so great a deficiency of rain. The wheat is generally good, and other crops it is hoped will be at least middling.

The Great Show of the Royal Ag. Society of England, is to be held at Southampton, July 23, 24, 25, 26—that of the Highland Society at Glasgow, Aug. 7, 8, 9—that of the Irish Society, at Dublin, Aug. 14, 15. At the Irish Exhibition, a "challenge cup," of the value of 100 sovereigns (near $500,) given by P. Purcell, Esq. is to be awarded for the best animal in the neat cattle classes. The premiums to be awarded by the Highland Society, amount to $7,500, being the largest list ever offered.

FOOD OF LABORERS IN HARVEST.—A writer on the comparative merits of different modes of reaping, in the last number of the Transactions of the Highland Agricultural Society, says, "I deprecate the practice of overtasking young women in gathering heavy crops, as cruel oppression. Half the number of those hired to gather, not being habituated to active employment, it is unreasonable to expect them to do as much at an occupation, perhaps the most active that falls to the lot of women in field labor, as those inured to it. To alleviate this hardship, for the first week of harvest, especially if the weather be warm, my plan is to make the reapers rest twenty minutes whenever I perceive it requisite, and I find it a plan both humane and profitable." In a note, the writer says—"It deserves to be noted that the food of the reapers, whose work has been stated above, consisted of oatmeal porridge and milk for breakfast and supper, and potatoes for dinner, with abundance of oat-cakes and milk at every meal. All whom I know that have harvested in the south, [England, we presume,] assure me that they cannot do so much work there, because the diet consists of porridge and milk, with bread at dinner only."

What would women in this country say to laboring in the harvest-field, even under the "*humane* plan" of this writer? and what would be thought of the farmer in this country who should feed his harvest-hands on nothing but "porridge and milk," potatoes, and oat-cakes? Let us be thankful that women are not here made "hewers of wood and drawers of water," and that our laborers are supplied with those articles of animal food which contain the most substantial elements of nutrition and strength,

Lime.—In "Sketches of East Lothian Husbandry," it is said lime was formerly used extensively, it having been found of the greatest efficacy on strong clayey land. It is now only employed to a very limited extent, more than half the lime-kilns at present lying idle. This, it is said, arises from the circumstance that land once thoroughly limed, derives comparatively little advantage from, and may be injured by a further application of this substance for a considerable period after the first dose.

Cultivation of Turneps.—The editor of the London Gardener's Chronicle, speaking of the fertilizing tendency of the turnep crop, says—"We have seen fields so cultivated that a handful of earth could not be taken up in them which was not full of these silken-looking fibres (roots); and so vigorous was the growth of the crop in that part of the field, that on digging a pit, these fibres, (recognized by their appearance and taste,) were found to have penetrated to the depth of *five feet!*"

Wheat in Drills.—From the same authority as that above quoted, we learn that 100 acres of wheat together, had produced by the drill-mode of sowing, according to the estimation of the best judges, five quarters (40 bushels) per acre.

Adulteration of Manures.—Great fraud is practised in England by the adulteration of some kinds of manures. By an article on this subject in the Gardener's Chronicle, it appears that a substance which had been sold as *bone ash*, was found on analysis to contain *eighty-five per cent* of carbonate of lime, or chalk. In this case the farmer had been paying 10*l.* for every thirty shillings worth of manure. In other cases the bones had been increased in weight by soaking them in water—making, in every ton of bones, about seven hundred weight of water. Substances sold as *guano*, have been found to contain seventy-five per cent of brick-dust—and in other instances a large proportion of saw-dust, clay, or ground bark. John Bull might offset this against Brother Jonathan's wooden pumpkin-seeds and horn flints.

Valuable Cow.—Mr. James Geach, of Penvounder, in the parish of Sithney, has a cow that, with ordinary keep, produced last year 350 lbs. of butter. She calved in March last, and there is every probability that she will produce as much this year.

Good Farming.—A correspondent of the Agricultural Gazette, says—"Good productive farming does not depend upon these things, so much as upon draining, deep and frequent plowing, clearing the land from all other plants but those you desire to grow, early seeding, and last, but not least, preserving every decayed vegetable matter that can be found, either on or off the farm, and mixing it judiciously with the excrement of a well-selected stock of animals adapted to the character of the soil, preserving the mixtures in properly constructed yards and tanks."

Composts.—The same correspondent recommends, from his own experience, a compost made as follows, the quantity mentioned being sufficient for one acre:—"Put 8 bushels of crushed bones into a dry shed, and add from time to time, as they come to hand from the farm-house, or as they can be procured elsewhere, 24 bushels of ashes (wood are the best,) and empty upon the mass, from day to day, the contents of the chamber utensils; to be stirred and mixed occasionally. At least 6 or 8 acres may be thus manured at a farm consisting of as many persons."

Turenp-Fly.—I have found that half an ounce of sulphur mixed with a pound of turnep-seed, prevents the ravages of the fly. The experiment is easy, and has not been known in any case to fail. I have used this plan with success for several years, and have not lost a single turnep. It has been tried on a small scale in my immediate neighborhood, and in no case has it failed to protect the young turnep from the fly.—*Ag. Gazette.*

Manuring with Loam and Clay in a roasted state.—Professor Chs. Sprengel recommends burning or roasting clay for manure. After alluding to the idea that is by some entertained that the use of burnt clay would render the use of dung superfluous, he says:—"Although this assertion is not borne out by fact, still it cannot be doubted that by roasted clay or loam one substance is conveyed to the soil, which is a most important ingredient of dung, viz. nitrogen. Because, if a loam or clay is roasted, which contain already protoxide of iron or manganese, or in which these substances are formed during burning from the oxide of iron or manganese, ammonia will be formed the moment that water and the nitrogen of the atmospheric air have access, as the protoxides of iron and manganese decompose the water and combine with its oxygen into an oxide, by which the hydrogen will be set free, which will then unite with the nitrogen of the air into ammonia, the latter being either condensed in the pores of the clay, or received by the moisture which is at hand. That this process really takes place, I have found by many experiments, on which account I recommend that sort of clay or loam for roasting which are rich in iron or manganese. A calculation made by me shows, that if the clay or loam used for the manuring of one acre contains 1000 lbs. protoxide of iron or manganese, there is a possibility that 100 lbs. of ammonia will be formed, which (as we know already) will produce a great effect."

Lucerne.—In no former period have I experienced the value of lucerne, as during the present protracted drouth; I have now nearly finished my first crop, which I have been cutting green for horses and cows, much of which measures in height 36 inches, and is very thick on the ground; my second crop is from 24 to 26 inches high, and equally as thick a plant as the first. I am now about cutting this for hay, and I think I have more weight per acre of my second crop than is grown this season on four or five acres (first crop) of the general average of pasture grounds now mowing. It does not appear to be in the least affected by the severe drouth, which I attribute to the very great depth the roots run down; for I have heard (and which I doubt not) instances of lucerne roots being found from 10 to 14 feet below the surface. I would again urge all, whether farmers or not, to try and grow lucerne, for of all summer food for horses this is the very best; I am inclined to say likewise nothing can be better food for cows, for my own have lived entirely upon it the last three weeks, my feeding pasture being quite burned up for want of rain, and have produced a full quantity of butter.—*Mark Lane Express.*

REFUSE OF THE TANNERRY.

"D. X." makes the following inquiries:—"In what manner can the refuse of a tannery, as hair, bits of skin and pieces of flesh that are taken from the hide, best be converted into a manure, to be applied to lands fitted for wheat or corn?

Would such refuse mixed with barn yard manure, ashes and charcoal, applied to land which is to be sown with wheat have a good effect?"

The substances alluded to, will undergo sufficient decomposition to render them good manure if laid in a pile during the summer. Ashes would, we should think, be useful in preparing the heap.

THE STRAWBERRY.

The excellence and value of this fruit are so well known as to need no recommendation. This is a good season of the year for transplanting. Mr. Kenrick's description of the mode of cultivation, as given in the "New American Orchardist," is as follows:

"For the reception of the plants, the grounds may be trenched twenty inches deep, and a quantity of half-rotted manure incorporated to half this depth. For economy, it is also recommended in the final transplanting, to set the plants in beds of four rows each; the rows running in a longitudinal direction; the distance between the beds varying from two to two and a half feet, according to the roots to be planted, as some varieties require much more space than others. During the first year, the runners to be carefully destroyed before they have taken root. Around such as show fruit, grass or straw is placed; (Keen recommends the same, for the plant derives its name from this circumstance.) This protects alike the soil from washing rains, from a scorching sun, and the consequent evaporation of its moisture; it protects the fruit from becoming soiled. But as soon as the fruit is gathered, this covering is to be removed, and the soil kept clear of weeds by the hoe till autumn. In autumn, all the spaces, including the alleys, to be dug carefully over with a pronged fork, so as not to injure their roots. Both Keen and Mr. Knight, however, direct manure to be applied before this last operation is commenced, and Mr. Knight, has particularly cautioned against digging so deep as to disturb the roots, as it weakens the force of the plants, The second summer Lindley states that the plant will bear their best crop and finest fruit; the beds and outside of the alleys should be covered with mown grass, or with straw, three or four inches thick; by this method, he states he has found the fruit not only more abundant, but of finer quality."

"In the vicinity of Boston the following mode is often adopted:—The vines are usually transplanted in August. The rows are formed from eighteen inches to two feet asunder. The runners, during the first year, are destroyed. In the second year they are suffered to grow and fill the interval, and in the autumn of that year, the whole of the old rows are turned under with the spade, and the rows are thus shifted to the middle of the space. The same process is repeated every second year. Another mode which may be recommended generally, is to plant the strawberries in rows thirty inches asunder and nine inches distant in the row, and suffer the vines to extend to the width of eighteen inches, leaving twelve inches for an alley; allow eighteen inches width to the alleys, and three feet asunder to the rows; and to form new beds every three years, or never suffer the bed to exist over four years; and to plant out in August in preference to Spring." Some good horticulturists, however, prefer planting in spring.

Much has been said about the sex and character of the strawberry. It is defined by botanists as belonging to the order of plants, (*Icosandria Polyginia*,) which have the male and female organs in the same flower,—yet some have contended that it is *diæcious* in its character—that is producing the male and female organs on different plants. The theory advocated by Mr. Longworth, of Cincinnati, and which is probably correct, is, that every blossom contains both the male and female organs in a greater or less degree of perfection; but that in some varieties the different organs are not developed in the due proportion to insure fructification. In some kinds, the female organs, (pistils) are defective, in others, the male, (stamens.) Those varieties in which the *female* organs are disproportionably developed, though when left to themselves they are generally sterile, will often produce fruit of extraordinary size when brought in contact with plants in which the *male* organs are largely developed; but there are some varieties in which the female organs are so defective, and the male organs are so much predominant, that they cannot be fructified, and are, therefore, under all circumstances, totally barren.

A little experience will soon enable any one to distinguish the male and female organs of the strawberry—or the staminate and pistilate flowers. Mr. Longworth, in a communication for the Western Farmer and Gardener, illustrates this part of the subject by the following anecdote. He says he was trying in vain so to express himself as to enable a person not a botanist, to distinguish the male and female plants by the blossom, when a young son of his German vine-dresser, conveyed the idea in a few words. "Why," said he to the person, "you not understand! The husband he always have de *beard*, de frow she have none." Mr. Longworth adds, "a quire of paper could not give a more definite description. In the male plant, the face of the flower is covered by a long yellow beard, that almost hides it. The female has the beard, but so closely *shaven* as not to be perceptible to the naked eye. The male blossom is generally also, of double size."

Mr. Longworth recommends planting the pistilate and staminate varieties in separate beds, two and a half feet apart, "every fifth bed being a male." If they are planted in the same beds, the male, or staminate plants, soon over-run the others, and no fruit is obtained.

As to varieties, Mr. Breck of the N. E. Farmer, who has had much experience in the cultivation of this fruit, says—"after having tried a multitude of sorts, we should recommend for common cultivation, *Hovey's Seedling*, as the very best for the general crop—*Early Virginia* for early use, and the *English Wood* for late. Many new and highly extolled varieties have disappointed the expectations of the horticulturist."

FARMING ON THE AROOSTOOK.

Now that the North-eastern boundary is finally settled, the best portions of the former "disputed territory" are becoming rapidly settled. From all we can learn, we have little doubt that our neighbors of New-Hampshire and Maine, would find the inducements for emigrating to the Aroostook Valley, equal in many respects to those of any other section. A correspondent of ours, who has purchased and is now improving a tract of land there, with a view to a residence, writes as follows: "The soil lies on a lime-stone rock, and is from one foot to two feet deep, of different colors, such as light yellow, chocolate color, light gray or black mold, like old barn-yard manure. These four varieties are often met with in the distance of two rods, and the settlers like that land best which consists of these different kinds, so located as to mix together in cultivating. The crops, when I was at the Aroostook last August, (1843) were superior in appearance to any thing I had ever seen or *conceived* of. The oats were up to a man's chin—the wheat about as high, with heads seldom less than four and sometimes *nine inches* long—and the barley from four to four and a half feet high. The potatoes were very well advanced, and of that peculiar richness and mealiness which no potatoes have, not raised in or near the 'Provinces.'"

Indian corn is not cultivated very extensively on the Aroostook; still there is some raised there, and our friend writes that he is informed by a man who is operating there this season, that "the corn there was knee high the first of July, and looked as it used to in Kennebec when growing on a *dung-heap*."

Cedar Shingles.—The Springfield Gazette says—"Mr. John Bliss of Wilbraham left at our office, last week, some shingles that were taken from the roof of his barn, on the 9th inst., where they had remained 104 years, having been put on by his grand-father, Ensign Abel Bliss, in May 1740. The shingles were of 5-8 thickness, made of cedar which grew on the farm of the then owner, and during the time stated had covered the west half of the north roof, the other part having in that time been *twice* covered with pine shingles. They were 20 to 24 inches long, and six inches exposed to the weather. The roof boards were in suitable order for re-shingling."

Cattle Shows this Season.—New-York State, at Poughkeepsie, Sept. 18 and 19.——Hampden Co. (Mass.) at Springfield, Oct. 16, 17.——Coshocton Co. (O.) Oct. 25.——Newberry (S. C.) Sept. 25.——Philadelphia, on the Germantown turnpike, 3 miles from the city, Oct. 16, 17.——Kings Co. (N. Scotia) at Kentville, Sept. 26.

THE LATE DR. SAMUEL L. MITCHILL,

Of the city of New-York, and his labors in aid of Agriculture.

NUMBER I.

MR. LUTHER TUCKER—Your late and lamented associate Willis Gaylord, commenced a notice (Cultivator vol. 10th, p. 170) of the essays contained in the printed volume of the "Transactions of the first New-York Agricultural Society," and of the men who organized it. Among other remarks he observes that "the leading spirits of this association were men of powerful minds, far-reaching in their views, *and in their practice evidently in advance of their age.*" (Anno. Dom. 1791.)

In my early days I had a taste and inclination to engage in agriculture; but circumstances diverted me into another course, and kept me so for many years, until declining health impelled me to rural pursuits, and the fulfilment of the wishes of my earlier life. It was then I read and studied the old agricultural society's Transactions, and admired the writings of Livingston, L'Hommedieu, DeWitt, De La Bigarre, and others. Associated with these worthy men was the learned **SAMUEL L. MITCHILL**, M. D., with whom the writer was personally acquainted, and whose labors in aid of agriculture, and in agricultural chemistry, it may be interesting at the present day to notice.

The old Agricultural Society was organized in 1791, and the first address was delivered by Dr. Mitchill in 1792, before the members of the society and the state legislature then holding their sittings in the city of New-York. It was incorporated in 1793, and the first volume of Transactions was published at Albany in 1801. It thus appears that it required ten years before materials could be collected sufficient to form a volume. When the society was organized, it was shortly after the revolutionary war, when agriculture was in a depressed condition, when the settled parts of the state were comparatively limited, and when the country had not recovered from the ravages of war, particularly the southern part which had been in possession of the enemy. The materials however which form the first volume of the Transactions were written by men who loved their country, true patriots, men who were both practical and scientific, some of whose writings may be read with advantage, even in these days of increased population, extended agriculture, and scientific farming.

We find by examining the volume of Transactions that the society was not purely agricultural. The title runs thus—"*Transactions of the Society for the promotion of Agriculture, Arts and Manufactures, instituted in the State of New-York.*" Thus soon after the war of independence, our wise men in the agricultural community, saw the necessity of encouraging the mechanic arts and manufactures, as well as agriculture, as it had been the policy of Great Britain not to let "even a hob nail" be made in the colonies. This policy in relation to these United States was continued by the British after the war. And it is in the recollection of many, as well as of the writer, when English merchants deluged the country with their manufactures of wool, and cotton, and iron, and leather, and many other articles which our own citizens can now manufacture as well as they.

Of the five addresses before the the society, as published in their volume of Transactions, Dr. Mitchill delivered two, viz: one in 1792, and one in 1798. In the winter of 1791–2, the legislature met in the old *City Hall* in the city of New-York, and at that session he was a member of assembly from the county of Queens, and though young, his agricultural, his scientific and general knowledge, led him to associate with men of learning, and he was very active in the organization of the first State Agricultural Society, of which he was for several years the corresponding secretary. He was called upon to deliver the inaugural address, at the organization of the society in 1791, and we find it full of scientific and practical information. Indeed it was so well received by those who heard it, (among whom was his preceptor Dr. Samuel Bard,) that it caused him to be appointed Professor of *Chemistry and Agriculture*, in Columbia college, New-York, of which Dr. Bard was a trustee. Before proceeding to examine his addresses and agricultural essays we will give a sketch of his life.

Dr. Samuel L. Mitchill was an extraordinary man. He was the maker of his own fortune and reputation. He began the world with impaired health, no money, and few or no influential friends. When he returned from Europe in 1787, his fortune consisted in his medical education, but he was unable to commence the practice of that learned profession in consequence of (hemoptysis) bleeding from the lungs, which occurred in London a short time previous to his return to his native country. He accordingly retired to the family residence on Cow-neck, in the township of North Hempsted, Queens county, and state of New-York, where he joined his father and brethren in agricultural pursuits. There he put theory into practice, and as far as his health and strength would permit, united with them in renovating the farm, which had been impaired by the British troops who had encamped upon it, and committed depredations without restraint.

This farm is still in possession of the family, and is owned by Judge Mitchill, the Doctor's only surviving brother, who has been long known as an able practical farmer, and who has cultivated it from his youth. It was devised to the family by Dr. Samuel Latham, (the maternal uncle of the Judge) who died in 1781. The British obtained possession of Long Island in 1776, and held it in military subjection the entire period of the revolutionary war, and a part of the time their troops occupied Dr. Latham's farm. The Hessian soldiers under Col. Wormzer encamped on it, and the adjoining one of Benjamin Akerly, both of whom were revolutionary whigs, and were obliged to entertain their enemies, who occupied their houses and lands, and destroyed their trees and fences. Other friends of the country suffered in the same manner, and were probably designated by the tories of those days, who took delight in seeing the British despoil the fair possessions of the advocates of the revolution and of civil liberty. It was on that farm that Dr. Mitchell, after the war, became a practical agriculturist, and hence we shall find in examining his writings in relation to husbandry, that they are not merely theoretical.

Previous to the completion of his medical studies at the celebrated school in the capital of Scotland, Dr. Mitchill wrote a letter to his father Robert Mitchill, on the industry of the Scotch, their employments and agricultural skill. This letter we have been permitted to read, and make the following extract, which will commend it to the perusal of every industrious farmer.

The letter is dated at

Edinburgh, June 1st, 1786.

"A spirit of industrious enterprise prevails much in this country at present; for in order to incite the people to industry and excellence, rewards are offered for almost everything. Premiums are distributed to those who embark in the *whale-fishery*, and to such as employ themselves in the *capture of herrings*, and to such *as spin the best and finest thread*, and to others who are *most expert in plowing land*, and even to musicians who can play most completely on the *Highland bag-pipe*. The good effects of such liberal offers are very manifest; for they promote ship building, employ carpenters and sailors, procure fish and oil, advance manufactures, *improve agriculture*, and reward labour. By such means, Scotland, notwithstanding its natural disadvantages, is advancing rapidly to improvement, and this is conspicuous as well in the advancement of arts and sciences, as in the refinement of manners among the inhabitants. Distinctions between people are here very great and striking, for they who have fortunes and estates live in elegance and splendor; they who have neither, dwell in dependence, poverty, filth, and apparent wretchedness; but in spite of all this, half an acre of land here answers a better purpose, and produces more than ten times as much as with you, because every inch of it is *manured* and cultivated to the best advantage. The Americans are in general bad farmers; they either are not industrious, or if they are diligent, they want contrivance and economy, to employ their labor and exertions to the best advantage. They seem not to know how to combine "*art with strength*," to unite "*contrivance with industry*," to associate "*labor with convenience*," or to blend "*convenience with elegance*.' These you have yet to learn."

In this letter, Mr. Editor, written by a young American in Scotland, fifty-eight years ago, we have some remarks which are applicable at the present time.

Staten Island, April 24, 1845. RICHMOND.

NUMBER II.

In our former communication it was stated that Dr. Mitchell delivered two addresses before the old Agricultural Society. It is now intended to notice them more particularly. The first was delivered before the Society and members of the Legislature in the old City Hall of the city of New-York, then situated at the corner of Wall and Nassau streets, on the 10th January 1792, soon after the organization of the Society.

After some prefaratory remarks and reference to the Idills of Theocritus, the Georgics of Virgil, among the ancients, and the pastoral essays of Gessner and Haller in later times among the Germans, and of Pope and Phillips in England, he comes down from the lofty flights of these fanciful writers to matters of fact, to the "dull pursuits of civil life," and he first points out those things for which we should be thankful:

"For among the numberless favors which Divine bounty has bestowed upon this fortunate land, that which in the first place claims our grateful acknowledgments, is the abundant harvest which rewards the industry of the farmer: since to a healthful climate and a fruitful soil, there is annually added the genial influence of a season that beautifies spring with blossoms, and loads autumn with fruit." p. 17.

Then he points out the condition of the land of this country, when first subjected to the plow:

"Hitherto, the American husbandman has cultivated a soil, enriched for ages by the yearly addition of a fresh stratum of mould. From the first existence of vegetation upon the dry land, decayed plants have continually furnished a supply of manure, which the winds and rain have liberally spread abroad. As the supply was annually greater than the consumption, the earth, unexhausted by its productions, increased in fertility. The thick layer of vegetable mould which covered the face of the earth was a store-house of food for plants, and this quantity was greatly increased by the conversion of wood into ashes by clearing. It is not wonderful, then, that for some years newly-cleared settlements should abound in produce, and require little more labor than that of plowing and reaping. During this period the provision is wasting, which for centuries had been accumulating. But the time will come, and indeed in many places *now is*, when the land, repeatedly wounded by the plowshare, and exhausted of its richness, shall be too weak of itself, to make plants grow with their former luxuriance. This may be called the era of systematic agriculture, when man, taking the earth from nature's hand, bare of manure, is so to manage and dispose it artificially, that it shall yield him first a subsistence, and then an overplus to grow wealthy upon. How far art may go in this species of improvement is yet unknown, as the *ultimatum of fertility* has never yet been reached." p. 20.

Proceeding in the perusal of the address we find that Dr. Mitchill then (1792) a young man, understood the nature of exhausted lands and the means of renovating them as well as we do at this day, (1844.)

"But how (says he) are fields to be artificially fertilized? By manure. This is the great hinge upon which the whole system of agriculture turns. In procuring this needful substance, we are first to imitate nature in collecting all the vegetable matter we can find, suffering nothing to be lost. As however, if a field, yielding grass for brutes, or grain for man, is principally exhausted of its produce by the creatures whom it supports, a very inconsiderable quantity remains for manure. What then is to be done? Must the land go on to be impoverished from year to year? No. The animal, the vegetable, and the mineral kingdom most be ransacked for something to aid the growth of plants. The ashes of wood and of peat, the muddy depositions of puddles and ponds, the unrespirable portion of our atmosphere, and some of the particles floating therein; the various earthy productions of marl, chalk, gypsum, clay and lime, and likewise the excrementitious matters of most animals, are found by experience when properly employed, to promote directly or indirectly the process of vegetation. When these things are added to the soil, they act in one of these ways. 1st. They are a pabulum plantarum, and materially contribute to the nutriment of plants; or, 2d, They are stimuli to plants, and by exciting them to action cause a greater absorption of food, a better assimilation of it, and consequently a more rapid and vigorous growth; or, 3dly, They so alter and dispose the earth in which plants are rooted, that the radicles shoot more easily and more extensively through it, or in other words it becomes a better filter for straining and applying nourishment to their inhaling and absorbing vessels." p. 23.

In this short extract, (Mr. Editor,) we have the principles contained in what are considered as discoveries and improvements of the present day. Very little notice and no application of them ever was made at the time they were promulgated. Well might your late deceased associate say of him and some of his co-laborers in agriculture, that in 1792 they were "evidently in advance of the age," as we shall hereafter be able to show in other particulars.

It was stated in our first number that manufactures were embraced in the plan of the "Old Agricultural Society." The address now under consideration speaks of these with due respect and discrimination:

"But I would not wish to be understood that the whole of our labor should be applied to agricultural pursuits, as if those were, as some argue, the only industry that is productive; for I think it may be clearly proved, that the capital and labor of this country, will be most advantageously employed, if a part of it is expended in manufactures; the best policy in this respect, being to carry on agriculture without neglecting manufactures, and at the same time so to manage manufactures, as that agriculture may be conducted with a due degree of spirit."

This first address before the old Agricultural Society treats of quicklime, plaster of Paris, and fish as manures, and recommends the preservation and even the cultivation of the sugar maple for the production of sugar: also the rearing of the yellow locust (Robinia pseudocacia) for its timber. Attention is called to the vine, the mulberry, the mangel-wurtzel, barley, hops, &c., as neglected articles of husbandry. Of animals, he recommended the introduction into the United States, the Bos bubalis or tamed Buffaloe of Europe, which Dr. Mitchell observes "has been long domesticated in Hungary and Transylvania." He also recommends mules and oxen in preference to horses for draught on a farm. He also spoke in the aforesaid address, of sheep, and the wheat insect, (Tipula tritici, more recently named Cecidomia destructor.) Of the latter he subsequently wrote an account which is in the transactions of the old Society. The address concludes by directing attention to injurious insects; for says the author, "We are almost entirely in the dark respecting the history of the insects injurious to our useful plants, and that man would be laudably and beneficially employed, who should collect what is knowable concerning the different moths, bugs, flies and worms, which infest our fields and gardens."

This labor, recommended nearly fifty years since, was neglected until it was undertaken by our late esteemed agricultural writer, Willis Gaylord, who commenced the work, (Trans. N. Y. State Ag. Soc. 1843, p. 127,) but was removed to his rest ere he completed the undertaking.

LYING.—The credit that is got by a lie, only lasts till the truth comes out.

SOILING CATTLE AND HORSES.

Soiling, or feeding animals during the summer season with green food, cut daily, and given to them in yards or stables, is nearly unknown in this country, and its advantages but little understood. This is owing chiefly to two causes. Land is comparatively cheap, and labor costly; and the saving of the former, and increase of the latter, by this practice, have prevented a fair trial of its merits.

If, however, experience shows that the nett profits of the farm are greatly increased, even though attended with greater temporary outlay, the practice ought to be more extensively adopted. The chief advantages of soiling are these:—The whole of the green food is consumed with less waste than by pasturing; it is not beaten under foot by cattle's hoofs while in a feeble state, but a full and luxuriant growth allowed before it is touched. The ground is not poached in wet weather; the cost of division fences is diminished; a great saving of manure is effected; and the advantages of rest and quietude secured to the animals. The chief objection is the amount of labor required in cutting the food, and in feeding and littering the animals. Hence it becomes a matter of importance to strike a balance, as nearly as the results of experiments will allow.

Loudon estimates the product of an acre, mown and fed green to cows, at triple the quantity obtained by pasturing; experiments reported by John Sinclair give the same results,—17 acres in one case, having supported 33 head of cattle more than four months, which had previously required 50 acres of pasture; and the same results were obtained by Josiah Quincy of Massachusetts. Other trials make the difference considerably less, but in such cases the pasture appears to have been suffered to acquire *a tall and heavy growth before the cattle were turned in, and thus the advantages of the practice just recommended were partially secured.*

Several limited experiments made by the writer, decidedly confirm the opinion that not far from three times the amount of product is obtained by soiling, over the common practice of feeding on short pasturage.

Many experiments have been performed in England, showing the increased rapidity with which cattle thrive when fed by soiling. In one case, two cows were fed four and a half months, one being soiled, and the other pastured. The former gained 16 stone, the latter 9 stone. In another experiment, 48 cattle were fed, one half by soiling, and one-half by pasture. The soiled cattle sold at six dollars more per head than the other; the food consumed by the former was grown upon 12¾ acres, one-seventh of which were ruta bagas, the rest chiefly clover. Thus half an acre supported one head for nearly five months.

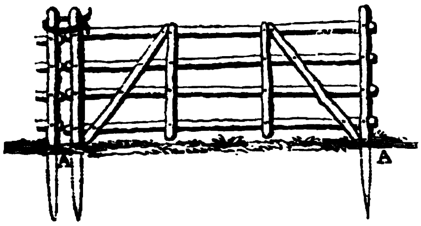
It is obvious that if soiling were generally practiced on the farm, the necessity of division fences would be nearly obviated. This is the case on the farm of Josiah Quincy, and many farms in England. Sheep, and such other animals as need feeding on the ground, being confined by hurdle fences, which are removed from time to time as needed.

In order to place before the eye at one view, the merits and disadvantages of this practice, the following estimate is made, which it is believed is not very far from correct:

Profits.		
In 100 acres used as pasture, by soiling, 66 are saved, as already shown; the annual interest on which would be about $3 an acre,	$200	
Saving of about 1½ miles division fence, at 40 cents a rod in ten years, or 4 cents yearly, a moderate estimate, ...	20	
Saving of at least 100 loads manure, if litter is freely used, as it ought to be, ...	25	
		$245
Cost.		
Expenses of cutting 33 acres of grass, drawing and feeding, but not curing; littering and cleaning yards or stables, say		$100
Annual profit on 100 acres, ...		$145

The preceding calculation is for the average price and quality of land in the State. In the vicinity of cities, where the interest per acre would be from 7 to 14 dollars an acre or more, and where manure might cost 50 cents per load, the profits of soiling over pasturing, would of course be more than double. While on the rich and cheap lands of the western country, it would be a decided loss. It is obvious that to be successful, an abundance of straw litter will be needed; and in proportion as this is abundantly supplied, will be the amount of manure returned.

The preceding hints are given with the hope that careful and well directed experiments may be undertaken. Thorough trial only can establish the advantages of the practice. Many throw aside a new thing at once, if full success does not attend the first effort. But a first effort in any of our common farm operations would be far less likely to succeed, than after years of experience. Experiments may be made upon a *small scale*, with little danger of loss.



Moveable Fence—Fig. 79.

Hurdles, or moveable fences for confining animals to particular portions of ground, are necessary in many cases, where soiling is extensively practiced; and the operation of thus confining them, possesses in part, the advantages derived from soiling, no portion of the field being touched but that on which they are feeding, which is not left till all the herbage is consumed. The manure, being also thus limited to one spot, may be plowed under before much loss is occasioned by evaporation.

A mode of erecting this kind of fence, lately witnessed by the writer, at the residence of Charles Downing of Newburgh, is at once so neat, cheap and useful, that a figure and description may be of value to others. The fence consists of separate frames or "lengths," one of which is shown by fig. 79, with a sharpened post at each end, A. A., driven into holes made in the ground by a crow-bar, and secured at the top by withing together, though the latter is not indispensible. These pieces are made of round poles or sticks split in two, the flat sides being placed next to the cross bars, which are fastened to them by wrought nails at the points of intersection. The points of the posts are driven into the ground to a depth of about fourteen to sixteen inches.

These frames or lengths of fence, are four feet high and eight feet long—they cost, besides the material, two dollars and twenty-five cents per dozen in making, or thirty-seven cents a rod. The material would add about thirteen cents more, making half a dollar a rod, for the whole.

Two men put up thirty rods of the fence, securing the tops by withes, in about three hours. J. J. Thomas.

INSECTS INJURIOUS TO AGRICULTURE.

Messrs. Editors—Permit me to call your attention, and also that of every American Farmer, to a work published in Massachusetts entitled "*A Treatise on some of the insects of New-England, which are injurious to vegetation*; by T. W. Harris, M. D." Cambridge, Mass. 1842. I obtained an early copy of this work, and have now had the advantage of two seasons for comparing the details of the book with such insects as have come within my reach: and I am authorized by this experience to say, that it has more than answered my expectations, almost equalled my most sanguine hopes. So far, even *here in Maryland*, I have found no insect that could be embraced in the object of the work or explained in the title, that was not fully described in that Treatise. When you recollect that the work only pretends to describe insects that prevail in *New-England*, you will admit that this is saying much for the work. It is a strange circumstance, but it appears to be a fact, that all insects of the class under notice, seem to proceed *from* the north-east *to* the west and south. Such was the point of departure, and such the *course* of the Hessian Fly, the Curculio, and I believe every other insect "injurious to vegetation." We have not yet among us the Canker Worm, of which our north-eastern friends so much complain; nor the rose slug, nor some other depredators upon our luxuries and comforts. How long will it be before they shall arrive here? I am induced to offer you this brief paper in consequence of the discovery of the *Spindle worm*, in our corn, (called by Harris, the *Gortyna Zea*, of the family of Nonagrians,) now, so far as I know, for the first time seen here. Harris's Treatise told me all about it, and I have published in our local papers, such a description and method of prevention, as I hope will arrest the evil.

Baltimore, Md. 1844. Gideon B. Smith.

INTRODUCTION OF SPANISH SHEEP.

"Honor to whom honor is due."

The man who "makes two blades of grass grow where only one grew before," is, proverbially, a public benefactor—seeing that his example may benefit others, and stimulate millions to improve their mode of cultivating the soil.

One of the contributors to the last volume of Transactions of the New-York State Agricultural Society, concludes his article by invoking some of his wealthy countrymen to emulate the example of the late Patroon, by adding to our country some animal or crop that may promote the welfare of the farming community. "Is any thing more needed to accomplish this object," says the writer in urging the introduction of the Scottish Highland cattle—"is any thing more needed to accomplish this object, than to stir up the spirit of patriotism which exists among the wealthy land-holders of the Empire State, by pointing to the noble example of the venerated Van Rensselaer? ☞ Let those who would secure perpetual honor to their names, by conferring favors on their country, emulate his worthy deeds."

The spirit which influenced that writer, animates me in now directing public attention to another Benefactor of American Agriculture. I allude to David Humphreys, a friend and companion of Washington—the man who, by "introducing the Merino breed of sheep from Spain into this country," rendered to this Republic, services not less valuable than his efforts in the battle-field. Is not such a man worthy of enduring remembrance? and yet how few are there who now remember the name of Humphreys in connexton with the benefits showered upon American Agriculture by the introduction of Spanish sheep?

Examining the records of the "Massachusetts Society for Promoting Agriculture," I found a memento which should be published broadly now when public attention is aroused, as it was never before aroused, in reference to *Sheep Husbandry*. The grateful testimonial uttered to the merits of Col. Humphreys by the Massachusetts Society more than forty years ago, is now before me: And where is the man among us who will grudge the corner of a newspaper necessary for publishing the interesting fact, that on the 29th of October, in the year 1802, that ancient Society, which yet "flourishes like a green bay tree," unanimously voted—

"That a gold medal be presented to the Hon. David Humphreys for introducing the Merino breed of sheep from Spain into this country; and that the Rev. Dr. Parker be a committee to procure said medal, and to cause such inscriptions to be engraven as he shall judge suitable, and to transmit the same agreeably to said vote."

Thus endeth the first chapter. In the next, I may mention a few more facts on this subject, in connexion with the statements made by Col. Humphreys concerning the *Merinos*, when he introduced that breed into the western world. Rho.

Agriculture is the most ancient, the most honorable and the most useful of arts.

SAXONY SHEEP OF THE LATE HENRY D. GROVE.

Messrs. Editors—During an excursion to the east, in the month of May last, for the purposes of business and pleasure, I visited the residence of the late Mr. Grove of Hoosic, Rensselaer co. Although several eulogies have appeared on his character, all fall short of those which the stranger will hear pronounced from those who knew him well and intimately—his immediate neighbors. The saying "that the prophet is more honored abroad," was in his case reversed; it is in the vicinity where he lived, that his excellence as a father and husband—his kind and humane qualities as a neighbor—his benevolence, his rigid probity in all his business transactions, are best known and appreciated. His enduring monument is in the hearts of those who knew him personally and intimately; and those who knew him thus, were his attached and ardent friends.

My object was to inspect the justly celebrated flock of sheep which had been the object of so much of his care, and which so widely extended his fame as a wool grower. The farming public, through the medium of agricultural papers, has been informed of its origin—that it was made up of selections from the most distinguished flocks in Germany by Mr. Grove himself, and at a cost, too, which would seem almost incredible to many, but not to those who are acquainted with the fact that very many sheep of similar excellence are every day selling in Saxony at prices varying from one hundred to 500 dollars per head. This will be found corroborated in the recent communication of Samuel Lawrence, Esq. of Lowell, in the Cultivator, where he alludes to a flock purchased and taken to Russia, a short time since. I refer to this more particularly to show that the wool growers in Germany know how to appreciate *purity of blood;* and the American sheep breeder will fail to attain perfection in his fleeces unless this point is more rigidly attended to than it has been. It is unnecessary to mention more than a single fact to impress the importance of this. It is stated by Lasteyrie, and confirmed by Chancellor Livingston and others, that the pure Spanish Merino fleece will not divide into more than four sorts—the fourth consisting entirely of leg wool; whereas, the grade Saxon and Merino divides into not less than from seven to nine qualities. Thus the remarkable uniformity of unalloyed sheep constitutes their chief value; and hence the reason why the manufacturer so highly prizes "good blood"—and explains the fact of the Messrs. Lawrence paying for such wool more than some others, as is very well known. This important point of evenness is characteristic of every individual I examined, to a degree truly surprising. In many instances it would require a critical eye to perceive any difference between samples taken from the shoulders and flanks. In addition to this, Mr. Grove increased the weight of his fleeces, by judicious selections from male and female for breeding, within a few years, very much; his clips averaging nearly 3 lbs. I am not aware precisely of the average of his buck fleeces, but a buck lamb I engaged of him shortly previous to his decease, sheared the present season 5 lb. 10 oz.

Another very important recommendation is the remarkable compactness of the fleeces, as well as length of staple; the latter quality, through the improvement in machinery, now being highly esteemed by manufacturers, inasmuch as they obtain more sound wool, and less "dead end" than from short staple.

This flock has always been free from foot-rot and other epidemics, and at the time of my visit was in capital condition.

To me it is melancholy to know that this magnificent flock of Saxons is to be sold. Stern necessity demands it or it would not be done. Its original heavy cost to Mr. Grove kept him somewhat embarrassed, and unfortunately thus he died, leaving a wife and four young children, whose fate, whether of competence or a plain support, or in circumstances much below it, will depend on the prices obtained on the day of sale. Let the friends of the lamented Grove look to it; let not the invaluable stock of one of our most enlightened and enterprizing agriculturists, be sacrificed. Yours, &c., L. A. Morrell.

Lake Ridge, July 17, 1844.

HAYMAKING.

Messrs. Editors—The article of hay alone may be set down as one of great consequence to the farmer, being one of his principal products, and the most essential fodder for most kinds of live stock. My mode of managing the hay crop, with some other suggestions, I cheerfully present for your consideration.

Many different notions prevail among us respecting the time and manner of cutting and securing the hay crop. It would appear that some true system should be established with this as well as with the grain crop, which has been reduced to one regular system.

That mode which will preserve as much of the natural juices of the grass as possible, and in the cheapest practical manner, is the one I have endeavored to attain. Counting nothing for board and team, we do not pay out one dollar per acre for cutting and securing our hay, at an average of one and a half tons per acre. In this section of country, a majority of our mowing lands, are composed of clay, and quite free from stones. We lose ten times more of our hay by cutting too late, than by cutting too early. Many let their clover and herds-grass stand till the seeds are ripe, and of consequence the stems become hard and wiry; a good share of the leaves have changed to a brownish state, and the natural sap has left the plant.

To get at the most proper time for cutting, let us inquire what rule the gatherer of herbs adopts in filling his medicine chest, or the distiller his plants. In collecting herbs and plants, they cut them as soon as they come into flower. At this period they contain all their useful qualities, and by cutting at this period, they secure the greatest quantity of oil; but herbs that are cut at this period and dried in the sun, lose much more of their invigorating and essential qualities than they do if dried in the shade. Plants of all sorts, if they are cut in full vigor, and afterwards carefully dried, without any waste of their natural juices, either by bleaching with rain or evaporating in the sun, contain a quantity of nourishing matter nearly double what they do when allowed to attain their full growth and make some progress towards decay. When mowing is delayed, as it very frequently is, till an advanced period of the season, when plants have not only reached their ultimate growth, but begin to decay, this description of herbage must become tasteless, dry, tough and less nourishing. Also over care in drying in the hot sun, by bleaching the juices of the early grasses, must produce a similar kind of fodder.

To commence with the cutting and manner of curing, we will suppose the grass to be a good burden, and in full prime for the scythe, but not ripe. The workmen should be made to cut as low as possible, especially if there abounds a fine bottom, thereby increasing the crop, and all the grass mown in the forenoon should be spread before dinner. As soon as the external wet is off, and it becomes partially wilted, we put it into winrows with a revolving horse rake, and before the sun goes down, into cocks of from 60 to 90 pounds; what grass is cut in the later part of the day, remains in the swarth till next day.

Grass should be made into cocks of about four feet high, not by rolling, but by laying one fork full upon another, and of as small diameter at the base as possible and stand firm; draw the loose hay out from the bottom all round and lay it upon the top with the ends hanging downwards. When grass is put together in this manner, it is in a great measure out of danger.

It will be proper to give them an airing before they are removed to the barn, and more especially that portion which comes in contact with the ground. When necessary, the first drying wind and fair day, lay them over by putting the top of the cock on the ground, and so manage after by putting as dry a bundle with the green, till you have one cock made up again, out of two being put together. By this treatment there is a more speedy exhalation of moisture by the action of the air, while an incipient fermentation will evolve or discharge a portion of heat, and thus promote the drying of the hay by increasing the evaporation of the humid particles. By this treatment the hay is secured until the maker wishes to remove it to the barn.

Clover hay should remain longer in the cock than most other grasses, that all the larger stems may undergo their proper fermentation. Before removing to the stack-yard or barn, we generally turn the cocks bottom side up an hour or two before loading.

Hay cured in this manner is much heavier, because not so much of the natural juices are evaporated by the direct heat of the sun. Its undergoing a partial fermentation in the cock, prepares it to be placed in larger bodies. Hay cured in this manner, should not be tumbled by the quantity into a mow all together, but one or two loads a day put together, and a mow of twenty tons should occupy the period of three weeks in filling, that it may all be got in as green as possible. The mow should be trod as lightly as possible at the time of filling.

When fears are entertained of over fermentation, a layer of dry straw or stalks over the whole, is an excellent thing. This coarse fodder, absorbing the extra juices of the hay, retains it, and makes it more tender and palatable. We prefer this method to the common one of salting for the above reason—and that we may select our days for feeding the stock their salt in winter, by brining the hay on the more mild and warmest days, when they have the least appetite. In this manner, we have a ready market for our poorest hay. Cattle and sheep devour it with a good appetite. If farmers would pay more regard to this manner of salting their stock, say to one hundred pounds of hay use a pint and a half of fine salt and one pail of water, they would be well remunerated for their extra labor. Sheep and other stock will look as full on these faintest days of winter, by thus salting their food, as they will in the most favorable weather on good hay.

When grass is quite ripe it should be exposed to the sun as little as possible after it is mown, and be made into large cocks or removed immediately to the barn, that by a steaming process, the dry stalks may become more valuable. Hay should in no wise be put into the barn or stack when wet; there is more hay damaged in this manner than by securing it too green. That hay which comes out of the mow the most solid will spend the best. There is more value in a load of hay taken from land that produces about one and a half tons to the acre, than there is in that hay which is cut from lands that produce much heavier or lighter burden.

In stacking hay, first put in the rack about two tons, and let it rest two or three days before more is added. The stackman should be careful about treading near the outer side but as much as he will in the middle, and mind and keep the centre the highest. Four or five tons make the most convenient stack. We have different ways of stacking recommended to prevent vermin. But let the stack be put up as above directed in its proper time, before the seed is matured, and there is no danger of mice; but when it so happens that grass must be put into stacks in a ripe state, salting will aid in preventing the depredations of vermin, but such hay should be fed out the first winter.

It is safer to purchase a large stack by guess than a small one.

The manure may all be removed from the stack yard; the urine is sufficient that remains in the land.

Tight barns are preferable to more open ones, with ventilation at the top; the heat will not drive to the centre of the mow but remains more equally over the whole than it will in an open bay.

A very common but bad practice is to put an assorted lot of hay over a cow, calf or horse stable, for spring use, where it has received all the effluvia arising from the manure below all winter, which cannot add to the quality of the hay, for at a time when the team is the most dainty, the best hay for spring work comes out of a well pressed mow, as little exposed to the air as possible. By dividing the mow and hay stack with a hay knife, not only keeps the hay as fresh as possible, by first feeding out one half, but we can better judge at what time of winter our fodder is half spent.

When a field is designed for clover seed, it is better to eat it down till the first of June with sheep. The after math will be shorter if the heads stand close together, the crop less bulky, but better filled.

If a crop of June grass be light, it many times is better to stand late. The ergot or poison with which it frequently abounds, will all be washed off by rains, and the rowen that springs up will frequently produce a good burden of excellent hay.

As we cannot cut all our grass in proper season, we reverse our mowing by cutting *first* this season the field which was *last* to receive the scythe last year.

Drag-rakes are very fashionable in these parts, for raking light grass, and after the cart, &c. They are of very great advantage in facilitating the work. They are made with a light head six feet long; the teeth set in the head 4 inches apart, and 14 inches long; the handle enters the head in two parts about two and a half feet asunder, and united together about four feet from the head where a convenient place is fixed for the head to draw by. The small hand rake is pretty much laid aside. What would have required the labor of a boy and four or five men ten years ago to rake over, now is disposed of equally as well, by one boy eight, and another fourteen years old, a horse and revolving rake, and drag rake.

Weybridge, Vt., June, 1844. S. W. Jewett.

SOUR SOILS.

Messrs Editors—I could not but expect that my paper on this subject would call out some notice, but I certainly did not look to such a source as Mr. J. J. Thomas. From what I have seen of his writings, I have learned to think him too much of a scientific man to hold to old notions when there is not ground to support them; and I think his own mind, if it considers the true facts in this subject, will lead him to think as I do. This is not flattery, but a candid estimate of the man.

The statement with regard to the lead pipe, in the July No. of the Cultivator, is an interesting one, and worthy of consideration, though not in reference to sour soils, inasmuch as the soil cannot be considered as extending to the depth of 2 or 3 feet. I will not attempt to give an explanation of it, since it would require a chemical examination of the earth from the spot to determine positively what it was that corroded the pipe. The cause was evidently local, and the growth of sorrel, I should consider, entirely accidental. If Mr. Thomas will send a portion of this earth to Dr. Emmons, I will see that it is examined in reference to this fact.

When I spoke of the effect of lime upon the growth of sorrel, I had in my mind a very interesting letter of Judge Darling of New-Haven, in which are found some remarkable facts on this subject. It was published in the Farmer's Gazette for Feb. 1843, and I presume Mr. Thomas has seen it. That this weed disappeared from the land of Mr. Dell after the use of lime, as stated by Mr. T. I do not doubt. But did he apply nothing else ? Did he not apply a course of tillage in connection with the lime, which would be quite as likely to remove it ? In judging of results from any process in Agriculture, all the attending circumstances ought to be carefully estimated.

Mr. T. says that the yellow pine will perish if not planted in what is regarded as a sour soil, and yet sorrel, the presence of which is always supposed to be an indication of a sour soil, will grow where the pine will perish. These facts would seem to contradict each other. I do not see the force of Mr. T.'s conclusion to this paragraph.

I do not know what "are regarded" as sour soils. I do not know what a sour soil is. I have never heard of the presence of any free acid being detected in any soil, nor in the water which passes through it. It certainly would be detected if it were there, or else great mistakes are made in analysis. It cannot be reasoned thus, because such a plant grows upon a soil, that soil is sour. The only evidence of its being sour, is the actual finding an acid in it, and if one is there, it can certainly be found. There may be "great difficulty in determining the constituents of the soil," but this can only be in case the quantity is very minute of any one substance, which I apprehend cannot be the case with the acid in a "sour soil."

Newburgh, July 15, 1844. A. J. P.

CULTIVATION OF FRUIT.—No. VIII.

THE PEACH AND NECTARINE.

The peach is usually cultivated by planting the stone in autumn, at a depth of about two inches; a small part of them grow the succeeding spring, and the remainder the year following. Cracking the stones before planting insures their growth the first season; but it is best in this case to expose them to the action of frost, during winter, mixed with sand or earth, and to defer the planting till spring. Probably their vegetation, in ordinary cases, would be accelerated if they were mixed with earth in a box, and during winter, successively subjected to the alternate action of freezing and thawing, by which the stones would be opened. If the soil be fertile, so that their growth is vigorous, they may be budded the same season; but if not, the operation must be deferred till the second. One and two years growth of the bud will render them large enough to transplant into the orchard.

The most suitable soil for the peach is a rich sandy loam; a light soil is generally preferred, but this is not indispensible, provided the ground be properly prepared. We have known this tree to succeed admirably on heavy soils, when very large holes were dug (6 or 8 feet diameter,) and filled with loose fertile soil. Peach trees, when transplanted, should not be large; a small thrifty tree, well set out, will in consequence of its rapid growth, produce sooner a large tree, than a larger tree, whose size has prevented the work being so well performed. For further directions, see a former number of this series on transplanting and general culture.

It is very commonly supposed that varieties of the peach may be continued without change, merely by planting the seed; hence many neglect their propagation by budding. The least improved varieties doubtless vary least; the common Indian peach, for instance, appears to continue nearly the same through many successive ages, though many sub-varieties of this exist. But the finest varieties, being farthest removed from the wild or natural state, are most liable to variation, and the original is consequently very rarely produced from seed. The nice shades of difference, however, which distinguish different varieties, are frequently entirely overlooked, and the error that the same sort is obtained from seed is thus confirmed.

To obtain good varieties with any degree of certainty, budding must be resorted to. Grafting rarely succeeds, and never unless performed with unusual care on such kinds as have the firmest wood. For particular directions on budding the peach, the reader is referred to the second number of this series of articles, published last winter.

When the great difference between good and bad varieties is remembered, the importance of obtaining the *best*, must be obvious. The reputation of some which are truly excellent, has been greatly injured by the numerous errors in names which have been introduced. Not only are the names of fine varieties attached by mistake to worthless fruit, but good varieties are increased merely by planting the stones, and the original name given to them, which is still continued through successive plantings, though wide departures from the original are thus generally produced.

This confusion and misapplication of names, and consequent perplexity to the cultivator, have induced the attempt to arrange the varieties and distinctive characters, so that this inconvenience may be removed. The peach presents facilities for this purpose, not existing in other fruits. The following, which is generally adopted as the best, is from Lindley. Peaches and nectarines, (which may be considered as one and the same fruit, the latter having smooth skins,) are separated into 3 general *classes*, each of which has three *divisions;* these are each separated into two *sub-divisions*, and every sub-division into two *sections;* consisting in all of 36 sections. Only a part of these sections contain varieties with which we are acquainted, and are only to be filled up as new ones are discovered with characters adapted to them.

Class I, comprehends those whose leaves are deeply and doubly serrated (or cut like sawteeth,) and having no glands on the serratures. Fig. 80.

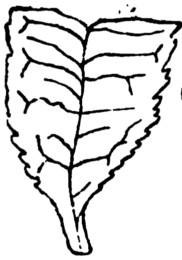


Fig. 81.

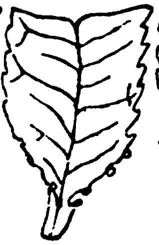


Fig. 81.

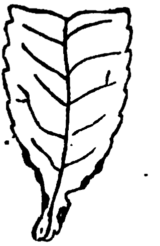


Fig. 82.

Class II, contains those whose leaves are crenate or serrulate (or with smaller and more rounded teeth,) and having globose glands. Fig. 81.

Class III, includes all those whose leaves are crenate or serrulate, having reniform (or kidney-shaped) glands. Fig. 82.

"The form of the glands," as Lindley very justly observes, "as well as their position, is perfectly distinct; they are fully developed in the month of May, and they continue to the last, permanent in their character, and are not affected by cultivation. The globose glands are situated, one, two, or more on the footstalks, and one, two, or more on the *tips* or *points* of the serratures of the leaves. The reniform glands grow also on the footstalks of the leaves, but those on the leaves are placed *within the serratures*, connecting, as it were, the upper and lower teeth of the serratures together; their leaves, when taken from a branch of a vigorous growth, have more glands than the leaves of the globose varieties. It will, however, sometimes happen that glands are not discernible on some of the leaves, especially on those produced on weak branches; in this case, other branches must be sought, for which to produce them." They are represented as rather larger and more distinct in the accompanying figures, than usually occur in a state of nature.

These classes, thus formed, are each divided into three divisions.

Div. I, embraces those which produce large flowers.

Div. II, includes those which produce flowers of medium size.

Div. III, contains those which produce small flowers.

These divisions are not so distinctly marked as the classes; the middle and small flowers only differing by the former being larger in all their parts.

The sub-divisions, two in number, are determined by the fruit. The first comprehends true *peaches*, or those which have a downy skin; the second includes *nectarines*, or those which have a smooth skin, similar to that of the plum.

Each of these sub-divisions are again divided into two sections; the former including the *pavies* or clingstones; the latter the *melters* or freestones.* For note see p. 255.

The following synoptical table will exhibit these divisions and sub-divisions as applied to the first class.

CLASS I. Leaves deeply and doubly serrated, without glands.	*Div.* 1. Large flowers.	*Sub.* 1. Peaches.	*Sec.* 1. Pavies.
			Sec. 2. Melters.
		Sub. 2. Nectarines.	*Sec.* 1. Pavies.
			Sec. 2. Melters.
	Div. 2, Middle flowers.	*Sub.* 1. Peaches.	*Sec.* 1. Pavies.
			Sec. 2. Melters.
		Sub. 2. Nectarines.	*Sec.* 1. Pavies.
			Sec. 2. Melters.
	Div. 3. Small flowers.	*Sub.* 1. Peaches.	*Sec.* 1. Pavies.
			Sec. 2. Melters.
		Sub. 2. Nectarines.	*Sec.* 1. Pavies.
			Sec. 2. Melters.

The same arrangement may be adopted with the other classes.

The following list contains some of the best varieties arranged according to the preceding method.

SERRATED GLANDLESS LEAVES. LARGE FLOWER.

Peaches—Pavies.

Old Newington.
Early Newington, or Smith's Newington.

Peaches—Melters.

Early Anne. Tillotson.
Malta.
Noblesse.
Early White Nutmeg.

Nectarines—Pavies.

Scarlet Newington.
Tawny Newington.

SERRATED GLANDLESS LEAVES. SMALL FLOWER.

Peaches—Melters.

Royal George.
Belle de Vitry.

CRENATED LEAVES, WITH GLOBOSE GLANDS. LARGE FLOWER.

Peaches—Melters.

Grosse Mignonne.

CRENATED LEAVES, WITH GLOBOSE GLANDS. SMALL FLOWER.

Peaches—Melters.

Bellegard.
Teton de Venus.
George the Fourth.
President.

CRENATED LEAVES, WITH RENIFORM GLANDS. LARGE FLOWER.

Nectarines—Melters.

Fairchild's.

CRENATED LEAVES, WITH RENIFORM GLANDS. SMALL FLOWER.

Peaches—Pavies.

Incomparable.
Catharine.

Peaches—Melters.

Chancellor.
Late Purple.

Nectarines—Melters.

Common Elruge.
Violet Hative.
Aromatic.

The following list of peaches will give a constant succession from a period immediately after wheat harvest, until autumnal frosts.

Early White Nutmeg.	Melters.
Early Anne.	
Early Tillotson.	
Early Red Rareripe.	
Early York.	
Grosse Mignonne.	
White Imperial.	
Red cheek Malacaton.	
Malta.[*]	
Columbia.	
President.	
Early Newington.	Pavies.
Oldmixon.	
Old Newington.	
Lemon Clingstone, Pine apple, or Kennedy's.	
Heath.	

The Early White Nutmeg is a peach of very small size, and a very poor bearer; and a cultivator may count him successful, if he gets a quart of peaches from a full grown tree. It ripens a week or more after our wheat harvests, and is valuable only for its early maturity. The Early Anne is later, but much larger and a much better bearer; and were it not for its very slow growth, would be truly valuable. A larger variety, a few days later, obtained from the seed of the Early Ann, is known by the name of Sweetwater. But the latter is scarcely a day or two earlier than the Early Tillotson, a peach fully equal to it in size and superior in flavor, and far exceeding it in productiveness, and which is in every respect a truly valuable variety, ripening in western New-York in the early part or middle of 8th month (Aug.) All the preceding are cut-leaved, glandless varieties, and are consequently subject to mildew, though the Tillotson is but slightly so, and soon nearly outgrows it.

The peach appears to vary more in quality from the effect of climate than other fruits. Fine American varieties are pronounced worthless in England. And varieties in this country, unusually delicious in favorable seasons, are of inferior quality in unfavorable ones. Again, culture greatly effects the quality; thus, the Heath clingstone, under favorable circumstances, is an excellent fruit, but if the branches are permitted to bear full, the fruit is small and of little value.

Some varieties which are excellent as far south as the vicinity of Philadelphia, when removed to western New York, prove to be greatly inferior in quality, in consequence of the slightly diminished warmth of summer. Hence only the earlier kinds cultivated there are suitable for culture here. The business of originating new and early varieties for the most northern region adapted to the peach, deserves more attention, and might be productive of some very valuable discoveries.

Peach and Nectarine trees are liable to destruction from two causes, the *worm*, and the *yellows*. The presence of the worm is readily detected by the gum mixed with excrementitious matter oozing from the trunk, at the surface of the ground. The best, and probably the only effectual remedy, is to scrape the earth from about the tree, and then with a knife to follow the holes made by the worm to their termination and destroy it. As this insect merely confines itself to the *bark*, its destruction is very easy. It rarely occurs that trees are completely destroyed by this insect, except they be small; death can only take place when the bark is eaten round the tree. Timely care will prevent this; the evil in fact is only to be dreaded by negligent cultivators.

The disease termed the *Yellows*, is truly formidable, and appears to be exclusively confined to the peach and nectarine. Its cause has never been satisfactorily ascertained. The first indication is an irregular and *premature* ripening of the fruit, accompanied with *purple discolorations* of the flesh. This usually occurs the first season on a part of the tree only. The following season, numerous small wiry shoots grow from the larger branches, the leaves become yellow, the whole tree assumes a sickly appearance, and eventually perishes. This disease is still more to be dreaded from its contagious nature. If not checked, it commonly spreads through the whole orchard. It appears to be usually communicated at the time of blossoming by means of the pollen. But the infection may be conveyed in other ways. The bud from a diseased tree inserted in a healthy stock will cause its death, and even the use of a knife in pruning which has been previously used on a diseased tree, is sufficient to communicate the disease. Facts also greatly strengthen the suspicion that the roots of healthy trees have imbibed the contagion by mere contact with those of diseased ones. After it has once attacked a tree there is no remedy; and to prevent it extending to others, the diseased tree should be immediately destroyed. No young trees should be planted on the same spot, as the diseased roots still remain in the soil. Coxe says, "The peach tree cannot be cultivated with success on the site of a former plantation, until some years of an intermediate course of cultivation have intervened." As it is probable that the pit or kernel becomes infected, caution would direct that stones from diseased trees be never used for planting.

The shortness of life in the peach tree and the consequent difficulty of its culture in some places, appear to be chiefly owing to this disease. In western New-York, it is comparatively unknown, and great care should be used by cultivators that it be not introduced by importations.

The peach tree, though generally supposed to be very short lived, when not destroyed by unnatural causes, will continue to flourish and bear for many years. Trees twenty years old and upwards, are frequently seen in western New-York; and in the town of Farmington, Ontario county, are the remains of an Indian orchard, containing peach trees a foot in diameter and probably fifty years old, in a bearing state.

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[*] The terms *pavies* and *melters* are decidedly better than those of *clingstones* and *freestones*, as the softest and most melting varieties adhere in all different degrees to the stone. Hence the term *clingstone*, in its widest sense, may apply to both pavies and melters.

The curled leaf, which frequently appears on peach trees early in summer, is occasioned by frost or chilly weather. These leaves soon drop and the tree assumes a healthy appearance. This would not be worth noticing, except that it sometimes occasions unnecessary alarm.

The growth of some varieties is retarded by mildew upon the young shoots. It appears to be exclusively confined to those having serrated glandless leaves, as the Early White Nutmeg, Early Ann, and some of the earlier varieties of the red rareripe. It is not a very serious evil; and the best remedy appears to be good soil and good culture to stimulate the growth. All yellow-fleshed varieties appear to be entirely free from it.

The length of this article precludes any further remarks on the curculio, which attacks the nectarine and sometimes the peach, than merely to say, that the evil may be prevented by jarring the insects from the tree on cloths spread beneath, and then destroying them; or by confining swine in the orchard, every year, during the early part of the season. The former should be done when the fruit is as large as a pea, and continued daily or oftener until no more are found. The latter should be continued so long as the injured fruit continues to drop from the tree. In the next number, a fuller account of this insect will be given. J. J. T.

CEMENT CISTERNS—THE BEST METHOD OF CONSTRUCTING.

Messrs. Editors—You will doubtless allow me to communicate through your valuable monthly, pro bono publico, but especially for the benefit of those interested, a few brief hints in regard to the proper manner of constructing cisterns; household appendages so necessary to the comfort and convenience of those who are not blessed by nature or art with a generous fountain of pure soft water at their doors.

Of the various methods recommended and practiced in different sections of the country, the plan of constructing cisterns of brick and water cement, is doubtless far superior to any other, particularly in regard to usefulness and durability. Though we have made one answer a tolerably good purpose for a number of years, made of white pine, bound with strong iron hoops, and firmly set in blue clay, yet the liability of the material to decompose and become useless, even when every precaution is used, suggested the propriety of adopting some improved mode in constructing it. The plan chosen was the one above mentioned. We constructed two of different sizes. For the largest, a pit was ordered to be dug ten feet in diameter and nine feet in depth, the bottom being shaped similar to that of a large potash kettle, and the sides perpendicular. The brick selected from the kiln for the purpose, were those burned hard, though but little cracked or warped. The mortar used was made of two parts coarse clean river sand, and one part ground water cement ready for mixing, obtained at the mill near Schuylerville, N. Y., at 25 cents per bushel, though from the fact that it does not petrify or "set" as soon as some kinds, it is believed a superior quality may be obtained. Water is worked in to render it sufficiently soft for use, like common lime mortar. With materials and pit thus prepared, the mason commences operations exactly in the centre and bottom of the excavation, by covering the surface with a thick coat of his mortar, and laying the bricks with their flat surfaces contiguous, forming as soon as convenient, a perfect circle of some three or four feet in diameter. Regular courses are then laid around the circle, taking care to increase the inclination of the upper edge towards the centre, so that when the bottom is finished to the edge from where he wishes to carry up the sides, the bricks will be placed in an angle of about fifty degrees with the perpendicular side. Extreme care should be taken with this part of the work, and an extra quantity of cement used, in order to prevent the possibility of a leak, as in turning up the wall, the outer edges of the bricks must necessarily be further apart than the inner, and every cavity should be completely filled with the mortar. The sides were then carried up perpendicularly five feet, from which point they were gradually drawn in until carried up nine feet, and the neck or top so small as to admit of being covered with large slabs of white marble, with a circular orifice sufficiently large to admit an ordinary sized person, and to place a pump for raising the water. A curb is then carried up sufficiently high to prevent any action of the frost on the work below, and filled in with dirt or gravel that will not heave. At the top of the brick wall and immediately under the stone covering, is left an opening the size of a brick, from which a drain is laid to conduct off the surplus water, made like the cistern of brick and cement. While the wall is going up, the mason should be particularly careful to lay on a good coating of cement over the outside before filling in, care being taken to preserve a sufficient space between the bank and wall for this purpose. To complete the work, a flat stone is placed on the bottom of the cistern in a bed of mortar for the pump to stand upon, the whole inside plastered with cement similar to the walls of a house, and after drying a few hours, whitewashed with a thick mixture of cement and water, and the work is done. Water may be admitted after the work has become partially hardened, but should be conducted to the bottom in such a manner as not to wash the coating of cement. The first quantity of water discharged into it, will be hardened and rendered unfit for use, by the sulphate of lime contained in the cement, which may be pumped out, when the next will be soft.

The advantages of having cisterns constructed as above described, must be apparent to the most casual observer. When done in a workmanlike manner, and with proper materials, they will be as durable as though formed of solid rock, and the inside presents a surface as free from filth as any stone vessel used for culinary or household purposes. Different families will of course require different sizes, and the amount of material necessary to construct them, vary accordingly; the one described, containing something like 45 hogsheads, the other about 20. The builder, Mr. Richard Swartwout of Schuylerville, N. Y., has often, to save expense, been ordered to plaster the cement directly on to the earth as shaped with the shovel, and covering with plank or large stone as before. But the mode is evidently objectionable, as, if accidentally exposed to the frost, the sides will crack and become leaky. Brick cisterns laid up with common mortar, are also liable to crumble in time, and prove defective. In either case, however, the top should be sunk below the surface, and covered with gravel sufficiently deep to prevent the action of the frost on any part of the masonry. If any of your readers choose to construct their cisterns according to the above directions, taking care to secure an experienced workman and good materials, they will find doubtless, should they live so long, that the lapse of half a century will not affect their usefulness or impair their durability. J. Chace.

Hoosick Falls, June, 1844.

CORN-STALKS FOR SOILING.

Some remarks were made in another column, on the advantages of soiling. One mode of raising green fodder for this purpose, should have been mentioned. This is by sowing corn. A sufficient number of experiments have been made to establish fully its advantages. Those made last year by the writer, by sowing it in drills two feet apart, and about twenty to thirty grains per foot in the drill, yielded over fourteen tons of green food per acre, though the land was not rich, and would not probably have given more than thirty bushels of the grain in the usual way. Dr. Button of Newark, N. Y., raised by sowing broadcast, (four bushels of seed per acre,) five and a half tons of dried fodder; and J. A. Miller of the same place, raised last year, which was a very dry and unfavorable season, and on poor and unmanured land, four tons of dried fodder to the acre.

The small size of the stalks, caused by the dense growth, greatly improves the quality, horses and cattle consuming entirely both leaves and stalks. A very striking benefit is derived from the use of the green stalks, during the latter part of summer and in autumn, for milch cows; and a proof of their excellence is furnished by the fact that when the dried fodder is thrown upon the ground and covered with the best hay, cattle will throw aside the latter, which will not be touched till the stalks are entirely consumed.

J. J. T.

PLOWS.

Messrs. Editors—When I penned my communication on plows for the May number of your Cultivator, I had no intention of engaging in any controversy on that subject, or of detracting any from the merits of Prouty & Mears' Centre-Draught Plow. Nor would I deem it necessary to trouble you at this time, were it not for some errors into which a correspondent under the signature of "Centre Draught," in your last number, has fallen.

When I first observed the *plate* of "the Boston Centre-Draught Plow," I was struck with the obvious advantage of the *new gearing*, especially in adding strength to the plow, for it is not uncommon to break the beam, especially in very stony and rough plowing. But where there is occasion as sometimes occurs to put the plow in to the beam, the fastening would *interfere* with the work. The wheel of the centre-draught *is necessarily* placed on *one side*, for the iron bar that runs under the beam occupies the place ordinarily allotted for that instrument.

But I am told that, what is matter of opinion is no evidence in a court of inquiry. I have not experienced this as law, but with due deference to your correspondent whose experience exceeds mine on this point, I would observe that I have yet to learn that farmers when giving their opinions on implements of husbandry are required to be tied down to such strict rules. If all were to *act* on this principle the inventors of the various new patents would be illy rewarded for their genius and labor. A good description or a good plate is sometimes sufficient for the practical man. But while your correspondent would trammel me with rules, he has himself totally disregarded such trappings. When he claims superiority for the centre-draught plow for all kinds of work, he has simply given his *opinion*. He has evidently not seen the Bergen plow, or he would not have fallen into the error of not observing that the wing or share reverses as well as the point.

I observed in my former article that I had no direct interest *in the sale* of any plow, which I have only to repeat. If Prouty & *Mears'* patent should prove superior to any yet in use, I will be benefitted thereby in common with the rest of the agricultural community. But as a matter of opinion—opinion founded on experience, I cannot assent to the doctrine laid down by your correspondent and claimed for the centre-draught plow; that a plow best formed for turning over a tough sod, is also the best for all *other purposes*—and the best for every kind of soil. For ordinary cross-plowing between rows and hills, the plowman requires no wheels and centre-draught fastenings. His machinery must be simple, and his plow light. In this section I have found Mr. Mayer's patent generally preferred for such purpose.

In conclusion I would inform "Centre draught," and the dozen to whom he alludes, that what was before stated as *belief* in reference to the invention of the self-sharpening principle as applied to points and shares, is fact. The invention belongs entirely to Mr. Bergen and was secured to him by patent in 1819. So far from the name of the inventor being lost in the lapse of time, I have the above declaration from him in propria persona, together with his acceptance of the challenge to meet the centre-draught plow at the plowing match to be held at Poughkeepsie in the fall, where there may be competitors that will outstrip either of the plows under notice.

Brooklyn, July 17, 1844. J. G. B.

Cure for Founder.—The seeds of sunflower are the best remedy known for the cure of founder in horses. Immediately on discovering that your horse is foundered, mix about a pint of the whole seed in his feed, and it will give a perfect cure.

ORNAMENTAL GARDENING.

Those who have had the pleasure of reading the first number of Colman's "European Agriculture," will doubtless agree with me in the opinion that the author has amply fulfilled the expectations which his abilities and opportunities had raised. Much that is interesting, and a great deal that is instructive, are comprised within the eighty pages before us; and the justness of his remarks in most instances, will be freely admitted; at the same time, those who are intimately acquainted with the state of society and morals in England, in the higher as well as lower classes, will see at once that in ascribing, though indirectly or by implication, all or nearly all the vice and immorality to one class only, he has greatly erred. They will also be surprised to find him contrasting, to the disadvantage of the English laborer, their vicious habits with the *worst cases* to be found in our own country. We must not complain loudly of the abuses or illiberality of English tourists, unless we are exceedingly careful not to tread, though it be very faintly and at a most respectful distance, in their footsteps. But my object is not to criticise, but to commend the work before us; and the defects we may see are only the more visible from the beauty and excellence of the surrounding mass.

You have already given some extracts from the work, and it is now my wish to call the attention of your readers to a few remarks, where not only the pleasure, but the utility, in a physical and moral aspect, of the cultivation of grounds for trees and shrubs, is strongly enforced.

"The cultivation of flowers and shrubs and vines, is a remarkable and prominent feature in the landscape of England: and a circumstance which has given no little gratification to my national pride, has been the profusion of American plants, which are seen in the shrubberies and plantations and pleasure grounds, both public and private. * * Green houses and conservatories are almost universal in the country where any thing like a garden exists; and the better class of houses are surrounded and adorned with a great variety of flowering shrubs and plants, presenting through the season, a charming succession of gay and brilliant ornaments. Even the laborer's humble cottage, too seldom, I am compelled to admit, any thing but a picturesque object, will occasionally have its ornamental shrubs adorning its doorway, and the ivy hanging its beautiful tresses over its window, forming as it were, a mirror, set in a frame of the richest green. The village of Marr, in Yorkshire, not far from Doncaster, and the village of Edensor, in Derbyshire, near Chatsworth, and the village of Lord Brownlow, in Lincolnshire, the best built, and by far the handsomest villages I have yet seen in England, to cottages of an excellent and picturesque construction, add those beautiful rural embellishments of vines and shrubs and flowers, and at first blush compel a reflecting mind to admit the moral influence of such arrangements upon the character and manners of their inhabitants."

The sarcasm in the following remark, it will be seen is in the writer's own style: "I have said and written a great deal to my countrymen about the cultivation of flowers, ornamental gardening, and rural embellishments; and I would read them a homily on the subject every day of every remaining year of my life, if I thought it would induce them to make this a matter of particular attention and care. When a man asks me what is the use of shrubs and flowers, my first impulse is always *to look under his hat and see the length of his ears*. I am heartily sick of measuring every thing by a standard of mere utility and profit; and as heartily do I pity the man who can see no good in life but in pecuniary gain, or in the mere animal indulgences of eating and drinking."

Speaking of the facilities which we possess, in a free use of our own land, in a fine climate, and in the beauty of our native plants, for the formation of gardens and ornamental grounds, he says, "Few countries in temperate climates are richer in the floral kingdom of nature, and the luxuriance of vegetable growth, and the splendors of vegetable beauty, than the United States. Why should they not be cultivated? Was the human eye, that wonder of wonders, that matchless organ of our physical constitution, that inexhaustible instrument of the most exalted and varied pleasures, made in vain? Are the forms of beauty in the natural world, so infinitely multiplied as they are around us, made for any other purpose than to be enjoyed; and what better means can we take to strengthen the domestic affections, of all others the most favorable to virtue, than to render our homes as beautiful and attractive as possible?"

My limits do not permit me to copy the author's remarks on the vice, impurity and crime, and the disease and pestilence, generated by closely built cities, and cellars and dirty lanes, crammed with wretched inhabitants; and on the imperious necessity of providing amply all new cities with public squares and public gardens, where a pure air may be breathed at least occasionally; but the following instance of munificence cannot be passed over: "Mr. Strutt, an eminent manufacturer at Derby, employed Mr. Loudon—the late distinguished horticultural writer—to lay out, plant, and ornament these grounds, at an expense of ten thousand pounds stirling, or fifty thousand dollars; and then, with eminent liberality, gave them to the city of Derby for the public use and enjoyment of its inhabitants. Tens of thousands of pounds expended in the erection of a Corinthian column, or a marble mausoleum, would not have formed so durable or extended a memorial of him; and thousands upon thousands yet unborn, in the enjoyment of this beneficence, will invoke blessings upon his memory."

I am also compelled to omit the truly interesting description of the English parks—those princely specimens of embellished nature—with their green turf sometimes kept so smoothly shorn, "that it seems more like treading upon velvet than upon grass"—whose undulating surfaces and wide plains are overspread with broad and magnificent forest trees, many of them with ages numbered by "patriarchal centuries," and which have survived the hoarse winds of hundreds of winters, the scathings of the lightning and the tempest, the successive changes of coming and departing generations of men, but still standing "green in their old age, the mute yet eloquent historians of departed years." But how far more gratifying would be the contemplation of such magnificent scenes, if the recollection did not so often force itself upon the mind, that they have been made and kept up in too many cases by the hard and weary labor of hundreds of starving but industrious poor; and that besides, they are too often made the scene

> "Of all the savage din of the swift pack
> And clamors of the field."

Our author appears to have received a plentiful dose of this latter kind of "*sport*," which he thus describes:—"Two or three days coursing, manly and healthful as the exercise on horseback undoubtedly is, and strongly exciting as the sport is, did not quite reconcile me to it; and the wailings and shriekings of the affrighted and dying hares in the jaws of the hounds, sounded in my ears for several days afterwards, like the cries of expiring children." J.

PHOSPHATE OF LIME, &c.

MESSRS. EDITORS—In the June number of the Cultivator, I observed an article from "A Practical Farmer," of Staten Island, inquiring of the "*late Geologists of the State of New-York*," regarding the localities and quantity of phosphate of lime in the different districts. The writer speaks in a very complimentary manner of the labors of the geologists, and of the benefits arising from the results of their investigations. It is certainly very consolatory to know that even one individual in this community regards our labors of some importance, when we are so often made to feel that very many question the utility of the whole.

I will endeavor, in a few words, to answer the inquiries, so far as I am individually concerned, remarking that the quantity of this mineral in any locality yet discovered is sufficient only for cabinet specimens, and, of course, cannot come into use for agricultural purposes. My own labors, since the first year of the survey, have been confined to that portion of the State west of the parallel of Cayuga Lake; a district in which the mineral in question is not known to exist in a separate condition. The recent investigations of Mr. B. Silliman, jr., make known to us the important fact that the solid structures of the recent corals, contain phosphates of lime and magnesia, both substances equally important in agriculture. Some notice of the analysis of corals, made by Mr. Silliman will be given in the July number of the American Journal of Science,* and a more detailed account will appear in the published works of the U. S. Exploring Expedition. The general results, however, are of the greatest importance. It is well known to a large proportion of the community that the greater part of our limestone formations are of marine origin, and the materials composing them are the remains of corals, shells and other marine animals, either in a perfect state, or more or less broken and comminuted. Of these materials the remains of corals and other zoophytes form by far the larger proportion. The phosphates which these contained in their living state are of course still retained in their fossilized condition, and the immense and inexhaustible limestone formations extending from near the Atlantic coast to the Mississippi river will furnish an inexhaustible supply of this material as the rock becomes decomposed. This without doubt is a great cause of the productiveness of those soils derived from the limestones, which occupy such an immense area in the middle and western states..

All that can be said of the phosphates in the western part of New York will be readily understood. There is no locality where the mineral can be obtained by itself, but the results of this analysis prove that it exists in all the limestone formations throughout that portion of the State; and though it may not in this form be found profitable for exportation, it nevertheless offers an inexhaustible source of fertilization to those farmers in the neighborhood of limestone deposits.

These facts also offer another subject for consideration, which is in the proper selection of limestone for agricultural purposes. Since the phosphates occur in the corals it is very evident that the coralline limestones, or those composed in the greatest degree of corals, should be selected for the purpose. Doubtless all the limestones of marine origin contain these substances, but an examination of the different strata will prove that some portions contain a much greater number of corals than others. The relative value of these different strata can, however, be easily tested by analysis or by a few experiments on the field. Since agriculture is rapidly approaching to a rank among the exact sciences, every fact or experiment of this kind should be recorded, for it is only by this means that we can arrive at just conclusions.

The crystalline limestones have to a great extent and perhaps entirely resulted from an alteration of the sedimentary strata; and in these the phosphate of lime is often separated, forming crystals or crystalline masses. This, doubtless, arose from the same cause which changed the nature of the mass around. The phosphate of lime is not, however, uniformly disseminated throughout any mass of limestone, but occupies certain beds or ranges, and may perhaps have resulted from the more coralline portions of the mass. This supposition derives additional force when we know the fact that, in the lower stratified limestones, the massive corals occupy a very limited thickness of the whole, and it may not be irrational to conclude that this portion has produced the phosphates as we now find them. I would not be understood however to deny the existence of the mineral in other portions of the crystalline limestones, for we often find it in minute crystals, and it may be so disseminated as to be invisible.

I doubt not but the inquiries of your correspondent will call out the observations of others, which may result in much important information on this subject. The value of phosphate of lime in an agricultural community can scarcely be overrated, and any person who might discover an extensive deposit of this substance would confer an important benefit upon the community. Of the value placed upon this substance by the English agriculturists we may form some opinion, when, upon the knowledge of an extensive locality of the min eral in Spain, a competent person (Dr. Daubeny I believe) was sent out to examine it, and the great distance from the coast was the only obstacle to its extensive importation into England.

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* The Journal had not been received when this article was written.

I wish it were in my power to furnish more directly important information to your correspondent, whom I suspect to be somewhat of a geologist as well as "practical farmer." A large amount of interesting matter upon this subject and other similar ones, could easily be furnished to the inquiring farmers of our country, and when they shall feel an interest in the subject the facts will readily be forthcoming. If the farmers would but make their inquiries definite, they could readily be answered, but there is far less inducement to give information when the writer does not know that even *one* of his readers may care to learn what he is endeavoring to teach.

With my best wishes for the prosperity of your correspondent and all practical farmers, I am

Very truly yours, &c., JAMES HALL,
Late Geologist of the 4th District of the State of N. York.
Albany, July, 1844.

USEFULNESS OF TOADS.

In proportion to what he is capable of doing, there is not a more useful animal to man than the toad. He has not bad habits, and in the pursuit of a livelihood he is sure to benefit some body. Yet how often do we find him the victim of an ignorant and cruel prejudice. Naughty children are allowed to torture and kill them through mere wantonness; and the fastidious lady sometimes orders them expelled from her garden, lest her nerves might be disturbed by meeting them in her walk.

The spawn of the toad, like that of the frog, is deposited in the water. As soon as the young have attained the use of their legs, they take to the land, and subsist on such flies, beetles, and worms, as they are able to swallow—thus in obtaining their subsistence, rendering a very essential service to the farmer and gardener. The number of insects in this way destroyed, is immense. As many as fifteen beetles have been found in the stomach of a single toad. It feeds mostly in the night; at which time insects are abroad. It is quite amusing to see the toad seize its prey. In the dusk of evening, it may be seen through the summer season, near the places most frequented by insects, snapping up, almost with the quickness of lightning, every bug or worm that makes its appearance.

In the days of boyhood, we have often amused our friends by the exhibition of a large pet toad. During the day we kept him in a little pen in the shade, covered by a board. At evening, we let him out and fed him with "white grubs," "cut-worms," &c., which during the day had been detected in their depredations on the cornfield. Sometimes when his appetite was keen from twenty-four hours' fasting, we would enjoy the sport of seeing him swallow a big horn-bug or "pinching-bug." And such a *face* as the toad would "*make up!*" But after scratching and straining a little, he would get him down. On one occasion this toad swallowed in rapid succession, *twelve* full grown larvæ of the may-bug, (the "white grub.") This will give some idea of the great benefit which results from the destruction of insects by this animal.

Several years ago, a gentleman advertised in the newspapers for toads to put in his garden, for which he offered a small sum each, and if others would follow his example, and thus induce the boys to save the toads alive instead of killing them, all would be gainers.

NATURALIST.

MESSRS. EDITORS—In the Cultivator of March 1843, A. R. McCord complains that the ants injure his peach trees. One of the greatest annihilators of ants, as well as other insects, in this country, I conceive is the toad. A few of these useful quadrupeds in a garden, are a pretty sure guarantee against the destruction of plants by ants, bugs, worms and flies. Where indigenous to the country, they can be easily collected and placed in the garden. Not being very swift on the foot, they do not wander far from home, but have a strong attachment for the locality in which they reside, and will, terrapin like, sometimes return to the place from which they are forcibly driven, unless prevented by some obstruction which they cannot overcome. The adage says, "there is no telling by the looks of a toad, how far he can hop."

They are a very grave and sedate looking animal, and if they do not "go forth at eventide to meditate," they most certainly choose that time to roam abroad in quest of food. For this purpose they are furnished with a slender and flexible proboscis-like instrument, three or four inches in length, which they throw from their mouths with great velocity, snap an insect, and convey it with inconceivable rapidity, to the natural receptacle of food. This proboscis-like apparatus lies rolled up in the mouth, and serves them for the same purpose as that of the elephant; is longer and more powerful in proportion to the size of the animal. In symmetry of form they may well compare with the elephant, bating that necessary appendage to the beauty of all quadrupeds—a tail.

The name of a toad has been too long a bye-word and a reproach. They are one of the most innocent and useful of animals. Vegetables they never injure. Why, when and how the almost universal antipathy to toads took its rise, would be a curious inquiry for the naturalist and philosopher. It will probably be conceded that the unrivalled English epic poet contributed his full share to the formation of a prejudice against them in the minds of his readers, by representing the arch fiend as sitting at the ear of our primitive mother, insinuating the baleful poison of his seductive tongue—"squat like a toad." If the toad had not been one of the most innocent of animals, it is to be presumed the prescient Lucifer would not, on that occasion, have assumed its shape.

The toad needs a shady arbor with mellow ground, which can be easily burrowed, where he may retire on the approach of day-light, to repose himself, sheltered from the heat of the noonday sun.

A few years since I had occasion to remove a bank of earth in my garden which had been undisturbed for more than forty years. It was filled with an innumerable multitude of ants. As Peter Pindar wished, when the rats destroyed one of his most delectable odes, that they might fill the maws of cats—so I had a strong desire that the ants might fill the maws of toads, I procured a few, gave them possession of the premises, and the ants were soon missing.

It is perhaps worthy of observation and inquiry whether the tree toad may not be uselul in preventing the ravages of insects on trees. I have noticed that apple trees on which these toads make their home, are seldom infested with caterpillars. Goldsmith, in his Animated Nature, has omitted to notice this species of the toad family. D. J.

Newbury, Vt., July, 1844.

FARM SCHOOL.

MR. LUTHER TUCKER—The Farm School, which I incidentally mentioned a short time since, has commenced, under the supervision of Stephen Sweet, Esq., late of West Troy. Our motto is, and ever will be, "to improve the soil and the mind." The school will be limited to ten boys, (including my own,) of decidedly moral and virtuous character—no others can have an abiding place with us, nor can drones, under any circumstances, be harbored in our hive.

That labor is honorable, we intend both to preach and to practice. Particular attention will be paid to physical training, and it will be our aim to carry out the views expressed in regard to the Elm Craig School, in your July number, to which we would particularly refer. I rejoice to see the agricultural thermometer rising. It speaks nobly for Tennessee. Will Mr. Fanning forward us his pamphlet? We like the extract so well, we want the whole story.

We commence with my four sons only, under the plain and unassuming title of Farm School, meaning that merit and not name alone shall be our recommendation. The growing and cultivating of fruit trees, from the first germ in the nursery, to the fruit-bearing tree of the orchard, will be taught; and another year, it is intended to attach a cocoonery, where the silk business in all its variety will be illustrated.

Our location is pleasant, healthy, and of easy access, being 9 miles west from Saratoga, and 5 miles northwest of Ballston Springs. Terms, $150 per annum, all charges included, payable quarterly in advance.

For further particulars address the undersigned, (post paid) Ballston Spa, N. Y. SETH WHALEN.

BEES.

MESSRS. EDITORS—I see you frequently devote a column in your valuable paper to *bees*. Some things have recently come under my observation which are new, and somewhat novel to me, relative to the swarming of bees. I supposed until lately, that when bees swarmed there was but one queen bee came out with the swarm. But recent experience and observation have convinced me otherwise. I find that not only two or three queens come out, but sometimes as many as five or six leave the hive at the same time. If you think the following *facts* are worthy an insertion in your paper, and would interest any of your numerous readers, and throw any light on the nature of bees; or elicit any remarks from some of your old and experienced correspondents who have long been acquainted with bees, you are at liberty to make them public.

On the 25th of May, between 11 and 12 o'clock, I had a hive of bees which commenced swarming. They flew some 30 or 40 yards, and began to settle on the limb of a peach tree about ten feet from the ground.

Before they had half settled, another hive, standing ten or twelve feet from the other, commenced swarming; and before these had all come out, another hive standing three or four feet from the one last mentioned, commenced swarming. They all followed in the same train of the first swarm.

I got a hive and began to take down the first that had settled, with a basket that I use as a hiver. The other kept settling in the same place, and as I could make no distinction between swarms, I continued taking down, until I had taken them all down and put them into a large square hive. They remained quiet during the afternoon, but did not all incline to go into the hive; a quart or two remained outside. At night I carried them to the place where I intended they should stand. The next morning before sunrise I made them a visit, and found nearly all in the hive. A little distance from the mouth of the hive I found a dead queen. I raised the hive, and saw another dead queen on the bottom board. I took them both away. About two hours after, I found two more dead queens drawn out of the hive. A few bees were flying about, as I have frequently seen them when they have lost their queen, but the main body of the bees were quiet. About 12 o'clock there appeared to be a good deal of commotion among them. I went to my dinner; was gone about half an hour. On my return, I found the hive *empty*, except a few scattering bees. On the bottom board lay another dead queen which made *five* that I had found dead. I looked around to see if I could find any trace of the absconded bees. About 20 or 25 yards from the hive, I found a swarm of bees settled on a peach tree, which I supposed to be a part of those that had left the hive. There could not have been more than one third or one half at the farthest, of what I had put into the hive the day before. What had become of the others I could not tell. I went for a hive, but before I got one ready they all took their wings and went to the woods. I would here remark that the first hive that commenced swarming the day before had swarmed *three* times this season before, and each time had returned to the old hive, of their own accord. The second time I knew a queen came out, for I found her in the grass, and lifted her up, and she arose into the air. Whether she got lost, or returned to the old hive with the bees I could not tell. On the next day (May 27,) the same hive that first commenced swarming on the 25th, swarmed again. I was present when they came out. Seeing a number of bees on the grass near the hive, I looked for the queen. I soon found *one* and took her prisoner, as I was determined to put the bees back into the old hive. The bees flew a short distance and settled on the limb of a tree about 12 feet high. I got my hiver and took them down. I had the curiosity to examine them and see if there was another queen, and to my surprise I found *three* more, all of which I made prisoners. I then let the bees go back into the old hive. The next day (May 28,) I was informed that a swarm of bees had come out and settled on a tree in the yard. I did not see them till they were all settled; of course I could not tell what hive they came out of. I got my hiver and took them down. I soon found one queen; cropped one wing to prevent her from flying away, and put her into a hive. On farther examination I found another, which I took away and killed. I put the bees into the hive, and set it where I intended it should stand. During the afternoon I passed the hive several times. At one time I discovered a queen outside of the hive which had *not* her wing cropped. She had hid herself in the bees, and I had overlooked her. I took her prisoner. The next day the bees came out of the hive, and went directly to the woods. I then ascertained for a certainty that *five* queens had been killed, including what I had killed myself. And allowing *one* to go off with the swarm, there must have been at least six queens when they first swarmed.

On the 30th, the hive where I put the bees back on the 27th, (after destroying four queens,) swarmed again. I examined them, and found two queens. One I killed—I cropped one wing of the other and put her into a hive with the bees; I thought there was no use in putting them back again into the old hive, they appearing determined on swarming, and would multiply queens as fast as they wanted them. JACOB HITCHCOCK.

Dwight Mission, C. N., June 8, 1844.

Several queens are often brought out in a hive near the same time, but as only one is necessary to a swarm, the others are either killed about the time they come out of their cells, or combats ensue between those queens attached to the new swarm, and are continued till only one remains alive. Such is the deadly hostility which is manifested by the queens towards each other, that two cannot long live in the same hive.—EDS.

POLITICAL ECONOMY

MESSRS. EDITORS—The rain, which has been pouring for three days, has afforded an opportunity to read your paper of the current month. On page 219 is the following wise conclusion, "a nation's imports should not exceed its exports."[*]

Had this been the first time I had seen this sophism, I should have passed it in silence; but the foolish sentiment has been so often printed by those who ought to know better, that I am unwilling that your Alabama correspondent should go unanswered.

If a wagoner from Vermont should take a load of *notions* to Boston, and a load of groceries back, as the avails of his export load, which was not worth any more on his return, than he gave for his load at starting, how long would it take him to get rich, or for the town in which he lived to become rich, by a thousand such transactions?

Any boy can understand that the man would lose his own time and use of his team, wear, tear and expenses.

When ships are employed on similar errands to all parts of the globe, the magnitude of the affair, or some other cause, seems to involve it in a fog, and every little while some wiseacre is crying about the ruinous effects of a balance of trade. Some newspaper scribblers will give us all the tables from the Treasury department since 1789, to show that we are four hundred millions poorer than we should be, because our balance of imports *amount to* nearly this.

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[*] That the reader may understand the position assumed by our Alabama correspondent, we annex the paragraph from which Dr. Bates makes this quotation. It is as follows:

"I will not produce arguments to show that economy is a blessing and extravagance a curse. The experience of any man who has reached thirty years of age, and is possessed of an ordinary understanding will respond in the affirmative. A farmer, to be economical in the use of money, must by proper care prevent the necessity of paying out money in the way of expenses, or in other words, he must live within himself. In order to do this, it is not necessary that he should make all he needs. By no means. But it is essentially necessary that he should make his expenses conform to the amount of his annual income—just as a nation's imports should not exceed its exports."

If it had not amounted to this, and much more, we should have been poor indeed. It is truly astonishing that the balance has been so much, when we reflect that so much has been paid abroad for the old national debt and interest, and so much is yearly absorbed in paying interest on State, corporation and individual loans abroad.

True, a great part of these latter have come home in goods and swelled the import tables. Our exports are valued at the place of departure, and our imports, until 1833, were valued at the foreign invoice with 20 per cent added for those from beyond the Cape of Good Hope, and 10 per cent for all others, as cost of transport and profit. Since then, they are valued by the true price at the port of entry. Now it is easy to see, the value of imports should be so much greater than that of the exports as to cover the use of ships, wages of men, finding, insurance and profits.

The profits or balance at this time would be nearer thirty millions per annum, than twenty, if we were not obliged to leave in Europe some twelve or fifteen millions of interest money.

That individuals or nations who *consume* more than they *produce*, must grow poor, is evident; but that a nation should not import more than they export, is sheer nonsense. Yours, &c. James Bates.

Norridgewock, Me., July 12, 1844.

P. S. Hay, except on old fields, will be good. Grain and potatoes never looked better, corn is small, but of healthy appearance. The season has been cool, the early part dry. But latterly, rain in abundance.

THE SHEEP.

History, Structure, Economy, and Diseases of the Sheep—Illustrated with fine engravings. By W. C. Spooner, V. S., London.

We acknowledge the reception of a copy of the above work. We consider it one of the most valuable publications that has yet been issued on the subject to which it relates. It is divided into three parts. The first relates to the Breeds of Sheep, with their Origin and Ancient History—the second to the Structure and Economy of the Sheep—and the third to the Diseases of the Sheep. We here present our readers with a valuable extract from the last division of the work, on the subject of the most destructive diseases to which the sheep is liable. Although it has not yet, from the drier nature of our climate and herbage, prevailed in this country, to the extent it has done in England and some other countries, we are satisfied that it has carried off many flocks, though the owners have been generally totally ignorant of the name and nature of the disease:

THE ROT IN SHEEP.

"The first symptoms attending this disease are by no means strongly marked; there is no loss of condition, but rather apparently the contrary; indeed, sheep intended for the butcher have been purposely cothed or rotted in order to increase their fattening properties for a few weeks, a practice which was adopted by the celebrated Bakely. A want of liveliness and paleness of the membranes generally may be considered as the first symptoms of the disease, to which may be added a yellowness of the caruncle at the corner of the eye. Dr. Harrison observes, "when in warm sultry and rainy weather, sheep that are grazing on low and moist lands feed rapidly, and some of them die suddenly, there is fear that they have contracted the rot." This suspicion will be further increased if a few weeks afterwards the sheep begin to shrink, and become flaccid about the loins. By pressure about the hips at this time a crackling is perceptible now or soon afterwards, the countenance looks pale, and upon parting the fleece the skin is found to have changed its vermilion tint for a pale red, and the wool is easily separated from the pelt; and as the disorder advances, the skin becomes dappled with yellow or black spots. To these symptoms succeed increased dulness, loss of condition, greater paleness of the mucous membranes, the eyelids becoming almost white, and afterwards yellow. This yellowness extends to other parts of the body, and a watery fluid appears under the skin, which becomes loose and flabby, the wool coming off readily. The symptoms of dropsy often extend over the body, and sometimes the sheep becomes *chockered*, as it is termed—a large swelling forms under the jaw—which, from the appearance of the fluid it contains, is in some places called the watery poke. The duration of the disease is uncertain; the animal occasionally dies shortly after becoming affected, but more frequently it extends to from three to six months, the sheep gradually losing flesh and pining away, particularly if, as is frequently the case, an obstinate purging supervenes.

With regard to our remedial measures, little satisfactory matter can be offered. There are few drugs which the laboratory can supply but what have been tried and found wanting; and though salt has appeared to have had more effect on it than any thing else, it must be confessed that hitherto medicine has offered no remedy for this formidable and destructive disease. Prevention must be our chief aim, and it is satisfactory to know that much can be done by means of extensive and general draining; and it is hoped that before long, by the aid of the legislature and the conjoint energy and capital of both owners and occupiers of land, the system will be adopted almost universally, by which alone this disease is likely to be controlled or eradicated; and at the same time increased labor employed on the land, and more abundant crops obtained from the bounty of nature.

It appears that, whether as a preventive or as a cure, salt has a more powerful influence over this disease than any other remedy. Its presence preserves even wet pastures from the disposition to give the rot, for it is well known that salt marshes are free from danger. In what manner salt thus operates it is difficult to explain. The blood in this disease is in a state of unnatural dilution—it is deficient in its fibrous and coloring principles; now, whether salt, which is a combination of chlorine and soda, acts by restoring some portion of those salts of which the blood is deficient, or whether it is prejudicial to the vitality of the flukes and the eggs, or whether it acts by the antiseptic power which belongs to chlorine, we cannot tell, though its influence over the disease is generally acknowledged.

Our own advice as to remedial treatment may be summed up in a small compass. The sheep should be removed from the unsound pasture as soon as possible, either to a salt marsh or the driest pasture that can be found; as much salt may be given as the animals will take with their food; to this the sulphate of iron may be joined. Half a drachm daily for each sheep, with the same quantity of ginger, may be given in nourishing gruel. An aperient should be given once or twice during the treatment, and may consist of one or two ounces of sulphate of magnesia, or a large table-spoonful of common salt dissolved in warm gruel or water. Food should be given in as nutritious form as possible; and a pint of beans daily will be an excellent diet with good hay on sound pasture.

Though turneps cannot be considered as a cause of rot, yet from the superabundance of water they contain, they are highly prejudicial to sheep that are affected with the disease, particularly if taken whilst a hoar-frost is on them. Calomel has been strongly advised, but the recomenendation, as far as I am aware, has not been backed by any successful cases. If tried by way of experiment, about five grains daily, with four of opium, supended in thick gruel, may be repeated once a day for the space of a week at a time.

PHILOSOPHY OF WOOL.

Mr. Foster of the Tennessee Agriculturist, and a correspondent of the same paper, M. R. Cockrill, Esq., object to the theory advanced by our correspondent, p. 156, on the influence of temperature on the growth of wool. As it is a subject of much importance, and one upon which the light of experience is needed, we copy Mr. C.'s remarks:

"Messrs. Editors—I observe in the May number of the Albany Cultivator, page 166, Mr. L. A. Morrell's

Philosophy upon Wool; he would bring you to the conclusion, that warm climates would not produce fine wool. As wool growing is at present becoming a matter of importance, and will finally be more so, to the American people, than any other one article; therefore, it is requisite that all the light should be given on the matter, to prevent improper conclusions. It is my opinion, that a low latitude, say 32 deg. north, is far better than the northern States for growing wool. I have learned that the best situation for sheep to maintain true health, and therefore grow the most even and uniform fleece, is where they live all the time on suitable succulent food. Mr. Morrell states, that you find the largest part of the fibre directly after shearing, which is true; and he attributes it to heat; I think it is caused by the great effort, when the animal is stripped, to re-produce his natural covering. A more rapid growth is always discovered, when all animals shed their coats; and the same is the case with sheep when they are stripped of theirs—and the largest part of the fibre is then produced, and not in the great heat of summer as he would have you to conclude from his philosophical theory. If you leave the fleece upon the fine wooled sheep more than one year, they do not shed, if they remain healthy; but the size of fibres is not increased, but on the contrary, it is weak or tender as long as left on, and small in fibre. The animal must, of course undergo great heat; his philosophy, therefore, would bring you to the conclusion that the fibre would be enlarged, and the fact is the reverse. I state that latitude 32 deg. is the true wool region, because there they can live all the time upon succulent food, which, in my opinion, makes the true uniform soft staple of wool, suitable to the manufactory of the best broadcloths. There is much country in the United States that is well suited to produce fine wool; but it can, of course be produced to greatest advantage where the sheep can graze all the time. I believe much more depends upon the food than the climate; and no doubt the true cause of traveling the sheep in Spain was to sustain them; and grazing them all the time, agrees with my philosophy or experience. The best and softest part of the fleece is grown in the spring just before shearing, when the grass is most succulent and inviting; but let it remain until there is too much fleece to support, and the wool-forming qualities are not sufficient to grow and support the life of the fleece. Mr. Morrell says the heat or warm weather opens the pores of the skin, and larger fibres are therefore formed. True, it does of all animals; passing off heat from the body, I think, is different from that of producing covering. I find by examination, that the fibre grown in June, is finer than that which is produced directly after shearing, which was done last of April, in mild, pleasant weather. I have been carefully collecting samples of the best wool I could procure, either grown in America or Europe; and I think the best wool I have ever seen, I grew in Mississippi about latitude 32 deg. north. If climate, as Mr. Morrell thinks, and that a cold one, is the only country for producing fine wool, why is England not growing of it for her factories. I do hope Mr. Morrell will examine this subject farther, and give the country his experience. I assert, that the State of Tennessee can grow better wool than Vermont, or any of the northern States, provided the proper stock of sheep be procured—and of course much cheaper, as our winters are about 100 days to feed, and theirs 150 to 180 days, and lands much cheaper. I would be pleased to furnish Mr. Morrell, or any other northern flock-master, a sample of wool grown in our hot climate; then they can compare for themselves; and it is by proper comparisons that we come to correct conclusions. I do hope that Mr. Morrell, and all others, may construe my remarks as trying to add something to this truly important matter, wool-growing. MARK R. COCKRILL.

Near Nashville, June, 1844.

PRACTICAL RECIPES.

From the United States Receipt Book

Burnt Rhubarb in Diarhæa.—It may be useful to know the value of burnt rhubarb in diarhœa. It has been used with the same pleasing effects for more than twenty years. After one or two doses, the pains quickly subside, and the bowels return to their natural state. The dose is from five to ten grains. The manner of preparing it is to burn the rhubarb powder in an iron pot, stirring it until it is blackened; then smother it in a covered jar. It loses two-thirds of its weight by the incineration. It is nearly tasteless. In no one case has it failed where given.

To Extract the Essential Oil from any Flower.—Take any flowers you like, which stratify with common sea-salt in a clean earthen glazed pot. When thus filled to the top, cover it well and carry it to the cellar. Forty days afterwards, put a crape over a pan, and empty the whole to strain the essence from the flowers by pressure. Bottle that essence, and expose it four or five weeks to the sun and evening dews to purify. One single drop of that essence is enough to scent a whole quart of water.

Raspberry Syrup.—To every quart of fruit add a pound of sugar, and let it stand over night. In the morning, boil and skim it for half an hour; then strain it through a flannel bag, and pour it into bottles, which must be carefully corked and sealed. To each bottle add, if you please, a little brandy, if the weather is so warm as to endanger its keeping.

Raspberry Jam.—Take one pound loaf sugar to every pound of fruit; bruise them together in your preserving-pan with a silver spoon, and let them simmer gently for an hour. When cold put them into glass jars, and lay over them a bit of paper saturated with brandy; then tie them up so as carefully to exclude the air.

To Extract Iron Moulds.—Rub the spot with a little powdered oxalic acid, or salts of lemon and water, let it remain a few minutes and rinse in clean water.

Premium Cheese.—For a cheese of 20 pounds, a piece of rennet about two inches square, is soaked about twelve hours in one pint of water. As rennets differ very much in quality, enough should be used to coagulate the milk *sufficiently* in about forty minutes. No salt is put into the cheese, nor any outside during the first six or eight hours it is being prepared; but a thin coat of fine Liverpool salt is kept on the outside during the remainder of the time it remains in press. The cheeses are pressed forty-eight hours, under a weight of seven or eight cwt. Nothing more is required but to turn the cheeses once a day on the shelves.

Tomato Catsup.—To a gallon skinned tomatoes add 4 tablespoonfuls of salt, 4 do. black pepper, half a spoonful allspice, 8 red peppers, and 3 spoonfuls mustard. All these ingredients must be ground fine, and simmered slowly in sharp vinegar for 3 or 4 hours. As much vinegar is to be used as to leave half a gallon of liquor when the process is over. Strain through a wire-sieve and bottle, and seal from the air. This may be used in two weeks, but improves by age, and will keep several years.

To Preserve Apples, Pears, &c.—Take apples or pears, and peel them, then cut them into eighths, observing to extract the core; dry in a kiln or oven until quite hard. In this way fruit is kept in the United States for two or three years. For use, wash the fruit in water, then pour boiling water on it, let it stand for a few minutes and use it as fresh fruit. The water forms an excellent substitute for fresh juice.

Butter—Is improved by working the second time after the lapse of twenty-four hours, when the salt is dissolved, and the watery particles can be entirely removed.

Blackberry Syrup.—We are indebted to a friend for the following receipt for making blackberry syrup. This syrup is said to be almost a specific for the summer complaint. In 1832 it was successful in more than one case of cholera.

To two quarts of juice of blackberries, add one pound loaf sugar, ½ oz. nutmegs, ½ oz. cinnamon, pulverised, ½ oz. cloves, ¼ oz. alspice, do. Boil all together for a short time, and when cold, add a pint of fourth proof brandy. From a teaspoonful to a wine glass, according to the age of the patient till relieved, is to be given.

Cure for Locked Jaw in Horses.—It is said that pouring water along the back from a watering pot, for a considerable time without intermission, will effect a cure. —*Selected.*

CLOVER AS A FERTILIZER.

"S. W." in the N. Genesee Farmer, thus sums up the arguments in favor of plowing in clover:

"Chemistry tells us that a green crop of clover is the cheapest fertilizer for the following reasons:

1st. The stalks and leaves of clover contain according to their weight, about 5 times as much nitrogen (the magic wand of manure,) as herds grass or most other green crops.

2d. The long tap root of the clover brings up from the sub-soil below the reach of the plow, those substances which are wanted in vegetation, retaining them in the leaves and stems of the clover to be given out when plowed under as food for the growing wheat.

Lastly, large masses of the broken roots of clover remain in the ground; these roots are worth, as a manure, according to Boussingault, about four times their weight in stable dung."

STOCK SUBSCRIPTION.

IN consequence of the increased demand for the *new and improved* article called *Poudrette*, made by the Lodi Manufacturing Company, and the prospect in future of a large yearly demand for the article. the Directors of the Company, *to increase the working capital*, have ordered the books of subscription to the stock of the company, under the 6th section of the act of incorporation, to be opened for an additional capital of $10,000, under the direction of the subscriber, as President of the said company.

Notice is hereby given that the books of subscription to the stock of the company, called the *reserved stock* under the 6th section of the act incorporating the company, will be opened at the office of the company, No. 43 Liberty-street in the city of New-York, on Monday the 2d day of September 1844, at 10 o'clock in the forenoon of that day, and will continue open from day to day, until the said stock shall be subscribed for.

The directors have stipulated that an annual dividend in *Poudrette* of 50 bushels to each share, for the term of five years shall be delivered to such shareholders: and after the period of five years to divide equally with the other stockholders. No person is permitted by the act to subscribe for more than 5 shares: and the sum of $100 a share is to be paid at the time of subscription. The *first dividend* on this stock, to be paid in December, 1844.

ANTHONY DEY,
President of the Lodi M. Co.

N. B. Any person at a distance from the city of New-York, wishing to subscribe for from 1 to 5 shares of the stock, may address a letter to the President, authorizing him to subscribe in the name of the writer: and may remit the money as soon thereafter, within a reasonable time, as he can with security to himself, on the receipt of which the certificate will be furnished. A pamphlet will be furnished gratis, containing all necessary information, by applying to the President, post paid. The price of Poudrette per bushel to stockholders, is only 12 cents.

New-York, July 17, 1844.

FINE FARMS FOR SALE.

THOSE very superior Farms situated near Galway Corners, in the county of Saratoga, collectively known as the Earl Stimson Farm, will be sold cheap and on terms most accommodating to the purchasers as to credit. The property consists of about 240 acres, is so situated as to be conveniently divided into three or four farms, all having the necessary buildings, and will be sold together or in parcels, to suit purchasers. Each farm is properly divided into pasture, tilled and wood land, and is in the highest state of cultivation, fenced in the best manner and with the most durable materials. The property comprises among other buildings, a large and convenient hotel, which is a favorite resort of families in the summer on account of the superior healthiness and beauty of the country. The farming buildings of all kinds are most extensive and convenient for all the purposes of agriculture and the raising of stock. The premises also include a country store, a most eligible location for a country merchant, having been occupied as such for about forty years. It is within two hours drive of Ballston, Saratoga, and Schenectady. The farm is well known among leading agriculturists, and in the agricultural periodicals, as the Pattern Farm. For terms, &c., apply to J. OAKLEY,

Oct. 1.—tf. No. 75 Nassau street, New-York.

PROUTY & MEARS'

Patent Cente Daught Self-Shapening Plows

OF various sizes and prices, from $4,50 to $13 each, with an extra point and share. Wheels will be attached when required. These plows are now believed to be the most perfect plows in use. They are strong, and can be kept in repair at a small expense. Among the premiums which have been received for these plows the following may be named: at Worcester $100; Boston $20, and a gold medal; New-York a gold medal; from the Philadelphia Agricultural Society $10; at Wilmington, Dela., first premium; at Govanstown, Md., silver cup; at Prince George, Md., silver spoon. Also Subsoil Plows at 6, 8, 10 and 12 dollars each. For sale wholesale and retail at the Seed and Implement Ware-house, No. 176, Market-st., Philadelphia, by m. D. O. PROUTY.

BEMENT'S AMERICAN HOTEL,

No. 100, *State-street, Albany.*

THE subscriber most respectfully announces to his friends and the public generally, that he has taken a lease for a term of years, the American Hotel, No. 100, State-street, Albany, which has been thoroughly repaired, completely renovated, and newly furnished throughout; and in quality of beds, cleanliness of rooms, will compare with any other establishment in the city.

In location, this house has many advantages, being situated in the centre and on one of the most beautiful and airy streets in the city; within a few moments walk of the Eastern and Western Rail-Road depots, and the landings of the steam-boats; about midway between the Capitol, City Hall, public offices, the banks, post-office, and business parts of the city, renders it very convenient for the man of business.

The subscriber places much reliance on the continuance and support of the *Agriculturists* throughout the union, who may visit the city, and pledges himself to spare no exertions, to render their stay agreeable, should they favor him with their company.

Three Hills Farm will be carried on as usual, under my own super intendance, by a careful manager, and the breeding and rearing improved stock, will be continued as heretofore. C. N. BEMET.

Albany, July 1, 1844.

GREAT SALE OF ELECTORAL SAXON SHEEP.

THE undersigned will sell at vendue the two flocks of *Pure Electoral Saxon Sheep*, belonging to the estate of the late Henry D. Grove, as follows:

1. That at Grainger, Medina co., Ohio, consisting of about 400 sheep, on the farm now occupied by them, on the 30th of *September next.*

2. The home flock, at his late residence in Hoosick, Rensselaer county, N. Y., consisting of about 350 sheep, on the 15th of *October next.*

A rare opportunity is offered to those who may be anxious to improve the quality of their flocks. The following is the opinion of the distinguished manufacturer who has usually purchased Mr. Grove's wool, of the character of these flocks:

"The purest blood in this country was introduced by the late Mr. Grove in his own flocks, the wool from which I have been familiar with since their importation in 1827. In point of fineness and admirable felting qualities, this wool is unsurpassed by any flock in this country, and the fleeces average about half a pound each more than any other I am acquainted with of equal fineness. SAM'L LAWRENCE.

Lowel, April 9, 1844."

Terms of sale, cash.—Reference, Sam'l Lawrence, or either of the subscribers.

Buskirk's Bridge, April 20, 1844.

ELIZA W. GROVE,
W. JOSLIN,
my1.—6t S. A. COOK.

FIELD SEED STORE.

THE subscriber continues to keep constantly on hand at his long established Seed Store, a supply of the best quality and kinds of Field Seeds, viz:

Red Clover, of the large and small growth,
Timothy, Red Top, or *Herd's Grass, Orchard Grass,*
Lucerne, or *French Clover, White Clover,*
Trefoil, Kentucky Blue Grass, &c. &c.

Also, the different varieties of Wheat, as White Flint, Red Chaff, Mediterranean, and English—for sale in lots to suit purchasers at moderate prices, by ISRAEL RUSSELL,

Feb. 1, 1844,—mar. oct. 26 Front-street, New-York

N. B. The following description of some superior English Wheat sown in the month of October last, the product of which will be for sale at the above Store, is given by a respectable English farmer in the State of New-Jersey, who sowed about eleven bushels, a sample of which can yet be seen. "It is called the Uxbridge White Wheat, and is the most noted Wheat they have in England, it being of fine quality, always commands a high price, as the flour is used by the biscuit bakers in London; it is great for yielding, and puts out a much larger ear than any wheat I have seen in this country. I saw when in England, three years ago, on my brother's farm in one field, 120 acres, that yielded 40 bushels and upwards to the acre. It grows very strong, and is not liable to be laid by heavy rains. I will warrant it free from any soil whatever. I did not see in the eleven bushels, a particle but Wheat; and I have sown it on Clover seed, on purpose that there shall be nothing but Wheat; and I will put nothing in the barn with it, so as to put it beyond the possibility of a doubt of its having any thing in it or getting mixed with other Wheat, which through carelessness is often the case. I have grown a great deal of it myself in England, and know from experience that for yield and quality, there is no Wheat to compete with it. Its general weight is from 64 to 67 lbs. per bushel. It is smooth chaff, and easy to thrash, which is not always the case with smooth chaff Wheat."

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DEVON CATTLE.

HAVING had frequent enquiries last season for Devonshire Cattle, I now have the satisfaction to state, that I can accommodate those who wish, with some good Calves, Yearlings or Two-year-olds, Bulls or Heifers. E. P. BECK.

Sheldon, Wyoming Co., July 1844.—2t.

SUPERIOR FARMS FOR SALE.

TWO superior productive farms in Rensselaer county, 2 miles from Hoosic Falls. The farms are about one hundred acres each, and so situated as to be conveniently worked as two or one farm: each having the necessary buildings, and being judiciously divided into pasture and tilled land, all recently fenced with entire new materials in the most durable manner. The land is all of the first quality, and its present state of cultivation would bear a good comparison with any land in the county. These Farms will be sold together or separate, on terms most accommodating as to price and credit. Apply to

Lansingburgh, July 16, 1844. ALEXANDER WALSH.

AGRICULTURAL IMPLEMENTS, &c.

THE undersigned are Agents in this city to sell the following celebrated machines, viz:

Hussey's Premium Corn and Cob Crusher.
Dickey's " Fanning Mill.
Platt's " Portable Grist Mill.
Hovey's Premium Straw Cutter, (Spiral knives.)
Warren's " "
Hull's Stalk and Straw Cutter.

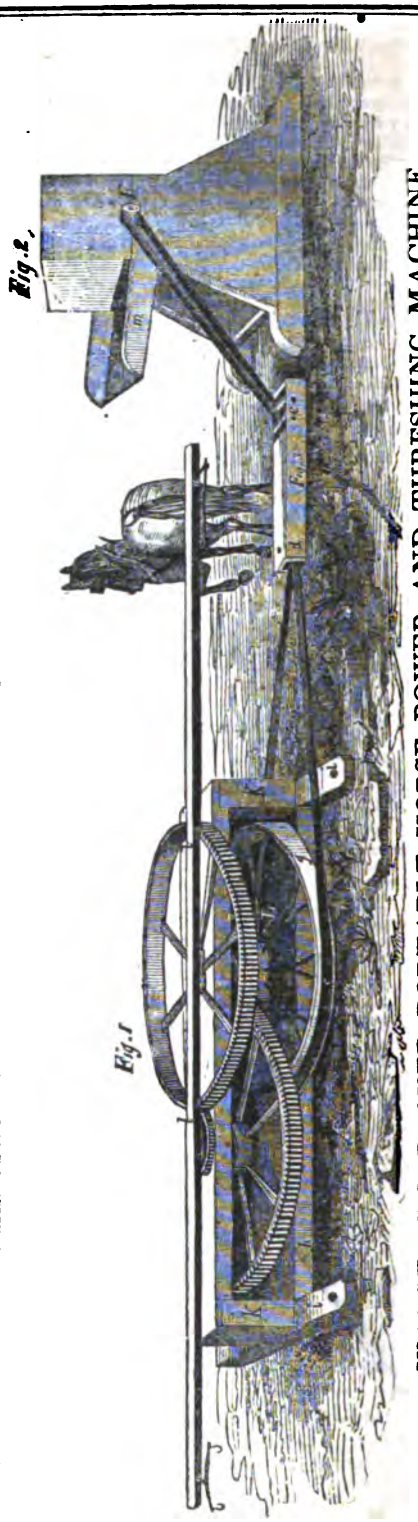
Being proprietors of the now celebrated "Warren's Improved Portable Horse Powers and Threshing Machines," for one, two and four horses, they continue to manufacture and sell them with increased success and satisfaction. Of the two horse machines, one correspondent states, "after a fair trial with barley and wheat with two horses, I can thresh in a clean and thorough manner, at least 30 bushels of the former, in 1 hour, with comparative ease to the horses; and this day, without driving them at all hard, in sixty minutes, 200 sheaves of wheat of a large size were threshed out in a clean and excellent manner, which is about 15 bushels. The straw, after threshing, is easily bundled; and as it comes out whole and unbroken, I consider these machines on that account important; and as only three hands are required to do the work well, I think the great saving of labor such an item as to make them what is much needed by many of our farmers in this section of country."

L. BOSTWICK & Co.
Aug 1—1t. 146 Front-street, New-York

TO FARMERS, HORTICULTURISTS, &c.

GUANO.—The subscribers offer for sale 200 bags, about 220 lbs each, of this valuable and economical manure recently imported from Peru. For particulars as to its quality, uses, &c. beg reference to the Cultivator of May and June, and the June number of the Boston Magazine of Horticulture. WIRGMAN & NEWMAN

July 1—2t. 44 Front-street, New-York.



WARREN'S IMPROVED PORTABLE HORSE POWER AND THRESHING MACHINE.

The prices for these machines are very low, viz:—two horse power alone, only $50—two horse power and thresher, together, $75—one horse power and thresher, $60—four horse power machine, $80—four horse power and threshing machine together, $110. Cash payable in this city on delivery. Liberal deductions made on all machines and implements to dealers. L. BOSTWICK & CO., 146 Front-st. New-York.

(*See L. Bostwick's & Co.'s Advertisement.*)

KENTUCKY BLUE GRASS AND HEMP SEED.

GEORGE, LAPPIG & CO.

Seed and Agricultural Merchants, Louisville, Kentucky,

KEEP constantly on hand a good supply of Kentucky Blue Grass and Hemp seed, which they are willing to sell to eastern dealers on favorable terms. They are also dealers in Millet, Clover, Timothy, Orchard Grass, &c. july—2t.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. I. ALBANY, SEPTEMBER, 1844. No. 9.

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THE CULTIVATOR.

MONTHLY NOTICES.

COMMUNICATIONS have been received, since our last, from Henry Stevens, R. A. Avery, A Friend to Improvement, A Farmer's Wife, Richmond, (2) M., G. F. B., G. B. Smith, Acetosella, Henry Colman, A. J. P., W., C. D., Junius, D. P. Gardner, S., Centre Draught, J. M. Harlan, J. J. Thomas, Doubleyou, H. S. Randall, D., Thos. Affleck, C., A Subscriber, C. F. Morton, G. L. Thompson, A. R. D., W. R. Prince & Co., A Farmer, J. J. T., H. A. Parsons, D. T., (the previous letter not received,) M. D. Codding, J. P. Norton, T., D., Quere.

It will be seen by the above list, that we have received an unusual number of favors from our correspondents during the past month, for which we beg them to accept our warmest thanks. We think we may say with justice, that few publications of any kind, number so many able contributors as "THE CULTIVATOR." We refer with pleasure to the present number, in which will be found valuable papers from Rev. HENRY COLMAN, England—Mr. J. P. NORTON, Scotland—Mr. THOMAS AFFLECK of Mississippi—Dr. GIDEON B. SMITH of Maryland—Mr. A. L. KENNEDY of Pennsylvania—Mr. S. W. JEWETT of Vermont—and DAVID THOMAS, Prof. GARDNER, Col. H. S. RANDALL, J. J. THOMAS, Dr. A. L. PRIME, R. A. AVERY, and JOSIAH HOLBROOK, of this State, and about a dozen others from different sections of our country.

We are indebted to H. GREELY, Esq. for copies of his pamphlet on "Protection and Free Trade"—To J. P. NORTON, for the Edinburgh Evening Chronicle, containing proceedings of the Agricultural Chemistry Association of Scotland—To G. W. ATWOOD, London, for a copy of his Circular, and for the London Pictorial News, containing an account of the Cattle Show of the Royal Ag. Society, with numerous illustrations—To HENRY STEVENS, Esq. Barnet, Vt. for "The Caledonian," the "North Star," and a list of the Premiums of the Caledonia Co. Ag. Society—To E. C. FROST, Esq. for Premium List of Chemung Ag. Society—To J. R. SPEED, for Premium List of Tompkins Co. Ag. Society—To WILEY & PUTNAM, booksellers, New-York, for a copy of "Chemistry, as Exemplifying the Wisdom and Beneficence of God, being the Actonian Prize Essay, by George Fownes, Ph. D."—To H. O'REILLY, Esq. for a pamphlet on the "Arts, Sciences and Civilization, anterior to Greece and Rome, by R. W. Haskins, A. M."

"*C. D.*" will accept our thanks for his parcel, mailed at New-York city. Will "C. D." favor us with his address?

SPECIMENS OF WOOL.—We have received from Col. H. S. RANDALL of Cortland, several samples of wool from his flock of Merinoes, which were noticed in our last number. They are certainly good specimens, and will be found "hard to beat." The reader is referred to another page of this paper for a communication from Col. RANDALL, on the subject of the repeated and unprovoked attacks which have been made on his flock as well as those of several other gentlemen. So far as we have learned, the public seem to have placed a proper estimate upon these attacks, which are likely to do much more injury to those who originated them, than to those against whom they are directed. Such statements as that in our last number relative to the produce of Col. Randall's flock, and that of Mr. Avery in our present number, afford sufficient evidence of the injustice of these attacks.

ANALYSIS OF INDIAN CORN.—We are gratified to learn that we are to have a thorough analysis of several of the principal varieties of Indian corn, from the Chemical Laboratory of Prof. JOHNSTON of Durham, our correspondent, Mr. NORTON, having sent out for specimens for that purpose, which will be forwarded to him in autumn.

MERITS OF PLOWS.—We have received a communication from "*Centre-Draught,*" in reference to the remarks of "J. G. B." in the August number of the Cultivator. "Centre-Draught" declares it was not his intention to offer "J. G. B." a "challenge," and says he is "at a loss to conjecture where Mr. B. obtained that idea." "Centre-Draught," however, declares his willingness to meet Mr. Bergen at any convenient place, and have "a day's trial with the plows for *love,*" which the former thinks would be preferable to a contest for "*money.*"

PROFESSORSHIP OF AGRICULTURE.—We are pleased to learn that a Professorship of Agriculture has been established at Amherst College, Mass., and the appointment of Professor conferred upon ALONZO GRAY, author of "Elements of Scientific and Practical Agriculture."

SHEEP HUSBANDRY.—We have had numerous applications for a work on Sheep, which we have been unable to supply from the fact that no such work as is wanted by our farmers, has as yet been issued. The English works on sheep are too expensive, and, valuable as they are, are not what our farmers need. The work on which Mr. MORRELL is now engaged, will, we doubt not, supply this deficiency. It will not, however, be ready for the press before some time in the winter.

MISSISSIPPI.—We are greatly indebted to our friend, J. J. M'CAUGHAN, Esq. of Mississippi City, for his continued efforts to promote the circulation of the Cultivator in that section of country. In our next, we will give such information as we can collect on the subject about which he inquires in his letter of Aug. 3, from which we make the following extracts:—"You can form but little idea of the wretched state of agriculture in this part of our State; but it is improving, and has been for two or three years, and I have little doubt will continue to do so until in ten or fifteen years we can boast of as much advance in that way as any part of the United States. True, we have a poor soil, but plenty of manure convenient and cheap; a mild, pleasant and healthy climate; all the advantages of sea and land, fresh water and salt, and two of the best markets in the world, New-Orleans and Mobile. I have just taken the 4th crop of grapes off vines of which I planted the cuttings in January 1839, every crop a good one, which I think is conclusive evidence that we have a fine country for vines, &c. Indeed almost every variety of fruit does well here."

Introduction of New Varieties of Fruit.—We have been furnished by Messrs. Wm. R. Prince & Co. of the Linnean Garden and Nurseries, Flushing, with an invoice of "estimable varieties of fruits," sent out to them by the London Horticultural Society in March last, and since extensively propagated by them. The list embraces, fourteen varieties of Apples—sixteen of Pears—eight of Plums—four of Cherries—three of Grapes—four of Raspberries—five of Currants—five of Strawberries, &c. &c. We rejoice at every addition to our choice fruits, the increasing demand for which will doubtless abundantly remunerate our nurserymen for any expense which may be incurred in their introduction.

Buffalo Nursery and Horticultural Garden.—We are indebted to our old friend, Benj. Hodge, the well known proprietor of this establishment, for a copy of his Descriptive Catalogue of Trees, Plants, &c., just issued, which will be found useful to all purchasers. In times past, Mr. Hodge used to be a contributor to our paper, and we, as well as our readers, would be glad to hear from him again.

Center-Draft Plows.—G. L. Thompson, Esq. of Esopus in this State, thinks, from what he has seen in the Cultivator, that this plow is just the thing that is wanted in his neighborhood, and inquires whether they can be had in New-York or Albany, as they cannot send to Boston for them, and also their price. The manufacturers of them would do well to advertise their price, and where they can be had, in the Cultivator.

Geological Survey of New-York.—In answer to the inquiry of "D. T." and others, we would state that we are informed that owing to a defect in the law passed last winter, the volumes of this work will not be sent to the county treasurers for sale, as was expected. A law was passed in 1842 or 3, directing the Secretary of State to make arrangements for the sale of these volumes through the booksellers, at $4.00 per vol. Under this law a contract was made with certain publishers, who were supplied with the first six volumes. The law of last winter made an entire different disposition of the work, directing it to be sent to the County Treasurers, and to be sold at $1.00 per vol. The previous law, however, was not repealed, nor was any provision made for supplying those who had purchased the first six volumes. The consequence is, that no sales of the work can take place until further legislation is had on the subject.

The Cotton Crop—Loss by the Flood.—We make the following extract from a private letter from our friend, C. A. Thornton, Esq. of Wilkinson county, Mississippi, dated Aug. 5:—"Our crops of cotton 'in the hills,' as the country off the river is called, I think are very good; they are, I know, in this neighborhood. I commenced picking a week ago, which is earlier than usual, and if we have a favorable fall, I think my crop will yield abundantly. The loss on the Mississippi and its tributaries, is variously estimated at from 250,000 to 500,000 bales. Some medium point between the two, I presume will be near the mark. The loss of property however, beyond the cotton crop, in houses, fences, stock of all kinds, and the whole of the corn crop, &c. is very immense. Very many families have not only been turned out of house and home, but every means of subsistence has been swept away by the mighty flood; and what makes the matter still worse, the waters not having subsided, there is no possibility of their making any corn before another year."

Medico-chirurgical Review, edited by James Johnson, Physician extraordinary to the late King of Great Britain, and Henry James Johnson, Lecturer on Anatomy at the School of St. George's Hospital, &c. Republished by R. and G. S. Wood, New-York. The design of this publication, is to furnish concentrated practical information relating to Medicine, Surgery, Midwifery Pharmacy, &c. It is issued quarterly. The July number has been received; as usual, it is filled with interesting and valuable matter. Terms, $5 a year in advance.

☞ Those wishing to purchase a valuable farm in one of the most delightful situations in our State, are referred to the advertisement of Mr. Cox in this paper.

☞ The article on the "Cultivation of Fruit," in "The Agriculturist," for August, should have been credited to "The Cultivator"—also the article on the "Culture of the Strawberry," in the Cin. Atlas of Aug. 15—also "Cutting Bushes," &c. in the Chambersburgh Times of Aug. 19.

☞ Mr. Sanford's buck Consul, figured in this paper, will, we learn, be exhibited at the State Fair at Poughkeepsie.

Honorary.—At a meeting of the Indiana Horticultural Society, at Indianapolis, June 29, A. J. Downing, J. J. Thomas, Alexander Walsh, and R. T. Underhill, of this State, were, on motion of Rev. Mr. Beecher, elected honorary members of the Society. At a recent meeting of the Cleveland Horticultural Society, the same honor was conferred upon David Thomas, A. J. Downing, and J. J. Thomas.

The Agriculturist Almanac.—We have a very pretty Almanac with this title, from the office of the Tennessee Agriculturist, Nashville, edited and illustrated by Charles Foster.

"**Chemistry, as exemplifying the wisdom and beneficence of God**, by George Fownes, Chemical Lecturer in the Middlesex Hospital Medical School."—This work is a *prize essay* on the subject indicated by its title. It is arranged under the following heads:—The Chemical History of the Earth and the Atmosphere. The Peculiarities which characterize Organic Substances generally.: The Composition and Sustenance of Plants. The Relations existing between Plants and Animals. In the execution of this work, the author has well accomplished his object, and has furnished a treatise most agreeable and instructive, not only in a physical, but also in a moral and theological view. New-York: Wiley and Putnam.

Night Soil.—Our farmers might add materially to their supply of manure, by constructing their privies so as to enable them to make use of their contents. A gentleman from Connecticut informs us that he mixed his night soil with swamp muck, adding a small quantity of lime and ashes, and made manure enough for five acres, which he planted to corn, and that the crop is equal, if not superior, to any one he has seen.

The Hessian Fly, &c.—I was very much pleased with the article in the August No. of the Cultivator, on the wheat midge and Hessian fly. The writer of it is perfectly correct in every particular of the natural history of these insects. I am the more pleased with the article on account of its furnishing another instance of the progress of truth and the dispersion of error. There are few subjects of agricultural discussion that have elicited more attention than this: and I know of scarcely one that has caused the propagation of so many errors of fact, and unsound reasoning. A year or two since I endeavored to contribute my mite to the propagation of information on this subject, through the medium of the American Farmer, and am glad to find that others are doing likewise.

To prevent Tea-kettles coating with lime.—Ellis' Housekeeping made Easy, which by the way is quite unsuited to the republican simplicity which *ought* to prevail on this side of the big waters, whither the authoress has never yet come, contains the following really valuable preventive of the incrustation of lime on the inner surfaces of tea-kettles, and every thing else of the kind, so often the annoyance of every clever, well-behaved woman:—"Put the shell of an oyster within the vessel whenever it is used, and the lime, instead of adhering to the sides of the vessel, will all be deposited on the oyster shell, which thus forms a nucleus for its attraction Tried by one of the first women in the world, and found infallible."

J. J. T.

Foreign Correspondence.

LETTER FROM MR. COLMAN.

London, July 19, 1844.

Luther Tucker, Esq.—Dear Sir—I have seen with poignant regret the annunciation of the death of Willis Gaylord, Esq., your colleague in the editorial department of your justly valued and widely circulated journal. If the length of a life is to be measured by its usefulness, his certainly greatly exceeded the common lot. His labors have been abundant, and of eminent utility. To an intellect of uncommon power, he united a corresponding thirst for knowledge. His attainments in science and useful knowledge were unusual; and with these in an eminent degree were associated a refined taste, a clear discernment of the practical and the useful, and a most happy and agreeable talent of communicating to others, what he possessed. He has contributed immensely in the country, to the cultivation of a taste for rural pursuits and pleasures, and for the promotion of agricultural improvement. I wish very much that a selection could be made for publication from his writings, as it would form a book not only of delightful reading for the parlor, but of admirable utility for the public schools; and I should suppose that the Commissioners for forming District and School Libraries, for I believe a Board of that kind exists in the State of New-York, would encourage the publication.

Mr. Gaylord affords one of those beautiful and remarkable examples, which we sometimes meet with, of men contending with heroism against difficulties, and nobly triumphing, where others would despair or sink in idleness and useless repose. It is well known that the diamond in his instance, was set in a very inferior casing; that his person was so greatly deformed as to prevent his going much abroad or mingling much in society. Yet how superior was the tenant to the dwelling; his powerful and well endowed mind, to his weak and deformed body. The very fastening down of the person, appears only to have made the mind more active, more impatient of restraint, more bold and excursive in its flight. Happy is it when our friends can thus depart, giving us nothing to regret but their removal from our intercourse and their cessation from their useful labors; leaving behind them a track luminous with the beauty of virtue and beneficence, and presenting an example in the highest degree encouraging to useful industry, to intellectual cultivation, to perseverance in every struggle against difficulties, and to a life humbly, quietly and conscientiously devoted to doing what good we can, by the means which Heaven affords in the place where it has placed us.

I want through you, my dear sir, to assure my friends how much obliged I am by their kind reception of my First Report, and to express my regret that I have not been able as yet to give them more of the result of my labors. I bespeak their patience. I assure them I am not idle or negligent; and if Heaven spare my life, in due season they shall hear from me as fully as they can desire. I feel it due to them as well as to myself, to make my work as little unworthy of their acceptance as I can possibly render it; but they would not have me recite my lesson before I have learnt it. Even a moderate share of self esteem may persuade a man to think his labors of much more importance than they are; but surely in this case, a proper and grateful respect, which I deeply feel for my patrons, should induce me to perform my work as well as I can, and not to give them what would be the result only of crude and partial observation. I cannot fix any definite time for the appearance of my Reports; but I have no doubt of bringing them very nearly within the time of two years, which was assumed for the enterprise.

I want through you to say another thing to many personal friends to whom I designed and ought to write. I hope to redeem my reputation with them presently; but they will make some allowance for my constant engagements, for a very extensive correspondence both at home and here, and for a mind harrassed with a continual succession of exciting objects. One more thing I am sure I may assume, that as I never desire to remember an enemy, I am equally certain never to forget a friend.

Yours truly, Henry Colman.

LETTERS FROM MR. NORTON—No. III.

Lab. of Ag. Chemistry Association,
Edinburgh, July 29, 1844.

Messrs. Editors—I have lately returned from an excursion through the north of Scotland, with Prof. Johnston. One of the ways by which the Agricultural Chemistry Association seeks to diffuse knowledge is through public lectures. Prof. Johnston, as the officer and representative of the Association, is allowed to accept invitations from those places where a desire for instruction is aroused. In pursuance of this branch of his duties, he has been travelling for the last two weeks, and has delivered lectures in four of the Highland towns.

It would give me much satisfaction to give extended reports of these lectures, admirably adapted as they are to the wants of the agriculturist, but each would require a separate letter, and I must therefore content myself with a mere sketch of the proceedings.

Our first point of destination, was Inverness. This town, having about 12,000 inhabitants, is situated at the head of the Moray Firth, and is in effect the capital of the Highlands. Prof. Johnston was invited there at this time particularly, because it was the period of the great Wool and Sheep market for the north of Scotland. The quiet of Inverness is for a few days effectually disturbed by a concourse of buyers and sellers; the former from the Lowlands and manufacturing districts of England, and the latter from the hills, where some of them can count their 30 and 40,000 fleeces. A singular feature of this Fair is, that although business, sometimes amounting to £300,000 is transacted, not a sheep or fleece is visible. The character of each man's flock is known, and false representations would ruin him ever after.

The Professor delivered three lectures at Inverness, giving, as far as possible within so limited a space, a sketch of the science of Agricultural Chemistry, in connection with instruction upon various important practical points with which it is more or less connected. The first lecture was upon the constitution of soils, and the methods of improvement. Under this head was included a full and most satisfactory argument upon drainage; a simple and concise reference to the principal constituents of fertile and barren soils, and the advantage to be derived from geological knowledge.

The second, was upon the inorganic elements of plants, and included naturally, manures, as the means of restoring or supplying these elements to the soil.

The third, brought into view organic substances. The beautiful analogy between the composition of the soil, the food, and the animal was also explained, and much light thrown upon the subject of feeding.

Though the business of the Fair was engrossing, a respectable audience daily assembled, and listened with marked attention. An enthusiasm was aroused, which showed itself at every public meeting. A breakfast was given to Prof. Johnston at which he introduced the project of an Agricultural newspaper for Inverness, Ross, and the adjoining counties. It was carried by acclamation, an editor at once selected, and a long subscription list procured before noon.

Our next stopping place was at Nairn, the county town Nairnshire. Two lectures were delivered there to a full audience. Some of their peculiar obstacles to successful cultivation were spoken of, and from the satisfied appearance of many a shrewd face, it was easy to see that a new path was opening before them.

We then proceeded to Forres in Elginshire, where but one lecture was given. It was sufficient to arouse the thirst for more, and the stout, hardy farmer who presided, at the close said, "he was sure it had done them good."

The last place was Keith, in Banffshire. A large number of people were together, some coming from a distance of eight & ten miles. The lecture occupied more than two hours, yet I heard one of the farmers say, "he would gladly have listened two hours more." Keith being in a high bleak situation, the advantage to be derived from belts of plantation, to shield the land from the cold wind, and from draining, was dwelt upon, very evidently with good effect.

This tour has most completely confirmed my previous impressions as to the immense increasing influence which the Agricultural Chemistry Association, yet in its infancy, has exerted and will continue to exert on the prosperity of Scotland. My short sketch of our operations and progress, is not more incomplete and general, than was the notice which Prof. Johnston was compelled to take of many most important branches of his subject. As he said, "it was but a commencement," yet that commencement opened to view a fair field beyond; it awakened inquiry, it staggered old prejudices, it gave the farmer a new and elevated view of his favorite pursuit. Thus aroused and encouraged, he will not be content with the mere glimpse afforded him; he will have recourse to books, and all sources of information; his example and success will stimulate others, and thus, as is now the case here, the work will go on with great rapidity. One of the most intelligent and most successful Lothian farmers, expressed in my hearing his firm conviction, that had it not been for the introduction of portable manures, and the suggestions of chemical science, the rents in Scotland must before this have been lowered. Another gentleman after reading Prof. Johnston's Catechism of Agricultural Chemistry, wrote to thank him for having *given him a profession*.

The Association originated with tenant farmers, and has by them principally been sustained; though some of the proprietors have shown their appreciation of its influence. It has thus a thoroughly practical character, and its officer, Prof. Johnston, from the scrupulous accuracy of his statements, both in public lectures and in his works, continually increases its reputation. The present visit has been to a part of the country where it was but partially known. A large number of new subscribers was obtained, letters asking for information, and soils and manures for analysis are already coming in, orders for books have been sent on, and all things show that an awakening has taken place.

These improvements have been and are going on among the tenantry, who as you know compose the great mass of Scotch and English farmers, and among whom it must be always a painful thought to the improver that these fruits of his toil may at the end of his lease, be the cause of an increase in his rent, or go into the hands of a stranger. What may we not therefore expect when such institutions are founded on our own soil, where the farmer being a proprietor, feels that in reclaiming and fertilizing the soil he is not only increasing his own store, but laying up a rich inheritance for his children also. Very truly yours,

JOHN P. NORTON.

FOREIGN ITEMS.

By the Acadia, which arrived at Boston on the 18th ult., we received our usual files of foreign papers.

The Crops, &c.—The grain crops in England and Ireland are likely to come in pretty well, notwithstanding the fears which had been entertained on account of the drouth. Wheat began to decline on the first of July, and is now 4s. to 5s. per quarter lower than it was four weeks ago.

The "Banker's Circular" says—"It appears to us that the cultivation of wheat has been progressively increasing ever since 1839, and that a greater breadth of land has been applied to the growth of that grain in the British Islands in 1844, than in any preceding year." The same circular further observes, that "a good wheat harvest in England, is usually followed by a good wheat harvest in most parts of Europe. The culture of wheat has been very much stimulated and extended in all those countries from which we have been accustomed to draw our supplies."

From the circular of GEO. W. ATWOOD, dealer in American provisions, &c. London, we learn that there is but little to encourage the shipment of flour from this country, even at the low prices it is now selling here. American pork is said to be firm at prices varying from 40s. to 50s. per bbl. in bond. Money is abundant at 1¾ to 2¼ per cent. For cotton, the demand was steady, at a trifling advance.

The papers contain accounts of the late Show of the Royal Ag. Society at Southampton. The Mark Lane Express says it was not equal as a whole to the preceding Shows of the Society, though the remark is intended principally in reference to the exhibition of animals—the show of implements was thought superior. The number of persons that visited the show-yard on Thursday of the exhibition, was *thirty thousand*. The total receipts for admissions during the Show, were upwards of $12,000.

Letting and Selling Rams.—Mr. Jonas Webb, the celebrated breeder of South Downs, held his annual letting of bucks on the 16th July. The services of seven of them were sold at auction for the season, at an average of £31 each—the highest price obtained for any one, was £76, which was paid by the Duke of Richmond.

Mr. Wm. Hewer, the eminent breeder of improved Cotswolds, held his annual sale of rams on the 17th July. A large company was in attendance. Forty-four sheep let and sold, averaged £11; the ten highest priced ones, averaged above £21 each. Several offers, some of which were said to be as high as 80 guineas, were made and refused for a young buck intended by Mr. Hewer for the use of his own flock.

Royal Presents.—Prince Albert has presented the Emperor of Russia, with a Yorkshire stallion, valued at 600 guineas, a Durham bull valued at £300, and a full blooded Leicester buck.

Poisoned Sheep.—A flock of sheep has been poisoned by eating "wake-robin," (*Arum maculatum*.) They were induced to eat the plant from its remaining green in a field which was burnt up by the drouth.

New way to make Butter.—The wife of a farmer saves herself the trouble of churning, by the following contrivance: She ties up her cream in a linen cloth, over which she places a piece of print, and buries the whole in a damp place in the garden for 24 hours; she then takes it up, and turns the cream (which by this time is in the shape and consistency of a pudding) into a bowl, and by stirring it with a wooden spoon, the butter quickly separates from the butter-milk, and is said to be sweeter than that produced by the ordinary method.

☞ How many pounds of pork will a bushel of barley make? An English farmer says: The fatting of hogs is profitable when a pound of green bacon, when it is first dried, is worth more than the tenth part of the price of a bushel of barley, for a bushel of barley is supposed, with good management and a good breed of hogs, to produce 10 lbs. of bacon.

Experiments in Cheese making.—Sulphuric acid, it is said, will produce a larger proportion of curd than rennet. Professor Traill has made some experiments on this subject. He thinks, from the trials he has made, that the acid will not answer—it communicated an unpleasant taste and smell to the cheese.

Agricultural College in England.—From our English papers we perceive that such progress has been made, that the establishment of this institution is considered certain. The Society, it is said, has now resolved itself into a tangible shape, and will immediately commence operations. *Port Farm*, consisting of about 400 acres, within one mile of Cirencester, the property of the Right Hon. Earl Bathurst, has been fixed on as the site for the example farm.

Sowing Machine.—T. Sullivan, in his "Sketches of East Lothian Husbandry," published in the Agricultural Gazette, thus describes a machine for sowing grain and grass seeds.—"A machine very extensively used in this county, is that for sowing corn and grass seeds, broadcast. Its great recommendations are, the regularity with which it distributes the seed, the saving thereby effected, and in remedying the inconvenience and loss of seed arising from sowing with the hand during high winds. The machine consists of an oblong box, 18 to 19 feet in length supported upon a frame-work on three wheels. A revolving horizontal spindle, with pinions in the inside of the box, scatters the seed. Clover and grass seeds are now rarely sown by hand, this machine being peculiarly adapted for sowing such small seeds, and obviating the dif ficulty always experienced in distributing the small allowance usually given per acre, especially during winds, when from the lightness of the seeds, they are liable to be blown away." Would not such a machine be exceedingly useful in this country ?

Experiment with Charcoal and Salt.—The Earl of Essex gives an account in the Agricultural Gazette, of an experiment made by him with charcoal, and charcoal combined with salt, applied to turnep-seed at the time of sowing. In the first case, the seed was mixed with twelve times its bulk of charcoal dust. In the second case, the seed was mixed with five times its weight of salt, and nine bulks of charcoal; and in the third case, the seed was put in alone. The ground was very dry and parched, but the seed where the charcoal, and the charcoal and salt, was used, came up in five days. The plants where the clear charcoal was used, however, grew much the most rapidly—where nothing was used, the plants came up badly, and after they were up, did not grow near so fast as the others. The Earl also tried the same application of charcoal with the seed of the Belgian carrot, which vegetated several days sooner than carrot seed usually does, even under favorable circumstances. He also sowed one row of turneps with double the quantity of salt above mentioned, which totally destroyed the seed. Nothing but the substances named were used, and the Earl thinks that the quick vegetation and rapid growth, was attributable to them.

Trial of Plows.—In a late number of the Cultivator, we mentioned that Mr. Colman had presented to the Council of the Royal Ag. Society, two American plows—one of which was the Centre-Draught plow from Prouty and Mears, and the other the Eagle plow from Ruggles, Nourse and Mason. These plows were tried in connexion with several English plows at the late show at Southampton. In reference to the trial, the editor of the Farmer's Magazine says,—"The contrast between the working of these trans-atlantic plows and the English ones was most striking, and was the most perfect practical refutation to the self-congratulatory remarks of Daniel Webster, who, on his return from England, stated that he had not seen any implement in England worthy of comparison with those of America. We particularly examined the work of these plows, and compared with the level and accurate furrows made by the English plow, which appeared as though cut out by a plane, were coarse, rough, and irregular. The work of the competing plows, with the two exceptions we have alluded to, was generally good, especially so, considering the state of the soil."

We know not how much justness there may be in these remarks, but would suggest that our agricultural societies test the two kinds of plows mentioned, as well as others, with the best English ones. At the late trial at Southampton, the first prize of £10 and a silver medal was awarded to Messrs. J. R. and A. Ransome. The same gentlemen also carried a prize for another plow calculated for turning furrows at an angle of 45 degrees. These Ransome plows have long been celebrated. In our Feb. No. (page 44) we spoke of one of them in possession of Mr. Noble, near Massillon, Ohio. We have witnessed the operation of that plow, and are certain that it is a very superior implement, both as regards the complete execution of the work, and its lightness of draught.

Agricultural Chemistry Association.—We acknowledge the reception of a number of the Edinburgh Evening Courant, containing an account of the last meeting of the subscribers to this association. We had prepared an abstract of the doings of this meeting, but the necessity for its publication, seems to be superceded by the nature of the contents of Mr. Norton's letter, which, it will be seen, furnishes a most interesting sketch of the progress which the Association is making, and the favor with which it is regarded by the practical farmers of Scotland.

Guano.—It would appear from Lloyd's List, that not fewer than one thousand ships have sailed from various ports in Great Britain for guano. Thus, no sooner does a new avenue for trade present itself, that it is instantly glutted.

CATTLE SHOWS THIS SEASON.

New-York.—State Fair at Poughkeepsie, Sept. 18, 19—Dutchess Co. at Washington, Sept. 12, 13—Rensselaer, at Troy, Oct. 2, 3—Chatauque, at Jamestown, Sept. 25, 26—Onondaga, at Syracuse, Oct. 2, 3—Chemung, at Havanna, Oct. 2, 3—Montgomery, at Fonda, Oct. 11, 12—Orange, at Goshen, Oct. 23—Columbia, at Hudson, Oct. 1—Erie, at Buffalo, Sept. 25, 26—Genesee, at Batavia, Sept. 25, 26—Cortland, at Homer, Oct. 2, 3—Ontario, at Canandaigua, Oct. 2, 3–Wayne, at Lyons, Oct. 28—Monroe, at Rochester, Oct. 8, 9—Orleans, at Albion, Oct. 3—Cayuga, at Auburn, Oct. 9, 10.

American Institute.—The annual Fair of the Institute commences on the 7th, and closes on the 18th October. The Silk Convention will be held on the 9th and 10th. A Convention of Farmers and Gardeners is to be held on the 11th and 12th, to take such measures as may be deemed advisable to promote their interests, and particularly to urge on Congress the necessity of establishing a National Bureau or Board of Agriculture. All Ag. Societies are requested to send delegations to this convention. Plowing Match, Oct. 15. Exhibition of Cattle, &c. on the 16th and 17th.

The Tompkins Co. Ag. Society hold their Fair at Ithaca on the 4th and 5th of Oct. Taking into view the intimate connection between the farmer and mechanic, this Society have offered a large number of premiums for the products of the workshop, such as carriages, carts, harness, saddles and bridles, chairs, axes, boots, shoes, barrels, pails, firkins, cabinet work, &c. &c. These premiums will interest the mechanics in the Fair, and can hardly fail to add materially to its interest. It would undoubtedly be good policy for most of our Ag. Societies to adopt a similar course.

Massachusetts—State Show at Worcester, Oct. 9, 10—Hampden, at Springfield, Oct. 16, 17—Middlesex, at Concord, Oct. 2.

Vermont—Caledonia, at Danville, Oct. 3.

South Carolina—State Show at Greenville, Sept. 11—Newberry, Sept. 25.

Pennsyvlania—Philadelphia, Oct. 16, 17.

Ohio—Hamilton, Sept. 19, 20—Coshocton, Oct. 25.

Delaware—Newcastle, at Wilmington, Sept. 11, 12—Address by that veteran in the cause of agriculture, J. S. Skinner, Esq. of Washington City, who we are gratified to learn will be present at our State Fair.

FARMERS' CLUBS AND DISTRICT-SCHOOL LIBRARIES.

The formation of Farmers' Clubs, we consider one of the best means of eliciting and disseminating valuable information on agricultural subjects. They are becoming common in England and Scotland, and several have already been formed in this country. The meetings are held periodically—weekly, semi-monthly, or monthly, as suits the convenience of the members. Subjects of a practical nature are given out at these meetings, and each member gives his views in regard to them. Questions touching the relative value of different crops for different soils or locations—the relative profits of different animals—the soil, and mode of cultivation best adapted to different crops, are here discussed, and the experience and practice of each one is made known. By a comparison of the theories and practices thus brought forward, those which are most consistent and reasonable, can hardly fail of being perceived and adopted. An idea possessed by one, is made known to all—may be subjected to a practical test—if erroneous, it is shown to be so—if correct, its usefulness is general.

It seems to us that the District-School Libraries of this state, might form an excellent nucleus for Farmers' Clubs. A portion of the books in these libraries ought to be such as would assist the farmer in the investigation of the principles, and the adoption of the best system of agriculture. The places where these books are kept, would be proper places for holding the meetings, and the contents of the books might frequently constitute topics for discussion. We recommend these suggestions to the attention of our readers.

IMPROVING LAND BY GREEN MANURES.

It is believed by some, that the best kind of vegetable growth for turning in, in the form of green manures, is Indian corn sown broadcast. If it be intended to apply lime to the land, it would be well to do so the fall before. Then as early in the spring as circumstances will permit sow corn broadcast, say three or four bushels to the acre, and as soon as it has grown as high as it can be conveniently turned under with a deep working plow, turn it under, and immediately sow another crop in the same way, turning that under as before, but with a medium plow run crossways of the previous furrow. In the middle and southern states, three crops can thus be turned under in one season. It is believed that no system of manuring or renovation, except the heaviest application of stable manure, can compare with this plan in its results. If the land be very poor the first crop will be very light, but light as it may be it will yet add a considerable portion of the elements of vegetable nutrition to the soil; and thus the second crop will be greatly improved, and the third will be all that can be desired. It is believed that in this way four times as much improvement will be effected in one season, as can be by means of clover in three or four years. For this purpose farmers in the north should use the tall kinds of southern corn, as being of more rapid growth and furnishing vastly more matter for the soil. •

LIMING LAND.

In the application of lime to land, it seems to me that one great object is generally overlooked. All the lime intended to be applied in one season is generally spread at once, thus leaving it in a kind of stratum, instead of being, as it ought to be, thoroughly mixed with the soil. Would it not be better to proceed as follows: Suppose you intend to apply sixty bushels to the acre. First spread twenty bushels carefully over the acre of ground; then turn the soil with the heaviest, or rather deepest operating plow you have. Then spread twenty bushels more in the same way, and turn that in with a medium plow passing across the previous furrow. Then spread the remaining twenty bushels, and harrow that in, or turn it under with a light seed plow. This would effectually mingle the lime through the whole depth of the soil. Any one can see the reason of the thing and the advantages of it; the only objection to it being the labor; but that is not more than is requisite to bring the soil into the proper condition for seeding. If wheat or any small grain be intended, then the third application can be made at the time the seed is sown. I do not much like the usual plan of applying thirty bushels one year, and three or five years thereafter thirty bushels more, and so on, unless deficiency of means prevents the whole being applied the same year. The idea generally is, that, like manure, the first application is exhausted or nearly so in three or five years, and that then another application is necessary. I do not think the lime is exhausted, but the small quantity applied having been diffused through the whole of the soil by successive plowings, the soil is not sufficiently calcareous. Now if we apply the whole quantity as suggested above, the soil to its entire depth will have become charged with it; and, if enough is applied I do not believe it will be exhausted in twenty years, if then. •

BIG HEAD IN HORSES.

A correspondent, with the signature "T.," of Greenwood, Miss., wishes information on the disease in horses called "*big-head.*" We do not find this disease in any catalogue or treatise at hand, and are not aware that it is known in this part of the country. In the fourth volume of the American Farmer, a writer speaks of having cured it by running a hot iron through the swollen parts. But as little seems to be known in regard to the disease, we give the remarks of "T.," and if others are acquainted with a better mode of treatment, we hope they will communicate it.

"I presume you are acquainted with the disease—its name is peculiarly expressive, so that one could not well be mistaken, even though he had never seen it before. It is the second horse I ever owned (out of a vast number) that has been similarly afflicted. That case, I believe I cured; but the cure was almost as bad as the disease. I will give it you. After having *perforated* the enlarged part, or swelling of the bone, in several places with a brace and bit, (hole about 1-8 of an inch in diameter) without as I could perceive, any beneficial effect, I was recommended to make an incision under the skin just or near the top of the swelling, and put in 10 grs. *arsenic*, put up in thin paper, on each side of the horse's face. This I did, and you may imagine the effect produced in a day or two; the poor horse's head soon assumed a size varying but little from a flour barrel; in time, mortification of the part near where the arsenic was put followed, the whole of which, in about three month's sloughed off, and on one side taking part of the bone with it. I left the sore too much exposed, which I believe was the cause of the bone coming off. To cure it, which required a long time, I used only a greasy cotton cloth bound round the head so as to prevent it being rubbed off. This cure is *certain* I am told, but so tedious, besides being objectionable in other respects, that I will only be tempted to try it again as a last resort."

VALUE OF URINE.—The great waste of manures, (as well as other matters,) is the crying sin of the American farmer. Even the best farmers in this section and in New-England, where greater economy is generally observed in saving manure than is generally practiced in other sections, we seldom find proper means used for the saving of *urine*, which, when carefully preserved and applied, has been proved of great value. In some parts of Europe, great pains are taken to save and apply this substance in the most profitable manner. In Holland and Flanders, it is said to have been the means of bringing much of the original sandy and sterile tracts of country, into a state of garden cultivation. The Heath and Broom which grows on the poorest soils, are encouraged, till their roots bind the loose and white sand together. These being cut, small patches of diminutive clover are induced, or a few patches of potatoes are planted, when a cow is kept. The urine is collected carefully in a small tank, or perhaps a cask sunk in the earth, and this is the nucleus from which, in a few years, a little farm will spread around. W.

SHEEP OF THE LATE H. D. GROVE.—The wool from these sheep has lately been disposed of at Lowell. It was sold in assorted lots, as follows:—158 lbs. at 85 cents per lb.—361 lbs. at 70 cents—538 lbs. at 62 cents—137 lbs. at 60 cents—197 lbs. at 50 cents, being an average of 68 cents per lb. for the whole. These fine sheep, it will be remembered, are soon to be sold, for the benefit of Mr. Grove's family. For time of sale, &c. see advertisement.

HEDGES FOR THE SOUTH.—Mr. AFFLECK, in a letter to the Planter's Banner, speaks of the Cherokee or nondescript Rose, as one of the best hedging plants for the south. He says—"It has but one objection—that it is a *vine;* and if left to itself will cover a space of from six to ten feet. It is hardy; grows readily from cuttings or seeds; forms with a moderate degree of care, a good fence in three or four years; when well grown is utterly impassible to man or beast; will bear the knife well in pruning, (which necessary qualification in a hedging plant, I fear is wanting in the Maclura,) and forms a beautiful sight all the year round, with its glossy, evergreen foliage. When in bloom, it is indeed most beautiful, with its long wreaths of snow white flowers—the whitest of all white roses. There are miles of splendid hedge of this plant in this vicinity—more than sufficient, one would think in the way of example, to have entirely abolished the unsightly, expensive rail fence, particularly in a country that must soon be void of timber. I am preparing for some miles of it, this fall—but not so extensively as I would if it were not that I am experimenting with another plant that I am confident will form better and more beautiful hedges than even the famed English Hawthorn. It is the 'Microphylla Rose,' (red) a standard, and just the plant for this purpose."

RECLAIMING WET LANDS.

August and September are the best months for reclaiming boggy and wet lands. The first object should be to get rid of the surplus water. Uplands, situated on a hill-side, or where there is some declivity, are sometimes too wet, and in many instances may be underdrained to advantage. In such cases a good mode is to dig ditches, two to two and a half feet deep, and if there are plenty of small stones at hand, fill the drains with them to within twelve or fifteen inches of the surface—put on a few hemlock or pine boughs, or turf with the grass-side down, and fill the ditch with earth. Drain-tiles, made of clay and burnt in a kiln, are made and extensively used in England, and we do not see why they might not be made and used to good advantage in this country. We have a great deal of land in our hill districts, where under-draining might be practiced with great profit. Its effects in many instances would be to render those lands which new produce only a sour, watery herbage, suitable for cultivated crops and artificial grasses. Loosening the sub-soil of such lands by the sub-soil plow, has proved of great utility. It has been practiced very extensively in Scotland by Mr. Deanston, the inventor, (as he has been called,) of the sub-soiling system, and so far as it has been tried in this country, its effects have been equally satisfactory.

In draining bogs, the first step should be to cut off the spring water, which will generally be found to proceed from the surrounding high-lands. Cut the ditches in such a manner as to intercept this water, and convey it to the general outlet. When this is done, it may soon be seen whether transverse ditches, and how many, will be required.

After the ditches have been completed, and the land has had time to settle, the next business will be the extermination of bushes, or any wild growth there may be in the way. If there are "tussocks" or hassocks, they must be cut up with a sharp, strong hoe, made for the purpose, called at the implement-stores, a "*bog hoe.*" If there are alders and other bushes, as is often the case, they had better be pulled up by the roots. If the draining has been well done, the land will be solid enough the succeeding season to bear a team, and a pair of good oxen, with two men, and proper tools, will make rapid head-way in clearing out the roots. A large iron claw, called a root-puller, is very useful for this business. It is a bar of iron, say an inch and a half square, bent round so as to form two large prongs, sharpened at the ends, and with an eye at the upper part to admit the hook of a chain. This claw is fastened into the stools of bushes, and the cattle soon jerk them out.

If the land is free from large roots and tussocks, it may be brought into a fit state for sowing grass-seed, mostly by the use of the plow and harrow. In some parts of the country, a plow is fitted expressly for the purpose. The share is cast in such shape as to admit of a plate of steel being bolted on, which constitutes the point and edge, the whole fitting nicely together. This plate of steel is ground to a sharp edge, and with a sharp steel cutter or coulter, and a wheel at the beam, the plow cuts the furrow with as much exactness as a carpenter would cut shavings with a jointer from the edge of a board. Much of the prairie land in the western country might be worked with such a plow to excellent advantage.

After the ground is plowed, care should be taken in harrowing, and all the subsequent working, that the furrows do not get broken, and the wild grass brought to the top. The ground should be made fine and level before the grass seed is sown.

These lands, though they sometimes produce good crops of grain and vegetables, are generally most profitable for grass. The kinds of grass which usually succeed best on reclaimed bogs, are timothy, (called herds-grass in New England,) and red-top. There are several kinds known under this latter name. One is quite small and comes into bloom considerably earlier than timothy. It is best to sow those kinds of grass together which are fit to cut for hay about the same time, and for this reason we should prefer the larger and later kind of red-top for sowing with timothy.

We prefer August, (though if the weather is favorable the first of September will do,) for sowing these lands to grass—indeed we believe that for the advantage of the grass merely, this is the best time for sowing it on *any* land. When sown at this time, it escapes the drouth of the first season, has all the benefit of the first rains of autumn, and gets sufficient root to sustain it against the frost of the succeeding winter. It is not ready for the scythe quite so early but will give about as good a crop even at the first mowing, as if sown in the spring. Grass sown in spring, with grain crops, is over powered and kept feeble by the grain, and if the weather is dry about the time the grain fills, or at the time it is taken off, a large portion is sure to be killed, and the consequence is weeds occupy the ground, and the hay-crop is poor in quality and deficient in quantity.

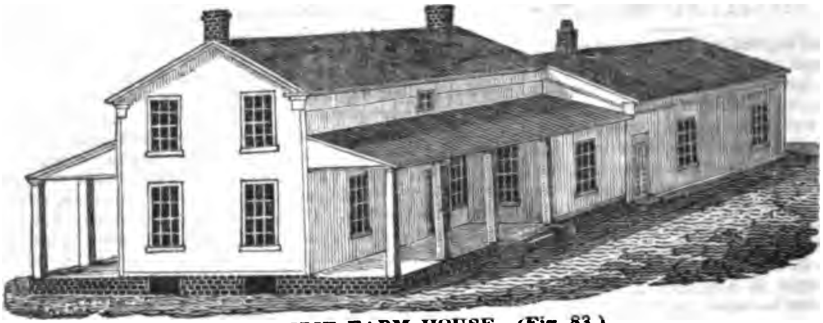
Many reclaimed bogs produce grass of very good quality, in great abundance for several years, without any outlay of expense, except to keep open the ditches, which must always be done. It should be made an object to get a close, thick sward as soon as possible, because this will tend to prevent any foul growth from springing up. When the grass begins to decline, as it will after some time, and rushes and wild stuff begin to come in, take the plow, with the share and cutter as sharp as they can be made, and when the ground is sufficiently dry in August, turn over the sward so smoothly that not a single spire of grass can be seen. Harrow lightly, (lengthwise the furrows,) with a light harrow, sow it again to grass, and pass a roller over the land. It will produce as good crops as before, until, from the natural decline of the grass, it may be necessary to go through the same process again. Experience has proved the success of this plan.

Sometimes the burning of the bushes, roots, and turf of these bogs, has a good effect in preparing the soil for cultivated crops. The alkali is thought beneficial in neutralizing the acids contained in peat. A dressing of common wood ashes has been seen to have a very striking effect in renovating the declining grass on this description of lands.

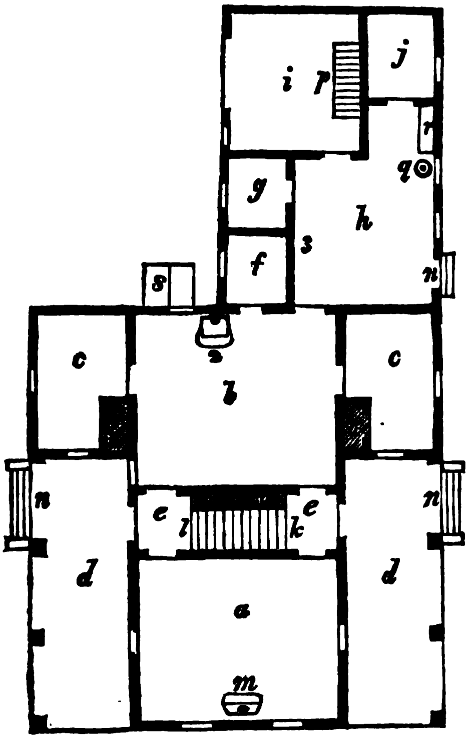
CURING GREEN CORN-STALKS.

The difficulty which has sometimes attended the curing of corn-fodder, has been considered quite a drawback to the advantages of sowing corn for winter feed. In curing hay from grass, we prefer the *sweating* mode as it is called, having practiced it with success. We have never tried this mode for green corn, but a writer (F. M. Butler) in the N. Y. Farmer and Mechanic says he has practiced it with corn to as good advantage as with grass. He recommends to cut the green corn and let it lay in the swarth to dry off the dews or moisture and to become a little heated. As soon as this is done put it up in large cocks or rather into shocks, trample it down close; let it remain in the shocks until it wilts and sweats or ripens, then dry off the sweat and remove the fodder to your barn. He says, "I remember a lot of green corn which for ten days baffled the skill of the farmer to cure it, and which was finally handed over to my care as being incurable. Feeling a firm reliance in the principles that should govern the curing of succulent vegetation for fodder, I proceeded to dry off the dews, and as soon as this was done formed the green corn into large cocks, trampling it down close, although a fine warm sun was pouring down its heat upon the field. The cocks became heated, the corn stalks wilted, but were suffered to remain until the next day, when towards afternoon the sky becoming clear, and a fine breeze blowing, the heaps were thrown open, the stalks dried and taken into the barn perfectly cured. It kept well, and in the winter the cattle preferred it to hay."

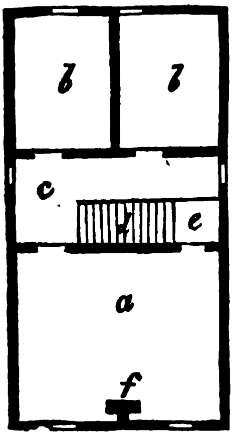
Sensible men and women never sneer at mechanics and others who earn their living by their labor. But self-styled gentlemen and ladies not unfrequently do. We have heard of a "lady" who once left a ball-room because a mechanic entered. She married a basket-maker, and died a wash-woman.—*Exch. paper.*



A PRAIRIE FARM HOUSE—(Fig. 83.)



Ground Plan—Fig. 84.



Second Story—Fig. 85.

A correspondent of the Prairie Farmer furnishes the annexed plans for a prairie farm-house, calculated, he thinks, to combine economy, comfort and convenience, with a pleasant and home-like appearance.

It is designed for a southern or eastern aspect, the end fronting to the road. The plan is drawn for a frame house, but may be altered for brick or stone by increasing the thickness of the walls. Its convenience will be seen at a glance. It contains all the room which a farmer in moderate circumstances needs, and there is none that is superfluous. Should any like to build after the plan, who are not able to build the whole at once, the rear part can be put up first, and will answer as a dwelling, by using the meal room as a bedroom. The main building is 18 by 36 feet outside; the lean-to additions, each 8 feet wide. The rear building is 18 by 25 feet. The posts to the main building are 16 feet; to the piazza, 10 feet; to the rear building, 12 feet. The rooms of the lower floor are 9 feet between floors, the chambers 8 feet. The room *b.* is intended for a dining-room in summer, and the room *h.* for a summer kitchen; in winter, the room *b.* to be used for both purposes. The expense of completing the whole, including cellar under the main part, is estimated at from $800 to to $1,000, according to location and the material used.

Explanation of ground plan, fig. 84.—*a.* parlor, 17 by 15 feet—*b.* kitchen, 17 by 15 feet—*c. c.* bed-rooms, 8 by 13—*d. d.* piazzas, 8 by 23—*e. e.* entries, 6 feet wide—*f.* buttery, 6 feet square—*g.* milk-room, 6 feet square—*h.* back kitchen, 12 by 13 feet—*i.* wood-house, 12 feet squre—*j.* meal-room, 6 by 8 feet—*k.* chamber stairs, 4 feet wide—*l.* cellar stairs—*m.* Franklin stove—*n. n.* steps—*o. o. o. o.* closets—*p.* wood-house stairs—*q.* pump—*r.* sink—*s.* bulk-head, covering outside cellar stairs—2 cooking-stove—3, place for stove in summer. Drawn on a scale of 16 feet to the inch.

Second story, fig. 85.—*Explanation*—*a.* chamber, 17 by 15 feet—*b. b.* bed-rooms, 12 by 18 feet—*c.* passage—*d.* stair-case—*e.* closet—*f.* drum connected by pipe with stove below.

SMUT IN WHEAT.

A gentleman near Baltimore, has for several years been in the habit of washing his seed wheat in a strong solution of Glauber salts, (sulphate of soda,) with the view of preventing smut, with complete success. He says he makes the solution strong enough to bear an egg, fills a tub half full of it, and then pours in half a bushel of wheat at a time; stirs it round well with the hands, skims off all the floating grains and other foul matters, dips out the wheat with a colander; lets it drain, spreads it out on the barn floor till not quite dry, then rolls it in air slaked lime, and sows it. One man can wash and prepare in this way as much as a dozen men can put in the ground. Every description of foul seeds, garlic and filth, (except cockle,) is effectually taken out of the wheat by this process. He has had no smut in his wheat since he adopted this plan. Glaubers salts can be purchased by the barrel at about one cent and a half a pound. The wheat swells while undergoing the process, about 25 per cent; that is, four bushels will become five. If, after washing, it be left upon the barn floor all night, and thus become dry, it will lose a large portion of its increased bulk. It is better, however, to put it in the ground while somewhat moist, as germination will take place sooner; and the quicker any seed germinates after being put in the ground the better. Besides the great object in view, the getting rid of smut and other impurities, there can be no doubt that a most valuable nutritive and stimulating principle is added to the seed grain, in the soda that is absorbed. Farmers will do well to try the experiment; they may be assured it will do no harm, and it is not very costly, probably a dollar's worth of the salts would be sufficient for fifty or an hundred bushels of seed.

In Smithfield Market, London, there were 180,780 head of cattle, and 1,500,000 of sheep, sold in the year 1839.

THE STATE CATTLE SHOW.

Remember that the great show of the N. Y. S. Ag. Society, will take place at Poughkeepsie on the 18th and 19th of this month. Contracts have been made for the erection of the necessary fences and buildings, which are now nearly completed. The show yard contains about eight acres, thoroughly enclosed with a high and tight board fence. The buildings consist of a Ticket office, outside the enclosure—a Business office, on the line of the show yard—and four buildings inside the enclosure, each about 100 feet by 25—one to be denominated Floral Hall, for the exhibition of fruits, flowers and vegetables —Domestic Hall, for articles of domestic manufacture —Dairy Hall, for dairy products,—and Mechanic's Hall, to be devoted to articles of mechanical skill.

Arrangements have been made for conveying animals and goods by boats from the different places on the Hudson, at moderate charges. The rail road companies, with their usual liberality, offer to bring everything from the west to this city, free of expense; and we trust the owners of fine stock of all kinds, will avail themselves of these opportunities to send large numbers to the show.

We hope, also, that our friends in Connecticut, will gratify their brother farmers of this state, by sending over some teams of their famous and well-disciplined oxen, and other stock. Mechanics and manufacturers, too, will not let this occasion pass, without making a general display of articles in their line, which, being seen by the thousands who will be there convened, cannot fail to be much to their advantage. It is thought that the exhibition will be equal, if not superior, in every respect, to any preceding.

The annual Address, we are happy to learn, will be delivered by the distinguished historian, George Bancroft, Esq., of Massachusetts.

CULTIVATION OF LUCERNE.

A 'Subscriber,' at Strawberry-Hill, North Carolina, asks for some information on this subject.

A deep, rich, and rather light soil, is best for lucerne, and it is hardly worth while to attempt its cultivation on soils of an opposite description. The preparation of the ground consists in deep plowing, and fine pulverization. Any kind of manure suitable for clover, may be used—mixed well with the soil. It may be sown either broadcast, with some kind of spring grain, or alone in drills. We prefer the latter, for the following reasons. When sown broad cast, with or without grain, its growth is much checked, either by the grain or weeds, or by both —if a drouth occurs at the time the grain is taken off, a large portion of it dies, and what remains is so injured that the succeeding winter probably kills it. After repeated trials, we have found it very difficult to get it through the first summer and winter. Unless the weather is very favorable, so much of it dies, that it is left too thin. Having failed some half dozen times in the broad cast mode, we tried sowing in drills with a machine, and succeeded completely. The drills were about ten inches apart, and the spaces were hoed once or twice, by which means the weeds were kept down, and the lucerne grew so rapidly that it was cut three times the first season—only about a month being required between the cuttings, to reproduce a growth of more than a foot in height. It produced at the rate of five tons of *hay* to the acre.

We should prefer sowing as early in the spring as the ground would admit of, in order that the lucerne might get a start of the weeds. In the broad-cast mode, fifteen or sixteen pounds of seed is recommended—in the drill mode, eight or ten pounds, if properly sowed, will be sufficient. There is no necessity of permitting a crop to go to seed, as our correspondent suggests, as the roots are considered perennial—at any rate, they live many years. In regard to the marls mentioned, it would be better to try them, as well as lime, plaster, &c., for the effect of these cannot be positively foretold.

The seed might be had at any of the principal seed-stores of our cities. Its cost is from twenty-five to thirty-seven and a half cents per pound. By the quantity it could probably be had for less.

Lucerne is greedily eaten by all kinds of stock, and it is considered highly nutritive. It may be fed green or made into hay. We know of no plant of equal value for soiling. Its growth commences very early in the spring, and continues without interruption through the whole season. No ordinary drouth affects it in the least, after it once gets fairly rooted. The roots have been traced to the depth of more than three feet in the earth, the first season, when sown in drills. The only cultivation that it requires after the first season, is an occasional harrowing before it starts up in the spring.

CALEDONIA COUNTY, VERMONT.

We have been furnished by Henry Stevens, Esq. Barnet, Vt., with several papers in relation to the Agricultural products of Caledonia county, Vermont, of a very interesting character. This county is situated in the northeastern part of the state, its northern boundary being only about 25 miles south of the 45th degree of north latitude. In size it is about equal to 18 townships of six miles square. About four-fifths of its whole territory yet remain a wilderness, there being but 90,456 acres of land improved. From the table of statistics furnished us, we learn that the number of "polls"—that is, we suppose, male persons over 21 years of age—in the county, is 3,756. This would give 24 acres of improved land to each poll. The products of the county, as carefully ascertained from the persons who took the census, would give each male inhabitant over 21 years of age, more than one of oxen and nine head of other cattle—over 26 sheep, fine swine, nearly two horses—more than 228 bushels of grain—nearly 50 lbs. of wool, 284 bushels potatoes, about 18 tons of hay, and over 177 lbs. of maple sugar. The value of dairy products to each poll, is $57,35, and of family goods, $22,72.

This statement of actual facts speaks volumes for the credit of the hardy sons of Vermont. There is probably no state in the union where property is more equally divided than in this, and here, with a hard soil and a climate of great severity, we find on an average every man of 21 years, has 25 acres of improved land, from which he produces an abundance of all things necessary for his subsistence and comfort.

Mr. Stevens says—"I have carefully compared the agricultural statistics of Caledonia county with other counties, not only of the New-England, but of the several other states, and I give it as my honest opinion that, when you take into consideration the number of acres of improved land, its appraised value, and the number of inhabitants, there is no county in the United States that produces so much as this. That portion of the population who are engaged in agricultural pursuits, are generally very industrious, economical and persevering in business. Many of our farmer's wives have the credit of making excellent butter and cheese, and have received the highest premiums in the Boston market."

IMPROVEMENT OF SANDY LOAM.

Mr. Eli Harris, of North Carolina, inquires, first—"What is the best method of improving an exhausted, high sandy loam?" Second, "What is the best plan of sowing clover seed?—at what time—how much seed to the acre —the preparation of the ground? &c."

In regard to the first inquiry, we remark, that ashes, clay, or clay-marl, will improve the texture of a sandy soil. Use *urine*, if it can be got, (and it can if you will only *save it*,) in place of coarse barn-yard manures, because the latter makes the land still lighter, and we suppose lightness is already one of its defects. Plow pretty deep—try plaster, and by all means induce as large a growth of clover as possible.

In regard to sowing clover, it does well sown on a moist snow in March, or the latter part of winter. We have known it do well sown with rye in September, and on land not subject to be thrown up much by frost, we do not see why it might not generally do well sown at that time. As to quantity of seed, we should not sow less than six quarts per acre on such land as described, and we presume a *peck* would *do no hurt*. A preparation of the ground suitable for any kind of grain, is proper for clover.

THE CROPS IN MARYLAND.

There has seldom occurred a season of more general success in the grain crop, than the present in Maryland. Wheat and rye have averaged full crops, and have been secured in good condition, and of fine quality. Some few sections have felt the effects of the fly, some very few also those of rust, but there has been less of either than I ever before heard of. In this part of the country we are particularly liable to failure in the rye crop, from the occurrence of heavy showers of rain at the time the rye is in bloom, which washes the pollen from the plant. Whole rye fields are often seen with fine straw and large heads, leading one to suppose that a heavy crop would be harvested; but on examining the heads not a grain could be found in them. Happily, this season that excellent grain escaped the evil, and has yielded finely. The oat crop also has been large, and of excellent quality. The corn crop also promises tolerably fair, though some sections of the state have suffered considerably for want of rain, particularly the Eastern Shore, where corn is the principal dependance. On that shore some farmers will gather but small returns for their labor, the late fine rains having come too late to be of much service. But the crop in the state at large bids fair to be a good average. The potatoe crop also looks very well, though generally too forward for winter use. Should we, this year, escape the disease that affected the potatoe crop so extensively last season, there will be an ample supply. Our hay harvest has also yielded finely, both as to quantity and quality, for Maryland. The quality of our hay is not generally equal to northern hay. I believe the deficiency attributable to the time of cutting and manner of curing. Grass is generally allowed to stand too long before it is harvested. All herbaceous plants should be gathered when in full flower, if we wish to retain all their valuable properties; because, as soon as the seed begins to form, the nutritive principles of the plant, such as sugar, starch, &c. are exhausted in forming them. See how rich a cornstalk is in sugar and starch immediately before the grain begins to fill on the cob; examine the dry corn-stalk after the grain is ripe, and see how little of either will be found in it then! And so it is with hay of all kinds. In this view, all mixed hay should be of such kinds as flower at the same time; otherwise one or the other will be too ripe or not ripe enough at harvest. The process of curing, it would seem, is not properly attended to. Generally the hay becomes *bleached*, and much of its nutritive properties are lost. It is not uncommon to see hay left in the *swarth*, as the scythe left it, for several days, then simply turned over to bleach the other side by the action of the sun and dew, and left several days longer; and showers of rain that may happen in the meantime, will be so much added to the general effect! A better practice would be, to let the boys with wooden forks, follow the mowers and shake up the grass well, and before the dew begins to fall at night to rake all into winrows; next morning the first work should be to spread the winrows, and turn the hay well; and before night put it into cocks. It will thus be ready for the stack or mow the next day. I am satisfied that a large portion of the value of hay is lost by the manner of curing generally adopted.

All kinds of vegetables and fruits, are abundant, and of excellent quality; and those intended for fall and winter use are very promising. In fine, I never knew a season of such universal abundance and excellence of agricultural and horticultural products, present and prospective, as the present.

Diseases of Swine.—G. L. Cockrill, in the Tennessee Agriculturist, says—"Quinsy attacks fat hogs or all above shoats—the cause I suppose, to be the same that produces it in the human family. My remedy is, to split the neck each side of the wind pipe, some inches long, and an inch or more deep, rub in warm tar or turpentine. Staggers or turning round, bleeding freely from the tail or ear, will generally relieve them. Kidney-worms used to trouble me some, but I have had but little of it for two years; pluck out the hair from the loin, rub it well with warm tar, then feed on dough or slops, strongly impregnated with salt and red pepper; the hog should often be lifted up by the tail and exercised. Hogs' feet become affected some wet seasons, by confining them on green oats; let them have access to some clean hard ground. Water is indispensable for hogs, they can live without for some time, but do not thrive; it is as necessary for the healthy action of the skin, as it is to drink—shade is also necessary in warm weather."

NEW-YORK AGRICULTURAL INSTITUTE.

We have received from Dr. Gardner, a circular, embracing a sketch of the fundamental principles of this institution, and an outline of the course of instruction to be here pursued. The difficulty of obtaining a course of education suited to the agriculturist, has long been deeply felt by those who have given the subject a proper consideration; but it is only within a short time, that such an extended and general interest has been manifested, as seems to indicate that the time has arrived when institutions designed for this purpose, may be established with a fair prospect that they will be fully sustained.

Dr. Gardner enjoys an extended reputation in this country as a man of science, and under his charge the success of the Institute is confidently expected. We extract the following from the circular.

The subjects of study are as follows:—

Agriculture. This course is designed to communicate all facts in Chemistry, Geology and Botany, useful to the farmer—so that being conversant with the characters and properties of the bodies wherewith he is engaged, he may be furnished with sound principles to guide and improve his culture. The theories of Liebig, Tull, Payen, Boussingault and Saussure will be canvassed, explained where they coincide with practice, and exposed where fallacious. The explanation of all processes, for the improvement of the texture, and drainage of lands, will be made on scientific principles.

Improvements in the orchard, vineyard, and the cultivation of commercial staples, will be detailed. The collection, storage and preservation of grass, grain, fruits—the feeding and improvement of stock; the economy of making manures, will form prominent parts of the course.

Mineral manures found in this and adjoining states, saline, vegetable and animal manures, their comparative values, successful application, and causes of failure, with their economy, will be thoroughly examined and illustrated, by appeal to decisive experiments. In short, all the topics usually embraced in the courses given by professors of agriculture in European colleges will be introduced.

Analysis of Soils, the ashes of plants, and saline manures, forms another principal object of study. The student will conduct these analytical inquiries himself, so as to become proficient.

It will be a constant object to familiarize the pupils with the method of applying principles to practice. To this end a series of cases will be prepared, in which the character of the soil, determined by examination, will be given, to discover the necessary amendments. Thus a specimen of soil being introduced from a field, valuable from its proximity to market, it will be required of the student to point out the means by which it may be brought into a perfect state of fertility at the least expense. Thus they will be prepared to think for themselves and apply the facts of science. Students coming from remote counties should bring specimens of soil from home, to furnish profitable materials for examination during the winter.

The Institute opens on the first Monday of November, and continues in session until the first of March following. Lectures and recitations will take place daily. This portion of the year has been selected to accommodate those engaged in farming, that they may not be drawn from their estates during the busy season.

Fees for the course on Agriculture, $20. For Analysis, $30. For both, $40. The laboratory students will provide their own utensils, which cost about $5. Full laboratory course, $100.

For further information, address, post paid, Dr. Gardner, 412 Fourth-street, where students arriving in town, are requested to call.

SOWING WINTER GRAIN.

Wheat—It is not always easy to tell whether early or late sowing would be most advisable. Early sown grain gets the best hold against the winter, and where it is not liable to attacks from insects, will generally yield best. But it unfortunately happens that the Hessian fly (a description of which was given in our last number) is usually more injurious to *early* than late sown grain; because a generation of the insect is sometimes brought forward in the fall. This is avoided by late sowing. But there is another insect which must be looked out for—that is the yellow maggot, (*Cecidomyia tritici*) also described in our last. This insect attacked the *late* sown winter wheat most, in this neighborhood, the present season, so that we are something in the predicament of the old navigators, who in endeavoring to steer clear of Scylla, were swallowed up by Charybdis. If we sow early and escape the worm in the *head*, (C. tritici) we are sure to have the worm at the bottom of the *stem*, (*C. destructor.*) If we sow late it is the reverse. So we see that all circumstances must be taken into consideration in determining the proper time for sowing, and the insect whose attacks are most to be apprehended, must be most guarded against.

Preparation of the ground.—In this operation, regard should be had to protecting the crop from injury during winter. This injury takes place in two or more ways. First—on land where too much water is retained near the surface, the roots of the grain are sometimes thrown out by the *heaving* of the soil under the action of frost, and by alternate freezing and thawing, the plants are left without any hold on the soil, and so perish. Against injury from this cause, we should use all practicable means to prevent water from standing on the surface, or remaining in too large quantities near the roots of the grain, and for this purpose would not only use drains, but should resort to *subsoil* plowing, loosening the earth to as great a depth as possible, thereby allowing the surplus water to descend at once so deeply that the heaving by frost is in a great degree avoided. Second—grain is sometimes injured from the rains and winds carrying the earth away from the roots. This oftentimes injures the crop more than any thing else. The mode of sowing in *drills* is the best remedy against this, which we have seen. The drill mode has, also, other important advantages, such as the security of the crop against rust and mildew. We spoke of this mode in our number for February, in describing the farm-management of Mr. Thos. Noble, under the head of "Farming in the West." The grain is sown very expeditiously with a machine drawn by a horse. The rows are left in a small hollow, so that the rains, instead of washing the earth away from the roots, are constantly bringing a little more over them, which operates as a security both against the winds and frosts. This mode of sowing, is now very extensively adopted in England, where its advantages are becoming every day more and more acknowledged. In that country, the spaces between the rows are sometimes cultivated, either by hand, or by the horse-hoe.

Proper quantity of seed per acre.—We will here give a rule, which, though at variance with some theories, we are quite satisfied is correct—viz. that the richer the ground, the less seed is required. It is the practice with some farmers to sow no more than two-thirds the usual quantity of seed on poor land, while on that which is rich, they sow an extra quantity—in the latter instance they say "the land can bear it," in the first, they suppose it can support no more. These conclusions must have been adopted without very close observation of the operations of nature in such cases. In the first place, there is not much land so poor that nothing will grow, and if it does not produce something *valuable*, it is sure to produce that which is *valueless*; and if grain on poor soils is sown thin, it is overpowered by the more hardy natural growth. Grain will not spread, or tiller, on such soils, and it must, therefore, be sown so thick that the crop may sufficiently cover the ground at *once*, before the wild plants can obtain a foot-hold. In this way, only, can such possession of the soil be secured as to insure from any crop a fair yield. On the other hand, grain-plants on rich land, have a natural tendency to tiller, and this tendency is always in proportion to the strength of the soil. It is from this cause, that wheat on rich land often recovers from the attack of the fly, while that on poor soils is killed. The strength and vigor of the roots in the former case, continue to throw up new stalks, till after the insect ceases its ravages; but from the want of this energy, the plants on poor soil, perish under the first attack. It is thus evident that poor land requires the most seed.

We are aware that farmers are not agreed as to the requisite quantity of seed, even on the same soils. In different sections of the country, the quantity varies from one bushel to two bushels per acre, and we have not found that this variation is much regulated by any difference in the quality of the soil. We think too small a quantity is *generally* sown. The most successful wheat growers we have ever known, have been in the habit of using two bushels of seed per acre, on land of fair medium quality, and we should in general prefer this quantity to less.

Rye.—The objections against the early sowing of wheat, do not, many of them, apply to rye. The latter is comparatively exempt from attacks of the Hessian fly, and we believe wholly so from the attacks of the wheat midge—improperly called *weevil*. In this latitude, there is no objection to sowing as early in September as is convenient. If it acquires too large a growth, it may be fed off by calves or sheep. Indeed a considerable object in sowing this grain, in some parts of the country, is to afford pasture in the fall, winter, and early in spring, when it cannot be had from grass. In some of the stock-districts of Ohio and Kentucky, it is highly valuable in this respect. Where snow does not accumulate to prevent its being pastured, we know of nothing equal to it for calves, ewes, and lambs, in the fall and winter. But even where snows of considerable depth lie on the ground for months, it is an object well deserving attention for fall and spring pasturage. If animals are only allowed to feed on it when the ground is in a proper state—that is, when they will not poach it with their feet—it may be pastured quite closely in the fall and winter without injury to the yield of grain, and there is no doubt that pasturing sometimes increases the yield. In some parts of the country, it is fed in the spring till grass will afford a "bite." It is then allowed to grow till the grain is filled and begins to turn, when hogs are turned in to eat it. At this stage of the grain, it does not shatter out, and the hogs get it pretty clean, trample down the straw, and leave a good deal of manure. This is considered, in the districts where it is practiced, one of best modes of enriching ground.

Rye requires a lighter soil than is most congenial to wheat. It often does well on quite sandy or gravelly land, where wheat would fail. Wheat is generally more profitable on a soil to which it is adapted than rye, provided it escapes injury from insects. On such soils the yield is equal, if not greater than that of rye. In some neighborhoods where wheat has been injured by the midge for a year or two past, rye is considered a pretty certain crop, and we find many farmers in this vicinity are intending to discontinue, for the present, the sowing of wheat, (on account of the insect here mentioned,) and substitute rye in its place. This course would seem to be a very judicious one, to be followed at least as long as danger is to be apprehended from the insect.

Sheep Racks.—The following is from a letter of Mr. Henry Weston, Jasper Co., Indiana:—"If the subject has not been brought to your notice, I would recommend a very cheap and convenient sheep rack, which is made by placing at an angle of 30 or 40 degrees from the perpendicular of a rail fence, two flat stakes or pieces of boards for each panel, and bracing them with short sticks, then laying on edge, one upon another, three or four boards, according to width, so that the lowermost shall slide close against the bottom rail. The sheep, being on the opposite side of the fence, feed between the rails. The hay thrown between the boards and the fence, will of course slide down as consumed below. The spaces between the rails must not be so wide as to waste too much, nor so narrow as to prevent feeding."

HISTORY OF THE BULLOCK STOCK.

There is a description of cattle well known in this part of the country as the "BULLOCK STOCK," the history of which, we have taken some pains to learn, and for this purpose, we paid a visit, a few days since, in company with a gentleman well skilled in *cattle genealogy*, to the farm of the late MATTHEW BULLOCK, Esq., (about ten miles from this city,) the gentleman from whom the stock alluded to, took its name.

We find that sometime previous to the year 1820, Mr. Bullock purchased of Mr. Cox, of Rensselaer county, a bull and two heifers of a family of Short Horns, which the latter gentleman imported from England. The particulars of this importation, we have not been able to procure, but shall make further endeavors to obtain them. These heifers and their produce, were afterwards bred to two Short Horn bulls imported from England by Messrs. Bullock and Wayne in 1821. One of these bulls was called *Nelson*, and the other *Comet*—the former was principally *red*, and the latter nearly *white*. The stock from both these bulls proved good—that from Comet particularly, was very well shaped, and thrifty, and the progeny of both were good for the dairy. Mr. Bullock first took Nelson, Mr. Wayne retaining Comet; and after three or four years, they exchanged, Mr. Bullock taking Comet, on whose hands he died. For several succeeding years, Mr. Bullock bred from bulls raised by himself and from bulls owned by the Patroon. In the year 1832, Mr. Geo. W. Smith imported the Short Horn bull *Copson*, and the cow *Susan*. Mr. Bullock bought Copson, and bred from him till 1837, when he was purchased by G. V. Sackett, Esq. of Seneca Falls. The stock from Copson proved superior for dairy purposes to any Mr. Bullock had before bred—though his cattle had all along been good in this respect; and it seems to be a general impression that the stock from this bull were superior as milkers, to any which had then been known here.

A primary object with Mr. Bullock, in the outset, was the establishment of a dairy. His cattle were of course chosen with a view to this object, to which they proved well adapted; and after the use of the bulls Comet and Copson, they united, also, very good fattening qualities, and were, besides, good for labor. They were in some instances sold as high as $225 per yoke, simply as *working* cattle, and some of them which were fattened, were quite extraordinary. A pair of six years old white oxen, (got by Comet,) were sold to a butcher of New-York, one of which weighed alive, upwards of *twenty-nine hundred* pounds. They had been worked on the farm for two or three seasons, and the season they were turned off to fatten, performed a heavy spring's work at plowing. They were fattened about eighteen months. One of them had 325 lbs. of rough tallow—the other, 296 lbs. Mr. Bullock sold them for $600.

Mr. Bullock carried on dairying on a considerable scale—milking some seasons from thirty-five to forty cows, and making as many as eight tons of cheese in a season; the quality of which was so superior, that the whole of it commanded a price as high as *eighteen cents* per pound.

It is evident that it was Mr. Bullock's object to make his stock *intrinsically* valuable. He did not rely on sales at high prices, but endeavored to keep that which gave most profit *on the farm*, and in this respect he was abundantly satisfied.

None of the stock we have mentioned, were *Herd-Book* animals—in fact, all of them, with the exception of Copson, were imported before any Herd Book was published—the first volume of that work having appeared in 1822. Of Nelson and Comet no particular history has been preserved. The pedigree of Copson was as follows:

Copson, roan, imported in 1832, by G. W. Smith, Esq. bred at Copson-Lodge, England. Copson was got by Dutchman, dam, Cardinal; g. dam, Nelson; g. g. dam, Marske; g. g. g. dam, sire of Danby; g. g. g. g. dam, Danby.

Dutchman, by Mynheer—dam, Pretender, &c. &c.

So well was the value of Mr. Bullock's stock finally established, that at a sale which took place in 1837, and at some private sales which took place both before and afterwards, several of the cows brought $200 to $275 each.

Since the death of Mr. Bullock, which occured a litl more than a year since, the farm has been divided between two of his sons, Messrs. Andrew and Thomas Bullock. From these gentlemen, and from Mr. C. N. Bement, (who was well acquainted with Mr. Matthew Bullock, and all the circumstances attending the importatio and purchase of his stock,) we have derived the principal points in the above history.

WORKING QUALITIES OF THE SHORT-HORNS.—An idea prevails among farmers, that our common stock is better for work than the improved breeds, or at least, better than the Short-Horns. We are satisfied that this opinion is in many cases founded in gross prejudice—we do not believe that any fair experiments support the idea in the least. We saw on the farm of Mr. Thomas Bullock, a pair of working oxen, entirely of the variety we have been speaking of above, one of which was five, and the other six years old. They were heavy—would "*girt*" (as the Yankees say,) considerably over seven feet, and were well proportioned. They were harrowing some tough inverted sward, near the middle of one our warmest days. One of them, (a son of Copson,) was as cool and quiet as if he had been lying in the pasture; the other had not been so much accustomed to labor, and did not perform his work quite so easily, but was in good condition in every respect. Their gait was spirited and lively—more so than that of common cattle. Mr. Bullock assured us that they had worked very steadily without extra keeping. On the farm of Mr. Andrew Bullock we were shown a pair of large red oxen of the common breed. We asked Mr. B. if he preferred these cattle to such as his brother's; he replied "no, they are neither so handy or so quick as his, and will not stand work so well." Both the Messrs. Bullock told us that their father worked many of the oxen of his breed, and that he always preferred them to the best of the common country oxen. They were more tractable, were stronger, and were kept easier. Mr. Thomas Bullock very candidly remarked, that upon very light soils, where less strength of team is required, lighter and more active cattle might be preferred, but that on their strong soil, a strong team was necessary, and these heavy cattle were therefore found most profitable.

CLOVER AS A FERTILIZER.—We noticed that the Messrs. Bullock pay very particular attention to stocking all their lands that are suitable, heavily with clover. Their pastures were so thickly set with it, that in spite of all the stock could eat, it covered the ground like a mat. When this ground is broken up, it is full of clover-roots, which render it mellow and friable like a carrot bed, almost ensuring the growth of a heavy crop of wheat or other grain.

The Messrs. Bullock's buildings are well arranged, and generally in good order. Considerable attention is paid to saving and making manure, and the yards are pretty well arranged for this purpose. Their general management is evidently good, and in this respect presents a wide contrast with that of some farms we passed on our way out, where the miserable fences, slovenly dooryards, the dying fruit-trees covered with old caterpillar's nests, old ricketty buildings, &c. &c., showed that the occupants were strangers to the comforts which neat and good management always brings.

MIXING SOILS.—A correspondent of the Springfield (Mass.) Republican, states that Mr. John Moore of West Springfield, has made a successful experiment in the application of clay upon grass land of a dark, heavy soil. Last fall he carted on clay to the amount of forty loads to the acre—left it in heaps exposed to the frost till spring; when, being dry and partially pulverized, it was spread. The expense of digging, carting and spreading, was ten dollars to the acre. The grass before the experiment, was nearly all sedge. It is now changed (no seed being put on) to red and white clover, mixed with herds grass, worth double the former crop in quality, and increased in quantity thirty per cent. A similar experiment was made in the same lot upon a light, dry, gravelly soil, which produced no effect whatever.

ENTOMOLOGY.

The Dragon Fly.—In a late report of the doings of the New-York Farmer's Club, it is mentioned that some grubs were presented, having a "singular growth, apparently like the root of some vegetable, proceeding from the neck," &c. A distinguished member of the Club gave it as his opinion that the grubs were the larvæ of the Dragon fly—*libellula*.

That vegetable excrescences sometimes proceed from the bodies of insects, is a fact, not perhaps generally known; and though these productions have been found on several kinds of insects, yet we should hardly suppose they could exist in the larvæ of the *Dragon fly;* and from the economy of that insect, we cannot but view the idea that they have thus been found, as erroneous. The Dragon fly, in the first stages of its existence, lives wholly in the water, and it is hardly reasonable to suppose that while in that element, this vegetable excrescence would be produced. We have had some opportunities for learning the habits of this insect, and have often seen it in all its stages, from the first appearance of the larvæ in the water, to the perfect fly. The eggs are protruded from the parent fly immediately into the water, where they soon hatch. When the larvæ is full grown, it emerges from the water, and fastens itself to some object near at hand. In a short time the shell is burst asunder, and the beautiful fly comes forth. In a few hours, the wings become extended and dried, and the insect commences its flight. We have sometimes taken these grubs just as they were coming out of the water, placed them in a warm airy situation, and in less than twenty-four hours have seen the fly come from them. Thus in the space of a single day, an aquatic animal, disgusting and revolting in its appearance, is transformed into one of the most beautiful inhabitants of the air!

It is supposed that the insect lives at the bottom of the water for a year or more. "Its mode of locomotion while in this element," (says the *Natural History of Insects*, pages 214, 215,) "is curious; for though it can move in any direction, it is not by means of feet or any direct apparatus that it moves, but by a curious mechanism, which has been well illustrated by Reaumur and Cuvier. If one of these nymphs be narrowly observed in water, little pieces of wood and other floating matters will be seen to be drawn towards the posterior extremity of the insect and then repelled; at the same time that portion of its body will be observed alternately to open and shut. If one of them be placed in water which has been rendered turbid by milk, or colored with indigo, and then suddenly removed into a more limpid fluid, a jet of the colored water will be seen to issue from the anal extremity of the libellula, to the extent sometimes of several inches; at the same time the force with which the column is ejected, propels the insect in the opposite direction, by virtue of the resistance with which it meets. Hence it appears that it is by means of its respiratory system that the creature walks—a strange and anomalous combination of functions in one organ.

"*If* the insect be taken out of the water, held with its head downwards, and a few drops of that fluid poured on its tail, that which was a mere point will immediately open and display a cavity; at the same time the body of the insect, which was before flat, will be observed to be enlarged and inflated, and if held up to the light, semi-transparent: moreover, something solid will appear to be displaced by the water, and driven towards the head. This solid mass will shortly descend, obscure the transparency of the lower portion of the body of the insect, lessen its diameter, and, when it does so, a jet of water will issue from the vent. It is clear, then, that the abdomen of the libellula is a syringe, the piston of which being drawn up, of course the pressure of the fluid fills up the vacuum, and, when pushed down, expels the water. To ascertain the fact, Reaumur held the insect in his hand, and when he saw its body inflated, cut it immediately with a pair of scissors, and found it unoccupied with solids. He watched when the jet of water was expelled in another, and as soon as the body was darkened and lessened in diameter, he clipped it, and found the cut portion occupied by solids. There is no doubt, then, that the abdomen contains a moveable piston, and this piston is composed of the air tubes."

During its existence in the water, the Dragon fly lives on the larvæ of the gnat, and other aquatic insects. After its metamorphosis, it feeds on gnats, musketoes, flies, &c., of which immense numbers are devoured. A large one has been seen to spread consternation among a swarm of common house flies. Entering a room and pursuing its prey with a ferocity equal to that of the hawk or eagle, numbers of the fly are soon caught, and the rest taking ready warning by the fate of their comrades, escape from the fangs of their terrible enemy, by the nearest door or window.

The May-Bug and Horn-Bug.—But let us recur again to the vegetable excrescences on insects spoken of above. In some sections of the country, the belief is quite common that *a kind of worm produces blackberry bushes.* The insects which are thus strangely supposed to be the origin of such a production, are the larvæ of either the *horn-bug, (Lucanus capreolus,)* or the *May-bug, (Melolontha vulgaris,)* both being generally confounded under the name "white grub." The erroneous idea to which we allude, probably originated in the circumstance of a kind of fungus having been found proceeding from the larvæ of one of these insects. We have more than once chanced to find the larvæ of the horn-bug thus affected. This insect is found in the decaying stumps of trees, particularly the oak and apple-tree, and also in door-yards where the chips and rubbish from hard wood have been suffered to accumulate and rot. Blackberry bushes are very likely to start up in fields around old stumps, and these stumps being the natural haunts of the horn-bug and its larvæ, it is natural to suppose that in eradicating the bushes, worms might be found having the excrescence mentioned, and with the little knowledge of such subjects which too often prevails, and without any examination, the strange theory alluded to was adopted.

This fungus is said to have been sometimes found on the larvæ of the May-bug, (Melolontha)—it should be remarked, however, that though the larvæ of the horn-bug is considerably larger than that of the May-bug, yet their appearance is so similar, that without particular observation, the one might be mistaken for the other. It should also be borne in mind that the places where these vegetating insects are mostly found, are the natural haunts of the horn-bug, but not of the May-bug—the larvæ of the latter, instead of subsisting, like that of the horn-bug, on decaying wood, feeding on the roots of grass and other living plants. From all these circumstances, we are inclined to believe that the larvæ of the horn-bug, *(Lucanus,)* has sometimes been mistaken for that of the May-bug, *(Melolontha.)*

In all the instances we have known, the worms on which these excrescences have been seen, were not only dead but in a state of decay; yet we are aware the belief is by some entertained, that they are found in the living insect, whose death it is supposed, is ultimately produced in consequence; though we do not recollect any well authenticated instance of the kind. It is admitted however, that in living insects of other kinds, productions of a similar nature have been found.

A word in regard to the habits of these insects. The horn-bug, in all its stages, is to the farmer a harmless insect—subsisting, as we have before said, on decaying wood. Very different is the character of the melolontha, or May-bug. A more formidable enemy to field crops is scarcely to be found among the insect tribes. The parent bug or beetle, deposits eggs to the number, it is said, of nearly one hundred, in the ground, usually in the month of June, in this latitude. It remains in the ground, according to Kollar, five, or in some instances, six years, living on the roots of whatever cultivated plants or grasses it may come in contact with. It lies dormant like the ant, in winter, but revives and resumes its ravages with the warmth of spring. It is sometimes very destructive on grass grounds. Some twelve or fifteen years ago, it prevailed in some sections of this country to an alarming extent. The roots of grass were in some places so completely eaten off, an inch or two from the surface of the ground, that the turf, for rods together, could be rolled up like a carpet. We recollect seeing a piece of ground of about two acres plowed for rye, and the grubs were so numerous that it was thought advisable to pick them up. Two large buckets full were soon gathered by following the plow. They sometimes attack Indian corn, and lay the foundation for much damage before they are discovered. They begin by gnawing off the roots at a considerable distance from the centre-stalk, by which the supply of nourishment is cut off; the plant looks sickly, but retains some degree of life. In this condition, the first wind that blows throws it flat to the earth; or if it chance to survive, it makes but a feeble stalk, and perhaps no grain.

In regard to the transformation of the may-bug, Kollar says—"When the grub has attained its full size, it buries itself in the ground, five or six feet deep, at the beginning of the fourth year, prepares itself a dwelling similar to the one it occupied when changing its skin, previously discharges its excrement, and quietly awaits its last metamorphosis. It now soon begins to swell out, becomes shorter and thicker, the skin bursts behind the head, the slit gradually becomes wider on both sides, and the skin by some vermicular movement is disengaged from the pupa, which now appears of a pure white, and as the first representation of the beetle, in all its parts being now recognizable. As it advances towards maturity, the pure white color changes to a dirty orange yellow, which gradually grows darker. In January, or at the latest, February of the fifth year, the cockchafer assumes its mature form. It leaves the pupa case a soft and white beetle at first, but in the course of ten or twelve days all the parts of its body become hard and of their proper color. The insect now remains three or four months in the earth, approaching however, gradually nearer to the surface; till May, or in the middle of April, if the weather should be fine, when it exchanges its abode in the earth for one in the air. The complete transformation of a May-bug, therefore, occupies a space of five years, or even in case the beetle be retarded in its transformation by its food and the weather, sometimes six years."

No easy remedy against the ravages of these insects, has yet been discovered. Skunks (pole-cats,) destroy great numbers of them, both in the larvæ and beetle state. They may be often seen in moon-light nights, or at twilight, searching diligently through the meadows and pastures for their favorite food. Toads destroy many of the beetles. Crows and other birds seek and eat many of the worms. They are also eaten by domestic fowls and by hogs—the latter often root up the sward of whole fields, in searching for them.

Kollar describes the may-bug as being destructive to vegetation both in the larvæ and beetle state. Our own observation does not agree with this, having never seen the bug eat any thing. We have made frequent inquiries of farmers and gardeners, but have found no one who has known vegetation to be injured by this insect in the beetle state. Hence we are induced to believe that some mistake has occurred. Perhaps the insect described by Kollar belongs to another species.

The may-bug lives but a few days after it comes from the earth. Like many other insects, it seems to have fulfilled the designs of nature when it has propagated its species, and soon after this, it dies.

LETTER FROM MISSISSIPPI.

We would call the attention of manufacturers of agricultural implements, to the following letter from Thomas Affleck, Esq. of Washington, Mississippi. The opportunity furnished by the conductors of the agricultural societies, of which Mr. A. speaks, for the trial of plows, &c., we should think would be gladly improved by those interested in the sale of such articles. An opening may hence be made for a very extensive sale of implements.

We received the samples of Bermuda grass alluded to. It is very heavy, and judging from the solidity and sweetness of its stems, we should suppose it was exceedingly nutricious. In appearance, it closely resembles some of our annual wild grasses, particularly a kind sometimes called "crab grass," but which we do not find registered in any botanical work at hand. It is very troublesome in gardens of a sandy soil. The stems or branches lay close to the earth, and have the habit of striking root from each joint. In these respects, and in the character of the head, it seems precisely like the Bermuda grass. If we understand Mr. Affleck, however, the Bermuda grass is perennial, whereas the other is strictly annual, and is totally killed by the first freezing of the ground. They are probably of different species, closely allied. We shall preserve the specimens, and endeavor to ascertain the correct name of the grass.

Editors of the Cultivator—You will observe by the report I forward to you, of our spring agricultural show, that arrangements will be made for a trial of implements at our fall meeting, (last Saturday of October.) The subject now excites much interest among planters here, and all are anxious to see a full assortment of implements, and particularly of plows, from every quarter of the Union at the approaching trial. It is to be hoped that makers of implements will see how much it would be to their interest to have their machines exhibited to their customers at such a time. Articles can be shipped at a trifling expense from New-York to New Orleans, and thence to Natchez. They should be consigned to Wm. J. Minor, Esq. the president of our society—may be sent to any commission house in New Orleans. I will name Messrs. Ferriday, Ringgold & Co., who will forward them. The society expects, of course, that manufacturers will deliver their implements at Natchez free of expense, or at all events that they will authorise the society to sell the implements, and remit the balance after deducting the freight and charge. The house of Holmes & Co. of Natchez liberally offered to the society, to carry any implements, intended for exhibition and trial at its meetings, from Boston to Natchez, in their regular packet ships, free of charge. Their agents in Boston are Henry Lincoln & Co., India street. You will materially aid the cause you advocate, by laying this subject before your manufacturers, and pressing it upon their notice. An extensive market can here be opened for implements and machines, such as the following—provided planters have an opportunity to see and test—Prouty & Mear's Centre Draught, Ruggles, Nourse & Mason's, Bergen's, Burrall's, McMillen's, Sinclair & Co.'s Self Sharpening, the Dolphin, Side-hill, and many other excellent plows—including many of western make, such as Sloop's, Garret & Co.'s, Peacock's, and others in Cincinnati; Dudley's, Wood's and others in Maysville; Hall's in Pittsburgh; many excellent plows made by Hays & Co. Louisville—and in fact all good plows whose makers may have a desire to extend their market. There are Langdon's Horse Hoe; Corn Planters, especially Bacheldor's; small Threshing Machines, horse power; Corn Crushers; Fanning Mills; Straw Cutters; Revolving Hay Rakes; Cultivators; Harrows, &c. &c. In fact almost any of your labor saving implements would attract much attention, and if on trial they gave satisfaction, would readily sell on the ground. If manufacturers will forward to me, through Messrs. Lincoln & Co. of Boston, or Messrs. Samuel Wiswall & Co., 139 Maiden Lane, New-York, *good* casts or wood cuts of their implements, &c., of a size not too large for the Cultivator, I will make such use of them as will be of great advantage to them, and that without charge. My object is to illustrate the report of the exhibition and trial this fall. Please to aid me in procuring as many of these as possible, and especially of plows. I may add, as a farther inducement to manufacturers, that there are at least two annual shows held by county societies, immediately adjoining, at which implements sent here can be exhibited, as they occur after ours. Even if the implements are sold here, a reservation can be made to that effect.

Bermuda Grass—And now I will answer your inquiries with reference to Bermuda (or Doub, not *Doul,*) grass. It would not, in my opinion, bear the cold of your winters—the first frost kills it to the ground. The Muskete, or as Kendall calls it, *Mesquit* grass, I presume would suit your climate better. It is yet a mooted question whether the Bermuda ripens its seed in this latitude. I will examine it carefully this season, and if I find matured seed, will send you some. I know not where

Mesquit grass seed can be obtained. I send you three samples of Bermuda—one of long grass, of upright growth from the meadow, just coming in blossom—the other from an upland pasture—and the third, a stalk that I pulled off the surface of the ground, to show you how it spread, and how admirably it is adapted for embankments. On a piece of good meadow land, this grass stands in a solid mat—so close are the stalks, and so thickly interwoven are the leaves, that when cut with the scythe it very frequantly stands erect. I feel very confident that it is *the most highly nutricious grass known to us.* From the specimens I send you, yon will readily understand how such enormous crops of hay are cut from meadows of this grass—observe the great solidity and weight of the stem. In curing, it loses less weight than any grass I ever saw—and affords three cuttings, yielding an aggregate of from five to eight tons of hay, from a moderately good meadow.

I have said enough, however, to convince any planter who wishes to form pastures for his almost starved stock, or to do away with the necessity of pulling fodder, work so destructive to the health of his negroes, that he ought at least to make the experiment. And as a proof that I am willing to aid in spreading this treasure over the naked hills of the south, I will willingly forward to any planter, *who is a subscriber to two agricultural journals, one of which is published in the state in which he resides*, on his applying to me *post paid*, a barrel of roots of this grass, which would, in one season, cover a large extent of ground. To the river planter it is absolutely invaluable—there is not a levee on the banks of the Mississippi could resist, for one hour, the pressure and attrition of the fearful flood now rolling along, but for their being bound together by this grass.

That flood, by the way, has done, and is still doing immense damage. (I now write on 26th July.) It is, by a number of inches, the highest on record. The fall is even yet so trifling, that it is disputed. The levees have broken in many places, and in others are completely overflowed. The back country is one sheet of water, in most places; and in almost all, the crops are gone, both cotton and corn. This, coupled with the tremendous destruction to the corn crops of Missouri, Illinois, Kentucky, Arkansas, &c. must, we fear, make corn very high. *The loss* of cotton is generally averaged at 300,000 bales—or about one-sixth of the past year's crop.

Our summer or first show came off on the 13th inst.—and a splendid, and a well attended show we had. I have not room for particulars. THOMAS AFFLECK.

Washington, Miss. July, 1844.

TO PREVENT HORSES JUMPING FENCES.

Some years ago, I bought a good horse, which among other fine qualities was recommended as a great jumper, vaulting with ease "over a fence six feet high." I intended to take care of that part of the business myself, but for a time I found I was overmatched. I tied his head to his fore-foot, but that made no difference—over he went. I put a wooden clog on his fore-foot as large as a man's leg, but he carried that over the high fence with him. I "*hoppled*" him, fastening his fore and hind foot within two feet of each other; but was very much surprised to find him, all chained as before, on the other side of the fence; and it was not till several repetitions of the experiment, that I saw how he did it—which was by drawing his two chained feet closely to his body, and throwing himself over with the other two. And when he chanced to be free from all restraint, it was very often hard to tell where he might be found, as he would soon pass half a dozen high fences to reach some favorite field. To try to catch him, was very much like the boy's trying to catch the hawk,—he said he "did not expect to get him, but thought he might at least *worry* him."

But I have found a simple and efficient remedy. Pass a small and strong cord round his body just behind the shoulders, and tie the halter to this cord between the fore-legs, so as to leave a distance of about two feet from the cord to his head. If then he undertakes to jump, he is compelled to throw his head forward, which draws hard on the small cord, causing it to cut into his back, and he instantly desists. The cord should not be more than a quarter of an inch in diameter. A FARMER.

SOUR SOILS.

I wish to avoid controversy, but it is perhaps justice to myself and respect due A. J. P. to answer some of his inquiries, especially as he appears to have quite misunderstood my object. If he will read the remarks I made, through, he will find I do not hold "old notions," and that the facts I stated were for the purpose of keeping "the question in a state of suspense," without taking ground on either side. Hasty decision has led to a great deal of dispute among physiologists and chemists.

A. J. P. will observe that I did not say that *oxalic* acid existed in soil, neither is the proof perfectly clear that it does not, for analysis is too imperfect an operation for any one to decide positively on the subject. He is perhaps aware that Dr. Dana, generally regarded as a "scientific" man, holds to the "old notion" of sour soils, and their neutralization by lime; and I would request leave to refer to a paper of his in vol. 10, page 123 of the Cultiuator, not agreeing however with him in all his opinions.

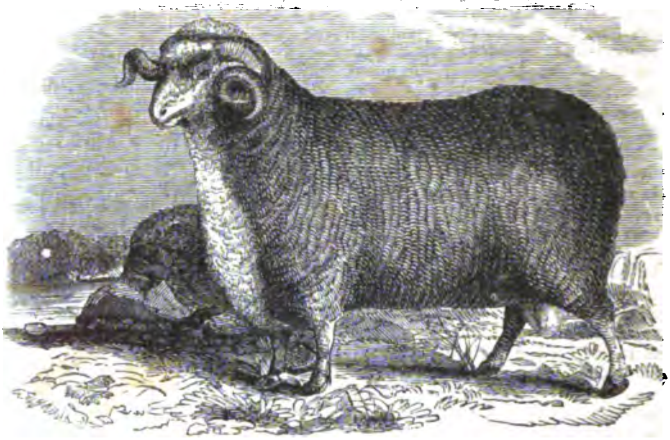
I am asked the meaning of the term *sour soil*. Perhaps I can best answer the question by referring to the 7th chapter of Ruffin's Essay on Calcareous Manures, without occupying any more space here than just to say that he gives repeated instances where the application of carbonate of lime *completely* prevented the growth of sorrel; and also very striking and decided instances where burying in the soil leaves of pine which had a strong acid taste, produced a marked and abundant growth of sorrel. That lime does not always destroy sorrel cannot be denied; but the reason of the difference in its effects, appears yet unknown. The term *sour* in England, appears to have long been applied to soils, in common language, very much as *sour face* is to a man, indicating an unfriendly quality.

I was somewhat surprised to observe that A. J. P. denied the existence of any free acid in soils. Berzelius, Johnston, Dana, and others assert it. "Who shall decide when Doctors disagree?"

He admits the difficulty of determining the constituents of the soil where they are in minute quantity. Now I have seen manures applied at the rate of one bushel per acre, produce very extraordinary results, nearly doubling the crop—and one tenth of a bushel would probably have made a very sensible increase. But one tenth of a bushel, diffused through an acre of soil eight inches deep, would constitute less than a hundred thousandth part of the whole, which would require a very skilful analyst to examine. Hence we may infer that substances existing in the soil in such small quantities that chemists cannot detect them, may yet yield important results in the growth of plants; and the latter may give decisive indications of the character of soils when analysis fails.

I am sorry I cannot furnish a specimen of the soil spoken of, for examination, as those particular portions in contact with the corroded pipe could not now with certainty be found.

It may be objected that I arrive at no conclusion, and leave all in doubt. This is what I wish to do. Nothing should indeed be beyond our inquiry; but in such a mysterious process as the growth of plants, where light and air, dew and rain, heat and electricity, and many constituents in the soil, are operating on them and on various parts of them at once, and new chemical affinities constantly taking place, and all at the same time imperceptibly slow, and by vessels and machinery so minute as to be in a great measure beyond the most powerful microscope,—it is not strange that many things remain undiscovered, and great caution should be used in laying down principles. If Newton, after a long life of deep research with mathematical demonstration, should compare himself to a boy playing with pebbles on the seashore, while the great ocean of truth lay all undiscovered before him, how much more should we hesitate in boasting our achievements in a science so much less capable of precision and certainty, as that which examines the ever-varying influences and results of vegetable growth. J. J. THOMAS.



FULL BLOOD MERINO BUCK, CONSUL—(Fig. 86.)

Owned by W. R. Sanford, Esq., *Orwell, Vermont.*

In reference to the portrait above given, Mr. Sanford says, "it represents a buck which I own, nine years old, bought when a lamb, of Hon. Wm. Jarvis of Weathersfield, Vermont, by a distinguished wool grower in this vicinity. His average annual weight of fleece is ten pounds. The weight of his body three years ago, was 164 lbs. I weighed him again about the middle of last April, and his weight was 156 pounds. His stock proves very superior, possessing all those qualities that I presume every wool grower is aiming at, viz. good thickness of fleece, very fine and soft. In 1829 I purchased of Messrs. Grant and Jennison of Walpole, N. H., twenty old full blood merino ewes, which were purchased by them when lambs, of Hon. Mr. Jarvis, and *warranted full blood.* These I have kept distinct and pure, and from them have reared a flock that the ewes yield an average of four pounds and over to the fleece, of clean handsome wool. Messrs. Grant and Jennison bought these sheep of Mr. Jarvis, *before* the Saxony sheep were introduced into the country—they were of course pure, and since I have had them, I have taken a good deal of pains and trouble to keep them so. I have purchased three superior bucks from Mr. Jarvis's flock, and by using them and those of my own rearing, have kept them pure."

Accompanying the drawing, we received from Mr. Sanford some thirty samples of wool from his flock. They are of long staple, soft, and free from gum, and of good quality. We should be pleased to show the samples to those who wish to look at them.

MR. AVERY'S SHEEP.

Messrs. Editors—Agreeably to promise, I send you a drawing* of one of my improved Paular Merino ewes. She was well washed and sheared on the 25th day of June, when her fleece was just one year and two days growth, in the presence of several gentlemen, among whom were Hon. Lewis Stone, Jesse H. Mead and Wm. B. Knox, Esqs. Her fleece was weighed by one of the above named gentlemen, and weighed 7 lbs. 3 ounces. Her live weight is about 120 lbs., having a lamb by her side, about 5 weeks old, at the time she was weighed and shorn.

In the Sept. number of the Cultivator, 1843, I gave the results of an experiment made with my flock, to ascertain the best feed to produce wool. An extract from that communication, appeared also on the 17th page of the Cultivator Almanac for 1844. At its close, I expressed my intention to renew my experiments another year. I have done so; dividing my flock into lots of as nearly equal goodness as possible. The kinds of feed are, as the year before, viz:

Lot 1.	Corn, ...	2	quarts to	32 sheep.
" 2.	Corn and oats, ...	3	"	"
" 3.	Oats, ...	4	"	"
" 4.	Cracked corn in cob,	4	"	"

The result is, that those fed on cracked corn, have given 1¾ ounces more wool per head, than either other lot. Those fed on corn and oats, about 1 ounce more than those fed on oats alone. Lots No. 1 and 3 gave about equal quantities.

The whole flock, consisting of 98 ewes, (35 of which are yearlings,) and 6 young bucks, gave an average of a fraction over 5¼ lbs.; which, at 45 cents, the price obtained for it this year, is, as you will perceive, $2,36 per fleece. In addition to this, I have from my 63 ewes, which are over one year old last spring, 63 fine lambs, nearly 40 of which are bucks.

It would be folly to say that my sheep are not *well taken care of;* but I certainly do not think them *extravagantly* fed.

I have been particular in laying these experiments and their results, before the public, to show how they have been fed, and what kind of food has succeeded best; that wool-growers, and especially those who are just commencing, may see the advantage of proper care, with the right kind of sheep.

In reference to the wool from my Paular flock, the statements given below from the two gentlemen who have manufactured, either the whole clip, or a part of it, for three successive years, will speak for itself.

"I manufactured the wool taken from the flock of Paular Merino sheep, owned by Mr. Avery of Galway, Saratoga County, in the years 1841 and 1842. I found the average weight of fleece, in those years, to be about 5¼ lbs., well washed, and free from tags. The heaviest fleece was about 12¾ lbs. This wool is free from jar, (hair,) a beautiful soft staple of great length; becomes the purest white when scoured, retaining its mellow, oily touch, and its felting properties are excellent.

July 29, 1844. Henry Pauling."

"I hereby certify that I manufactured for Mr. Avery of Galway, Saratoga County, N. Y., a part of the wool taken from his flock of Paular Merino sheep, in 1843. He brought me 20 fleeces, well washed, free from filth and tags, which weighed 111 lbs. I find this wool free from jar, a fine soft staple, of extraordinary length; and its felting properties are of the first order.

Milton, July 16, 1844. Jos. Riggs."

I will only say further, that the 20 fleeces taken to Mr Riggs, were a trifle heavier than the flock would average, which was 5 lbs. 5 ounces per fleece.

Respectfully yours, R. A. Avery.

Galway, Saratoga Co., N. Y., July 29, 1844.

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* We are under the necessity of omitting the drawing.—Eds.

NEW SYSTEM OF MANURING.

A singular idea has just been suggested in Scotland, in relation to the nutrition of plants. It may be summed up in a few words, thus—that a sufficient quantity of the elements of nutrition may be absorbed into the seed of wheat, oats, barley, &c. to ensure a very large produce at harvest, without any other manure. The gentleman that suggested the idea made experiments at two successive seasons, (in 1842 and 1843,) with complete success, and the Highland Agricultural Society of Scotland, have published in their Transactions, a detailed account of the whole affair. The experiments were tried on oats and barley, and the produce, especially the oats, were exhibited at the Society's exhibition last fall, and were of remarkable quality. In their Transactions, the Society speak of them in these words:—"There was perhaps no object in the exhibition of plants in the Society's Show at Dundee, in August 1843, which attracted such general attention as the remarkably strong and vigorous oats, growing in soil, exhibited by Mr. James Campbell of the Educational Seminaries of that town. The soil in which they grew, possessed no peculiar property, except that it had not been manured for eleven years. The vigor of the plants, according to Mr. Campbell, was entirely to be ascribed to their seed having been subjected to the process of soaking in certain chemical solutions." Mr. Mr. Campbell, himself, describes the result of the experiment thus:—"The greater number of the stems of the oats are as thick as small canes, and the leaves from one inch to one inch and one-seventh in breadth, of a vigorous dark green color. The seed was very light, not exceeding 37 lbs. per bushel, and consisted of grains set aside for feeding poultry. The average number of stems from thirty-three seeds, is eleven or twelve to each seed sown, and the gross apparent produce between five and six hundred fold." The solution in which these oats were soaked, was that of sulphate of ammonia. He prepared it from the carbonate of ammonia himself. He also used solutions of nitrate and muriate of ammonia, and nitrate of soda and potash, and all these in combination; but he seems to think the sulphate the best, though all the others produced favorable results. As these experiments cost but little, and can very easily be tried, I would recommend all farmers to make them with at least one acre. The simplest method is to take one pound of carbonate of ammonia and dissolve it in five pints of pure rain or river water. Then take one pound of finely ground gypsum (or plaster of Paris,) and stir it into the solution of ammonia, and let it stand twenty-four hours, stirring it occasionally. When the lime of the plaster of Paris has completely settled at the bottom of the vessel, pour off the clear liquor into another vessel, and add four pints of water to the lime, stir it well, let it settle, and then pour off the clear liquor into the other vessel as before; then put three pints more of water to the lime and stir it well again; let it settle and pour off as before into the other vessel. The object of these successive washings is to secure all the sulphate of ammonia that may be in the lime. The result will be, that there will be in the twelve pints of solution just one pound of sulphate of ammonia, which is the strength of the solution directed by Mr. Campbell. And these twelve pints, or one gallon and a half is the quantity required for one bushel of seed. The cost of the carbonate of ammonia is about 30 cents a pound at retail; the plaster costs comparatively nothing; therefore, if Mr. Campbell's theory be correct, it will cost but 30 to 60 cents to manure an acre of ground for a very large yield of wheat, oats, &c. The length of time Mr. Campbell left the oats, barley, &c. in soak, varied from fifty to ninety-four hours, at a temperature of 60 deg. Fahrenheit. Barley did best when steeped 60 hours. Rye grass, and other graminous seeds, do with soaking fifteen to twenty hours, and clover from eight to ten hours. He does not mention the time required for the steeping of wheat. Of course a much shorter time will be required than that for barley or oats; probably ten to fifteen hours would be sufficient.

Having stated Mr. Campbell's theory and given his practice with the results, I must be permitted a little criticism. It appears to me that the theory itself is a kind of condensation of the old and very deservedly exploded practice of manuring in the hill, without some of its most important advantages. Suppose a small quantity of this same sulphate of ammonia were placed in the hill with the seed, the moisture of the earth and the rain would gradually dissolve it, and the seeds would readily absorb it to the full extent of their capacity, and the growing plant would take up as much of what was not absorbed by the seed, as its future growth required. But it is obvious that this would only be of much advantage during the very young state of the plant. Its roots extend every way, far beyond the small place where the salts are: What for? Are we to be informed that the roots are thus sent out in search of inorganic matter, air and water only? Again, does sulphate of ammonia comprise all the elements of nutrition that compose the food of wheat, barley, oats, &c.? Let us see. Straw contains 38 per cent of carbon; that is, one hundred pounds of straw contain 38 pounds of carbon; and one hundred pounds of wheat contain 43 pounds of carbon. Sulphate of ammonia can only furnish the necessary (but absolutely essential,) nitrogen, nothing more. If, therefore, as Mr. Campbell asserts, oats soaked in a solution of sulphate of ammonia, and planted in a tilly subsoil taken six feet from under the surface, and in which there is no humus or organic matter of any kind, produced from five to eight stems of prolific oats, then we must conclude that a sufficient quantity of carbon and organic matter to supply the plants with its other elements must have been supplied through the medium of rain water, atmospheric air, &c. It may be safely admitted that the plants do obtain from these sources, an abundant supply of carbon; but that they do not thence obtain their potash, phosphorus, magnesia, silica, &c. is well known. Again, supposing there is no magnesia in the soil, whence will the wheat plant obtain phosphate of magnesia, which is an essential portion of all the gramineæ? Whence, also, will it obtain the silicate of potash, if there be neither potash nor silicic acid in the soil? Will sulphate of ammonia alone, in a soil taken six feet below the surface, and in which there is no humus or organic matter of any kind, furnish all these or any of these essential elements of vegetable organism? As hinted above, ammonia furnishes to plants nothing but nitrogen; nitrogen does not enter into the composition of any one of the above named elements. plants receive much, if not most of their carbon from the atmosphere; and why may they not also receive their nitrogen from the same source, as atmospheric air is composed of oxygen and nitrogen, the latter being four-fifths of its bulk. We all know that they do take carbon from the atmospheric air, throwing off the oxygen, and it is no more than reasonable to conclude that they appropriate the nitrogen to their own use.* If this hypothesis be admitted, the application of ammonia to soils is superfluous. But again, and I will have done with this criticism. Can it for one moment be supposed that a grain of wheat can take up by absorption, a sufficient quantity of ammonia to supply the whole plant, seeds and all, with all the nitrogen required for its perfection? It must be borne in mind, while considering this question, that twelve-thirteenths of the bulk of the solution absorbed by the grain, is simple water, and therefore that but one-thirteenth of the same bulk is sulphate of ammonia, that but one-third of this is ammonia, the other two-thirds being water and sulphuric acid, that about five-sixths of the weight of ammonia is nitrogen, the other sixth being hydrogen. Hence, wheat steeped as directed by Mr. Campbell, and absorbing the whole of the solution, will contain only one two-hundred-and-thirteenth of its own weight of nitrogen, a portion so inconceivably small, as to entitle the theory of Mr. Campbell to the appellation of the Homeopathic practice of agriculture. It is pretty well known to chemists, that grass, hay, &c. contain one per cent of nitrogen, that is, that one hundred pounds of hay contain one pound of nitrogen. I have not been able to find any close analysis of wheat, but it must of necessity contain a much larger proportion of nitrogen than grass does, on account of its possessing a greater abundance of gluten, an essential element of which is nitrogen. Therefore the addition of half a pound of nitrogen, (which is the greatest quantity Mr. Campbell's theory requires,) to an acre of wheat, could only result in adding fifty pounds of wheat in the straw to the harvest that would have been yielded without it; that is, that this plan of manuring can only result in increasing the crop, straw and all, of an acre of ground, fifty pounds. Still, as I stated before, it is worth trying, because the cost of the experiment is a mere trifle, and there may be things in agriculture as well as elsewhere, not dreamed of in our philosophy. In the chemical proportions above referred to, I have only attempted an approach to the various quantities, but I believe a sufficiently close approximation to exactness has been attained for all practical purposes, especially for that in view.

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* I am fully aware that chemists deny that plants derive any benefit from the nitrogen of the air, because, say they, "nitrogen cannot be made to enter into combination with any element except oxygen, even by the most powerful chemical means." Are there not many other combinations in the vegetable organism, that the same powerful means cannot produce, but that the chemical means of nature can and does continually?

Baltimore, Aug. 1844. GIDEON B. SMITH.

MERINO SHEEP—A CHALLENGE.

EDITORS OF THE CULTIVATOR—At your request, I forward you some samples of my merino wool.

As the best answer to the commendations of the merino sheep of Mr. D. C. Collins of Conn., and the attacks on those of other breeders, which have appeared in the American Agriculturist, I forward you a copy of the following offer forwarded by me this day to Mr. Collins, accompanied by the intimation that it would be published in the principal agricultural journals of this State.[*] This intimation was given to allow him to publish his answer accompanying the challenge, in the September number of those periodicals, should he see fit:

I will show a buck from the flock of Mr. S. W. Jewett, against Mr. Collins' 'Grandee,'[*] and as the properties of the individual do not always test the blood and properties as a stock getter of a male animal, I will show two bucks and two ewes not less than one year old, and also two buck and two ewe lambs, all got by the buck exhibited by me, against an equal number of bucks, ewes and lambs, the get of 'Grandee' from Mr. Collins' imported stock or their descendants—these also with the exception of the four lambs, to be not less than one year old. The descent of the other animals from the buck exhibited by me, and from 'Grandee,' to be properly attested. The exhibition to take place at Poughkeepsie at or near the show ground of the State Agricultural Society on the 17th day of Sept. next, at 2 o'clock, P. M. As the judges on sheep selected by the State Ag. Society will not probably be then in attendance, and as they might not choose to be called on to decide in a private contest of this kind, I will select one of the judges, Mr. Collins shall select one, and the two thus named shall have power to select a third. I have named no sum of money as a wager, for under provocation which I consider as most gross and wanton, I would avoid all appearance of retaliatory blustering. I am content to show the sheep, and let their comparative merits be decided by disinterested men; but if desired by Mr. Collins, a wager for any sum not exceeding $200 on a side, will not be declined.

I will also show at the same time and place, samples of wool from five of my ewes, against samples from an equal number of Mr. Collins' Rambouillet ewes, the weight of the last fleece, from which each sample is to be taken, to be proved by the affidavit of some individual who witnessed the shearing, "doing up," and weighing of each of the fleeces without being absent *during or between* either of said processes. The entire credibility of the person making such affidavit to be certified by the first Judge of the County in which he resides. The weight and quality of the fleeces in connection with the ages of the sheep, to be taken into consideration by the judges in making their decision. Judges selected as above. Here too, no wager is offered, but if one is proferred by the opposite party, to an amount not exceeding say $50, it will not be declined.

This challenge to remain open until the 5th day of Sept. next. HENRY S. RANDALL.

Cortland Village, Aug. 5, 1844.

BEST TIME FOR CUTTING WHEAT.

The following experiments, just performed by the writer, to determine the best time for cutting wheat, may possibly be interesting to some:

1844, 6 mo. 29.—A few heads of wheat were cut from the field, when perfectly green, the grains hardly having attained full size, and being "in milk" or quite liquid within. After drying several weeks, a hundred seeds were carefully weighed and found to weigh only twenty grains. They were almost shrunk to chaff.

7 mo. 4.—Other heads were cut in the same way—they had just begun to assume a perceptible shade of yellow. One hundred seeds weighed when well dried, 35 grains, or nearly double the first.

7 mo. 11.—Other heads were cut—they had changed about one-third in color—the grains in the *dough* state. One hundred seeds weighed 46 grains, and would be regarded as a fair specimen of ordinary wheat.

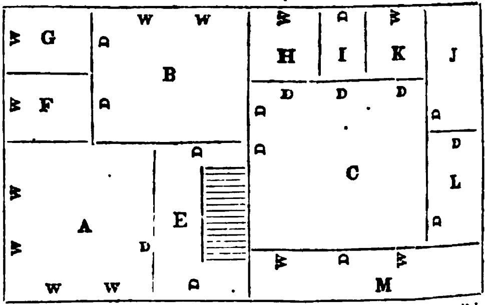
7 mo. 15.—Mostly become yellow—a few streaks of decided green near the tips of the chaff—heads quite erect. After cutting in this state, and drying some weeks, the seeds were very plump and fine looking, 100 weighing 55 grains.

7 mo. 29.—Heads dead ripe and curved downwards. 100 seeds weighed 53 grains, being two grains lighter than the last, which would be a loss of about one bushel of wheat in every twenty-seven, by cutting it dead ripe, instead of two weeks earlier as in the above instance—besides the loss by shelling, and the inferiority of the straw. J. J. THOMAS.

PLANS OF BUILDINGS.

MESSRS. EDITORS—Here is a plan of a farm house that I would like to see in the Cultivator; and also a plan of a cheap horse barn, asked for by one of your correspondents.

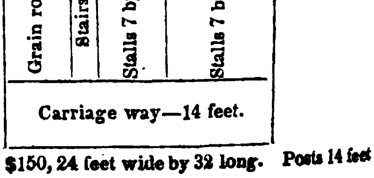
FARM HOUSE—(Fig. 87.)



Main building, 24 by 32 feet, two stories—back building, same size, story and a half high.

A. parlor, 16 by 16—B. dining-room, 16 by 16—C. kitchen, 18 by 18—E. hall, 8 by 16—F. bed-room, 8 by 8—G. bed-room, 8 by 8—H. bed-room, 7 by 8—I. hall, 4 by 8—J. wood-house, 12 by 16—K. pantry, 7 by 8—L. wash-house, 12 by 12—M. open stoop, 6 by 32.

HORSE BARN—(Fig. 88.)



Cost about $150, 24 feet wide by 32 long. Posts 14 feet long.

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[*] I give it this unusual publicity, as these commendations of Mr. C.'s sheep, *accompanied* by a favorable notice of the attacks which have appeared in the Am. Agriculturist, on the sheep of other breeders, have been published in an Almanac, of which a large edition has been issued with the design of giving it as wide a circulation as practicable.

[*] Mr. Colling's best imported buck, of which a portrait has appeared in the American Agriculturist, American Agriculturist Almanac, Central N. Y. Farmer, &c.

CHARCOAL, ITS PROPERTIES AND ACTION.

Messrs. Editors—Since the coming in of science to the aid of agriculture, there has seemed a wonderful disposition in the minds of some men to run quite mad on some particular theory or opinion. And this has shown itself in nothing more than in the desire to make some one substance in small quantity, supply the place of all manures. But the search for such a substance will be as vain as that of the alchemist for the philosopher's stone, as long as plants are of their present compound nature. In some parts of this country, the mania has run on charcoal; and from the praises often bestowed upon it, it would appear that it is indeed a substitute for all manures, although in *itself*, almost or quite valueless. No systematic and correct experiments have been made with it, by which its value can be estimated, and it is highly desirable that such should be made. Wherever great results have been attributed to the use of charcoal, it has always been applied in connection with some other substance that might well dispute the credit with it. Theory cannot settle the question, though theory is not altogether useless.

Charcoal is often spoken of as *pure carbon*. This, however, is not the fact. It consists of carbon mixed or chemically combined with the earthy salts which constitute a portion of all vegetable matter. When burned in the open air, the carbon is consumed, and these salts are left behind in the small quantity of ash that remains.

It is one of the most indestructible of substances. Exposed to heat of the greatest intensity, if air is excluded, it suffers no change. Moisture has no effect upon it, nor any chemical agent. It has been said by some writer that after being in the ground for several years, it is converted into a sort of coaly earth. But on the other hand, it is well known that charred wood will remain unchanged for years under these very circumstances. It is at any rate doubtful if it is ever converted into earth, or of itself, furnishes any food for plants.

Its most important property as a manure, is its porosity; and if it has any power, it probably depends upon this. All porous bodies possess the power of absorbing gases in greater or less quantities. Charcoal, *after being heated to redness and cooled without being exposed to the air*, will absorb 90 times its own volume of ammonia, and various quantities of other gases. By this force, they are condensed into a solid form. If heated, and then cooled under water, and placed in a confined portion of atmospheric air, it will absorb all the oxygen and leave pure nitrogen. But holding these gases with all this force here, does it give them out to the roots of plants?

One class of theorists say, that the vital force of the plant will separate them. But they are locked up in the small pores of the coal, where the most minute fibre of the root cannot penetrate. Others say it is by the power of fixing gases that it is useful, without accounting for the giving them out. Now what is the fact? Water absorbs at the common temperature and pressure, from 600 to 800 times its volume of ammoniacal gas, and will not part with the whole of it when boiled. Charcoal 90, water 800. The superior force of the water is seen at a glance; and what must be the result? Simply this—if charcoal is put upon land as a manure, however much gas it may have in its pores, the first shower of rain will separate it and carry it into the earth for the use of plants, and the pores of the charcoal are filled with water. As soon as they are dried by the heat of the sun, the process of absorption commences again, and again it is washed out. This view of the case would indicate the use of charcoal as a top-dressing to crops. And this is believed to be the correct plan. Buried in the soil, it adds to its looseness, but is not exposed to alternate dry and wet as when on or near the surface.

There is another mode in which this substance is used and with undoubted benefit, and that is, in the compost heap, or as an absorbent of the urine of men and animals. The general opinion seems to be, that in this case also it acts as an absorbent of gases produced during the decomposition of these matters. That this is not the case, will readily appear, by referring to its well known action on animal matter. If meat which has begun to putrefy, be packed down in charcoal, it is not only deprived of all bad smell, but the process of putrefaction is immediately arrested. No more gases are formed, and of course no more are absorbed. Its effect is to stop the process of decay. In this way any animal or vegetable substance may be preserved a long time unchanged.

Thus when used in the compost heap, or when saturated with urine, all the substances it comes in contact with, are brought under its influence, and when applied to the soil, are gradually separated by the rains which fall upon them, and undergo in the earth the decay which fits them to become food for plants. Used in this way, charcoal will undoubtedly be found very useful, much more than when applied alone.

It is very desirable that those who have it in their power, should make accurate and careful experiments upon this substance, to ascertain its individual and comparative value; and I would suggest to those who can do it, to try its effects in something like the following way, unless some other should appear more convenient. Take four equal portions of the same land, and treat them thus:

1. No manure.	2. Charcoal.	3. Yard manure.	4. Charcoal saturated with urine.

Newburgh, N. Y., Aug. 3, 1844. A. J. P.

TO BRUTUS.

> "The blood will flow where the knife is driven;
> The flesh will quiver where the pincers tear."

July 15th, 1844—My eye has just rested on the article of ☞ "Brutus," an appropo exponent of his feelings and taste. He asks whether I would deny ugly, vicious, and debased women, the benefit of a name? I say no: and would reply in part by asking a few questions. Would you, if a fine field of wheat was struck with rust, call it Canada thistles? or a sheep smitten with the scab or foot-rot, a goat or pole-cat? Proper names are given in infancy, when the blank page of life is unsullied by vice; if in after years, immorality should harden the heart, and vice bedim the bright sunshine of youthful innocence and hope, they are amenable to a higher tribunal than that of man. But the idea of giving proper names to unthinking brutes, is fraught with such ridiculous bad taste, it excites a smile of pity for the weakness of man. Two years since, at the State Fair held at Syracuse, I saw Daniel Webster, and where do you think? Tied to a pine tree, by a ring in his nose. Do you think if that illustrious statesman had been there, and seen him, he would have thought it a high compliment to behold a namesake in that condition? What gentleman of refined feeling, would think of applying the name of a wife or a daughter, to a great strapping Berkshire sow, with thirteen pigs? If the name was to expire with the animal, it would be quite an abbreviation of the error; but many of them are herd-book lordlings and princesses, whose names are recorded, and will be referred to, as long as man wields the plow and the spade for a subsistence; "yea, as long as earth bears a plant, or sea rolls a wave." Who would think of looking in the herd-book for a name for a son or daughter? and what man of high tone of moral feeling, would think of looking in his family register in the old ancestral bible, for names for his sheep and calves? If he did, I should expect his next act to be to make a golden calf and then fall down and worship it. What would be said of us as a community of enlightened farmers, if we should make it a common practice to name our male sheep, hogs, horses and cattle, after our most distinguished scholars, statesmen, orators, philosophers, poets and divines, and the females after the most accomplished lady writers of the day? If we should ever arrive at that point of animal refinement, I would propose to give them these titles also; as for instance, my bull, the Hon. or Elder or Col. The ancients recorded the deeds and names of their sages and heroes, in song and sculptured marble; we polished moderns, practical believers in transmutation, apply them to soul less brutes; they deified their great men, we brutalize them. To lend one's name to another's note, is granting no small favor, but to have one's own name, or that of a mother or sister, taken without leave or license, to be sacrificed at the Moloch altar of beef, mutton and pork, is "carrying the joke a little too far." Would "Brutus" give his own fair name as a cognomen for a buck, a bull, or a boar? If not, remember the golden rule. By the way, I have a princely gentleman of the cow-yard; a roaring four year old animal magnetizer, whose present title is "Brutus;" if the incog. "Brutus" will send me his address, he shall forthwith become God-father to as splendid a bull as there is in the Parallelogram County.

Yours, JUNIUS.

NOTES OF A TRIP TO LOWELL.

MESSRS. EDITORS—You will probably remember that when, on passing through your city a few weeks since, I mentioned to you my intention of making a short excursion to the eastward, you mentioned to me to furnish you with some memoranda of what I might see worth noting in the course of my trip. I declined engaging to do so, on the ground of being unqualified to write for the public eye, as well as disinclined to do so in this age of fine writing and critical animadversion. I thought no more of the matter until I reached Lowell, where, finding a leisure evening, I remembered your request, and set about scribbling a few rough memoranda, such as I here send you.

Allow me to start at Vergennes, an incorporated but small city, and by the way, the *only* city in our State. Vergennes lies on the Otter creek, eight miles north of my place of residence, and is accessible to vessels of the largest size from Lake Champlain. It has manufactures established on an unlimited water privilege, and a United States Arsenal. It is the place where McDONOUGH'S fleet was built and equipped in the last war. The largest vessel in the victorious battle of Plattsburgh, was built here in 42 days; the timber mostly taken from the stump, in the mean time. Here I went on board the new packet "Garland," which plies monthly between this city and Buffalo. At her side were lashed several boats laden with iron, timber and other commodities, which were all towed to Whitehall at the head of the lake, by one of the lake steamers. On one of these tow-boats I shipped a few sheep, ordered by Mr. Peckham of Utica, which he assured me were designed to *improve* his flock "at the west."

In Albany, I met Mr. ROBERT S. WILSON, a planter from Baltimore county, Maryland, with whose conversation I was highly entertained. He is a practical agriculturist, and among the many experiments which he has been making, he mentioned one on Indian corn, which I think worthy of note. He has for three consecutive years planted seed corn taken from within an inch of the butt end of the ear, and the result has been he has obtained a mature crop of corn, some two or three weeks earlier. I have never tried the experiment myself, but I am confident the corn crop can be forwarded in this way, from the fact and for the same reason that beans taken for seed from the lower part of the vine which mature first, have been found on trial to ripen some time sooner than those taken from the upper parts which mature later. Mr. Wilson informed me that great improvements were making in the agriculture of his State, particularly by some enterprising individuals who had emigrated from the eastern States, and he thought that those who chose to settle there, with help brought from the east, would find themselves able to invest money very profitably in lands and agricultural operations; that lands were now at their *minimum* price, and would in a few years advance in value a hundred per cent. He said that he himself raised last year a crop of corn from a piece of "worn out land," as the lands exhausted by long cultivation are there called, which yielded 70 bushels to the acre; and that his crop now growing, promised him an average of 100. He remarked further, that bone dust was one of the best fertilizers for these lands, which they had found; and that this could now be procured in plenty and very cheap, in the cities and market towns.

In New-York, I called on Mr. Van Ness, the collector of customs, not to obtain an office, (Heaven forbid!) but to obtain from him such information and assistance as he might be able to render me in reference to a contemplated voyage to Spain; he having been lately our Minister to that country. He obligingly gave me such information as I desired, and promised me such letters as might be useful to me abroad.

Leaving New-York for Providence, I passed in one of the noble steamers, through Long Island Sound. It being clear and calm, we had a delightful view of the city as we passed it, and the scenery along the shores of Manhattan and Long Island, surpassing any prospect that I ever before witnessed. The improved cultivation along the banks, the elegance and taste displayed in building, fencing, laying out of gardens, parks, alleys, &c. and arranging copses, shrubbery, &c., all added a beauty and loveliness to the scenery which seemed more like enchantment than reality.

Along the route between Stonnington and Boston, I observed that the field crops were suffering considerably by drouth, though all along the border of Lake Champlain, the Hudson and the Sound, they were quite promising. The grass crop is not as heavy in general, as last year; but the quality is I think better than I have ever observed before; red and white clover literally cover the ground with their blossoms. In Vermont, the wheat harvest has never appeared better within my recollection. There is sufficient growing to supply the State at least one year. Last year the average crop was about 18 or 20 bushels to the acre; this year, I think the average will reach nearly 25. The Black Sea wheat will be of incalculable value to the State, should it continue to yield as it has done for the few years since its introduction.

But to return: I made but a few hours stay in Boston, and consequently saw but little of that beautiful and flourishing city—a home for Yankees. I called, however, on the editors of the Boston Cultivator. Mr. PEDDER I found at the office, and the short interview I had with him assured me that he was an enlightened practical farmer, and I was particularly interested in his intelligent observations respecting the management of sheep. He said he had formerly had the charge of (I think) about 13,000 in Pennsylvania.

At Lowell, I called on SAMUEL LAWRENCE, Esq. I found him at his mansion-house, a little out of the city, on elevated grounds, which command a fine view of the city and adjacent country for many miles in circuit. He has just finished his house, which may be fairly called a palace. It is of wood—a very elegant and costly style of building, and finished in exquisite taste. But however pleased I was with the mansion itself, I was still more so with its worthy owner and inmates.

I found Mr. Lawrence clad in checked cloth of his own manufacture, such as he sells at $1.25 per yard. He said he had worn no cloth other than of his own manufacture for fifteen years.

On arriving at his factories, I was much surprised to find manufactured there every kind and quality of woolen cloths, from those worn by the humblest, to such as are chosen by the wealthiest citizen of our land. I learned that the two factories under his charge, had consumed 3,300 lbs. of wool per day for the last month, and that the general average through the year is 3,000 lbs. per diem. I saw piles of wool in the fleece, in his warehouses, all of last year's clip or older, to the amount, as I was told, of more than 1,000,000 lbs.

Mr. Lawrence pays *more* for fine wool, and *less* for coarse, than any other purchaser. His prices varied from 25 to 80 cents; for many lots that bring 38 and 40 cents in Vermont, he could not offer more than 32 to 35 cents. Mr. L. says he has no doubt that the weight of fleece may be increased in our flocks, without injury to the pile; that the length of staple was no detriment to the manufacturer, and that this would soon be recognized as the first wool-growing country in the world, with the best and most profitable breeds of sheep. He further agreed with me respecting the competition from the west, that Vermont had nothing to fear at present—that if he owned 1,000 sheep, he would sooner place them in Addison county, Vermont, than to send them to the prairies of the west.

The contrast between the condition of the laborers in this manufacturing city, and that of the "operatives" in the cities of Europe, must forcibly impress every intelligent and humane mind. Here, instead of poor, emaciated and haggard forms, and visages worn out with sleepless and never ceasing toil, all appeared blooming, cheerful and healthy.

In no city in our country can be found so great a proportion of young, healthy and neatly clad people. Among the whole populace, I saw not a single pauper or beggar. What a contrast this with the ragged, sickly, beggarly thousands, that throng the streets of Manchester and Leeds!

On Saturday eve, the walks were filled with young "*ladies*," as they may well be called, neatly, and many of them even elegantly dressed, presenting those native decencies, proprieties, and even graces of manner and movement, which many of the highborn and fashionable belles of Broadway might advantageously copy.

Who ever heard of a literary journal conducted by factory girls in any other country or place? In the city of Lowell is issued a neat little monthly sheet called "THE LOWELL OFFERING," written, edited and published by the working girls in the factories!

In Mr. Lawrence's woolen establishment, there are employed 550 females, and about 250 males. In the different factories of the city are 6,295 females and 2,345 males. Many of the girls who, when they came to Lowell, had left their parents in poverty and distress, have, by their diligence at the spindle and the loom, removed from their grey hairs the pressure of penury, and rendered their last days comfortable and happy. Some have even been able to pay off mortgages and recover from alienation their patrimonial inheritances. The girls usually receive from $1 to $2.50 per week with their board, making an average of about $1.75. There is a Savings Bank in which they deposite a considerable portion of their wages, bearing interest. In their moral condition and character, the operatives of both sexes are not inferior to any portion of the community. On Sunday morning the streets are full of young people at the ringing of the bells, walking in orderly procession to their respective Sunday schools and churches.

The factories in Lowell were commenced in 1825. There are now thirty-three in successful operation. There are 8 establishments for calico printing, besides which are powder, flannel, blanket, batting, and paper mills, grist and saw mills, foundries, &c. The total number of yards of cloth (cotton and woolen) manufactured in a year by all the mills is 74,146,600, which amounts to 230,000 yards per day.

In taking leave of my hospitable and excellent friend, MR. LAWRENCE, I cannot but remember the deep interest he manifested in agriculture, especially in the rearing of sheep. On the centre table of his splendid parlor lay, in elegant bindings, the three volumes of the "Transactions of the N. Y. State Agricultural Society," and two volumes on the "Domestic Animals of England, with Engravings."

I observed nothing novel in my hasty journey home, through a part of Massachusetts, New Hampshire, and across the Green Mountains, except the mode of quarrying the granite in New Hampshire, and the very common use of it in sections of that state. In separating the blocks from the mass, small holes are drilled in a straight line a few inches asunder, into which wedges are inserted, which being gently and evenly driven, sever blocks of any required length; these may be afterwards subdivided in the same way. So easily is this hard material quarried, and so easily wrought, that it is considered in many parts of the state, the cheapest material for posts and fixtures requiring strength. As we passed along the road, I saw great quantities of these posts in the railing of bridges, viaducts, ornamental fences, and common fields enclosed with these granite posts, into which are fitted wooden rails. The price of these posts varies according to finish and size. Small plain posts may be furnished for a shilling a piece. Crossing the Green Mountains, I reached home safely, and was not at all displeased to think of remaining on the banks of the Otter.

SOLOMON W. JEWETT.

Weybridge, Vt. July 20, 1844.

ON THE YOLK OF WOOL.

MESSRS. EDITORS—This substance is also called *eke*, in some parts of the United States, and with much propriety, as it is continually eking or oozing out of the skin. The words eke and yolk, or yoke as it is frequently pronounced, appear to be derived from the Saxon word *eac*, which in their language, is pronounced *eoke*. So that between the spelling and the pronunciation, the two words *eke* and yolk or yoke, are made out of the same word. In the present state of the English language, the word eke seems to define this secretion of the skin with propriety, and the words yolk or yoke seem to be the Yorkshire dialect for the same thing.

The yolk of wool is a kind of soap which is composed of potash and an adhesive oil, and the potash is super-saturated with this oil, and to it are added small quantities of carbonate of potash, acetate of potash, muriate of potash and lime. That it is principally a soap, in which the alkali is super-saturated with oil, any person may convince themselves by putting some alkali, either potash or soda, into some rain water, and washing some eky wool in it. The eke will be turned into a perfect soap, and the wool made clean with the greatest ease.

The uses of the yolk appear to be as many as three:

First—it makes the wool soft and lively. Hence that kind of yolk which is most abundantly saturated with the adhesive oil is best. It will then adhere to the ends of the wool as well as to that which is near the skin; and every part of the wool will be kept lively—whereas, if the yolk is almost nothing but a mere soap, as seems to be the case with the yolk of some kinds of sheep, it will be washed by the rain out of the ends of the wool, and such ends of the wool will become dead as it is termed, and will felt unevenly.

Second—the yolk forms a defence against the weather. If it is of such a quality that it will not be washed out by the rain, it will be for the sheep a complete coat of mail, and it must be a severe storm of rain or snow which will completely wet through such a fleece. In Scotland, after the lambs have been weaned in autumn, it has been customary to milk the ewes a few weeks, and from their milk to make a quantity of butter, and then mixing this butter with tar, say two or three parts of butter with one of tar, they prepare a kind of artificial yolk in order to soften the wool and defend the sheep against their wintry rains and snows.

If they find it profitable to take so much pains to make this artificial yolk, how carefully should he who owns merinoes, breed them together so as to preserve the proper quantity and quality of the yolk upon his sheep? and if there is any especial reason for preserving merinoes pure, it is the preservation of the quantity and quality of the yolk.

Third—there is very little taste to the yolk, and yet it appears to be in some measure a defence against flies and worms. The tick seems to be the only animal which can live comfortably in pure yolk of wool. No fly of North America will lay its eggs in pure yolk of wool of the merino. It is only when the yolk is mixed with blood or mucus or some other animal matter, that the fly will deposit eggs which will make worms. The sheep of England are very much troubled with maggots coming from eggs deposited by the fly in the wool itself. But it would seem that they must have some different fly from what is found in America; for British sheep in America are not troubled in this manner. And after wool is shorn, it will not be disturbed by moths so long as the yolk is left in it. This to the wool buyer is a very useful property of yolk. And he always buys it, making proper allowance for yolk and dirt, and buys it readily when it is black with yolk, knowing it to be good; and all the compliments for clean wool which are purchased by raising sheep which are deficient in this useful article are dearly bought.

C. D.

COTTON CROP OF FLORIDA.—A letter from G. F. Baltzell, Esq., dated Oakley Hill, July 24, says—"The planters of this country will again be seriously injured by the caterpillar, lessening the crop of the staple to one third of their expectations two weeks ago."

AGRICULTURAL INSTITUTIONS.

BY ALFRED L. KENNEDY.

That the ignorance of true theories and improved processes of agriculture, which prevails in most sections of our country, can be radically removed only by establishing agricultural schools and colleges, is a proposition that receives the universal assent of intelligent men. The question on the *necessity* of these institutions, is settled throughout the civilized world. Our duty now manifestly is, to adopt the best plan, and then to put it in execution forthwith. This duty is of no mean proportions. The causes of the difficulties, changes and failures of like projects, must be well studied ere we can expect to profit sufficiently by their experience to avoid their fate. That these difficulties are not invariably fatal, is evidenced in the continued and flourishing existence of schools, which are widely illuminating the toil of the cultivator. We propose to sketch a few interesting particulars of the most prominent of these institutions. They may be most conveniently treated under two heads. Those which, to an *academical* course, unite the theory and practice of agriculture, and those which teach agriculture only.

The schools of the first class, are based upon the Institution at Hofwyl, in Switzerland, under the direction of its noble founder, the philanthropic M. de Fellenberg.* It consists of three schools, literary, agricultural and intermediate. In addition, lectures to teachers are annually given. The literary school commenced by the introduction of three children into the family of the principal. In 1807 the first building was erected for it. In a few years the number of professors gradually increased to 20, and the pupils to 80. The studies comprise, in addition to those taught in our colleges, music, dancing, fencing and cabinet-making. The latter gives facility in the use of tools, incites habits of industry; and as the product of the student's labor becomes his own, and is generally sent home as a present, neatness of execution and filial affection are encouraged.

The object of the Agricultural School is to afford children of poor parents an opportunity of acquiring an excellent education, while they gain a practical familiarity with the most improved farming processes. This was commenced in 1808, under the most unfavorable auspices. The children were of the worst possible description—brought up in idleness, they were literally taken from the hedges and highways. Yet by receiving a few at the onset and slowly increasing the number as the first became subject to the admirable discipline, a perseverance that nothing could daunt, has successfully established an institution whose benefits have excited the admiration of the friends of education every where.

"The pupils are admitted at an early age, there being however, no fixed limits, and are expected to remain until 21, if supported gratuitously. By so doing, they would be enabled by their manual labor to repay the expense of their maintenance and education, so as to leave the institution without pecuniary obligation. They would besides, be detained beyond what is considered the most critical age. In practice, however, it is found difficult to induce this lengthened stay, the actual expediency of which must depend so much upon individual circumstances. In addition to the gratuitous pupils, others are taken, who pay in part or entirely for their education. In summer, the time occupied in labor is from eight to twelve hours per day, and in instruction from two to four hours. In winter, the amount of labor is less, and of study more. During the time of harvest and hay-making, the instruction is omitted altogether."

In winter, the hours not devoted to the care of cattle, threshing, and other farm labor, are employed in the agricultural machine shop, in making baskets, straw mats, in selecting seeds and in breaking stone for repairing roads. The pupils are encouraged to labor on their own account. Each has a small portion of land for the culture of vegetables and flowers, the profits of which are his own.

As an example of *incidental* instruction, we subjoin the following:

"In laying out the ground for different crops, for planting, or for spreading manure, care is taken in determining the points, in drawing the lines parallel, in measuring the distances, and the intervals of the plants with the eye or by paces. The number of plants or heaps of manure is calculated, and the whole is a lesson in geometry and arithmetic, as well as an exercise of accuracy and foresight."

"In cutting the trenches for watering an artificial meadow, the level of different portions is observed by some; others trace the lines in such a manner that the water shall perform the circuitous route necessary to supply the whole of a given space without descending below its level; and others still place the sluices necessary to prevent excess in one part or deficiency in another. All these operations are practical lessons upon the laws of gravitation, and are often employed in the most striking manner to lead the pupil to the existence and influence of this universal agent. If the pupils are engaged gathering the stones out of the fields, these become the subjects of examination, first in reference to color, hardness and texture, then the uses to which they are respectively applicable, and finally their name, either in the moments of rest, or in some of the lessons of the day. The instructions thus received, are recalled almost involuntarily at every fresh operation of the same sort; and such associations serve to divest this lowest of agricultural occupations of its purely mechanical character."

"If they are clearing the ground of weeds, the name, characteristics and qualities of each one are made the subject of remark. The relative effect of sun and air and moisture and cultivation, upon these plants, and those of a useful nature, is necessarily brought to view by the observation of the pupil, and by the instructions given him, and inferences are then drawn as to the best mode of exterminating them."

The intermediate school was established to supply an education for the sons of the "middling classes," in a style correspondent to that of the parental roof. Free from the glare and show that frequently attach themselves to boarding schools, and give the pupils fondness for fashion and extravagance, that ill comports with home notions. Farm labor, however, forms no part of the course.

The success of Hofwyl led a number of wealthy friends of agriculture in the north of Ireland, among whom was Earl Spencer, to project a similar establishment there. This led to the Institute at Templemoyle, 6 miles from Londonderry. Believing that similar benefits would accrue, it was proposed, as at Hofwyl, to establish both a Literary and an Agricultural College.* This was abandoned after much expense had been incurred, and the energies of the Company directed to the latter. It is not, however, a school for special instruction, since the English branches and mathematics are taught in connection with the principles and practice of agriculture. Pupils are received from 15 to 17 years of age; and 3 years are considered sufficient to complete the course. In 1837, 66 young men were preparing themselves for the thorough management of farms. The annual charge for maintenance and tuition (about $50,) is not sufficient for their support. For convenience, the pupils are divided; one half being with the teacher, the other in the fields; thus working and studying alternately. Ten hours a day are thus appropriated.

"The direction is vested in a committee of the subscribers, each of whom pays $10 per annum, and who alone have the power of proposing pupils. The immediate control is divided between the Agricultural Master or farmer, who regulates the agricultural affairs, the School Master who divides the time of pupils with the farmer, and the Matron who has charge of the domestic economy of the establishment under the direction of the farmer and instructor."

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* For an acquaintance with this distinguished man and his noble undertaking, the English reader is mainly indebted to Rev W. C. Woodbridge, Editor "Annals of Education," to Prof A. D. Bache, in his able Report to the Councils of Philadelphia, on Education in Europe, and to "Letters from Hofwyl, by a parent," London, 1842. From these authorities we have freely quoted.

* To establish the schools, one hundred and sixteen shares of $125 each were subscribed by different Companies and individuals, and $6,000 were subsequently subscribed for the erection of the buildings at Templemoyle. Various other donations have been made.—[Bache's Report.

The school at Templemoyle is a most gratifying example of what may be done by a few ardent friends of the farmer *without Legislative aid*. On a farm of 150 acres, and with a system whose details are marked by great simplicity, an Institution has been formed, of the highest practical benefit. The advantages derived during the 27 years of its existence have enlisted the entire community in its favor; and seldom have we been more gratified than in hearing the encomiums passed upon both school and pupils by former residents of the neighborhood—a gratification of course mainly derived from the anticipation that thus encouraged the farmers of our beloved country would be quick to furnish their own sons with similar instruction here.

Class 2d. Schools for special instruction.

As an example of what has been done, and shall we not say, may be done? when Agricultural Societies, aided by government, exert themselves, "The Agricultural Institute of Wirtemburg," is well deserving a notice. This was founded in 1817 by the Agricultural Society of Wirtemburg, under the patronage of the king, who devoted a royal seat with extensive buildings to the purposes of the Institution. There are two departments—in the higher, the object is less the acquisition of manual dexterity in the operations of agriculture, than the knowledge required to superintend them; while in the lower, the practice is the chief end. In the higher, for tuition natives pay $40, foreigners $120 per annum; and for meals, &c., paid in advance to the Steward, $40. In the lower, natives are admitted gratis, if their circumstances require it, otherwise $40 for three years. The officers are appointed by the Agricultural Society. The Director is an instructor; there are also a treasurer, 4 regular and 4 extraordinary professors, besides an overseer and steward; number of students in 1837 was 99. Applicants for admission must be 17 years of age, and possess the necessary qualifications for the prosecution of the course. The pupils of the lower school are engaged in operations on the farm, garden, &c. They also attend certain of the lectures given to the higher classes, and receive instruction when not engaged in labor. They are paid for work done, by which they are enabled to defray the expense of maintenance. Those who display great skill and industry, receive premiums.

The agricultural course of the higher school generally requires two years. The same period is required for that of *forestry*.

Branches of special theoretical instruction:

1. *Agriculture.* General principles of farming and horticulture, including the culture of the vine, the breeding of cattle, growing of wool, rearing of horses, raising of silk-worms, arrangement and direction of farms, estimation of the value of farms, book-keeping.

2. *Forestry.* Encyclopedia of forestry, botany of forests, culture and superintendence of forests, guard of forests, hunting, taxation, uses of forests, technology, laws and regulations, accounts, and technical correspondence relating to forests.

3. *Accessory branches.* Veterinary art, agricultural technology, especially the manufacture of beet sugar, brewing, vinegar making and distilling. The construction of roads and hydraulic works.

General courses:

1. *The Natural Sciences.* Geology, physiology of plants, botany as applied to agriculture and forestry, natural history of animals beneficial or noxious to plants and trees. General chemistry, and its applications to agriculture, physics and meteorology.

2. *Mathematics.* Theoretical and practical geometry, elements of trigonometry, arithmetic, elements of algebra.

The farm of 960 acres is thus divided; arable land 501; meadow, 242; fields set apart for experiment, 33; woodland, 13; nursery, 67; hop plantation, 2; botanical garden, 14; ground for pupils in plowing, 2; garden, 1; otherwise appropriated, 85.

For the further advantage of pupils, the arable land is cultivated according to five different rotations; a large stock of cattle of different breeds, foreign and domestic, and of sheep are kept; agricultural implements are made in a work-shop attached; collections of seed are made for lectures and sales—useful seeds are distributed throughout the country. There are collections of soils for analyses and lectures; philosophical apparatus, library and laboratory; also a cider press, beet sugar manufactory, brewery, distillery and vinegar manufactory.

We have already extended this article much beyond our intended limits. We have written that the reader, knowing what has been done, may be the better enabled to form a tangible idea of *what he should assist in doing*, viz: *blessing our country with like Institutions.*

Philadelphia, July, 1844.

LETTER FROM RICHMOND

Of Staten Island, New-York, to his friend SOLON ROBINSON, *of Indiana. Dated at Oakland Farm, July* 4, 1844.

DEAR SIR—I have been some time in your debt, and I now set down to discharge the obligation, by answering your last agreeable letter. In this part of the country, the season has been favorable, the crops in general look well, and the in-gathering has commenced earlier than usual. Although in the midst of harvest, I am enabled to devote a portion of the day to you, because my farm laborers have been allowed to absent themselves and partake of the festivities and amusements of our national anniversary at a neighboring village. The day is delightfully clear, cool and pleasant, and all nature puts on a smiling aspect. When I look upon the fields teeming with bountiful crops, and the whole country blessed with peace and plenty, I feel that we ought to be very thankful to the "Good Supreme,"[*] who hath placed us in this favored land, and rewarded our labors with abundance.

In your last letter, (Cult. for March, 1844, p. 92,) among other remarkable facts in relation to the western lands and prairies, you mention a cause of sickness in the wooden curbs of wells. This is doubtless the case, and permit me to point out the remedy, which may be easily applied. If the lower section of the curb, beneath and above the water, was completely burnt or charred before being sunk, it would preserve the wood and sweeten the water. Within my memory, no vessel going on a long voyage, could preserve the water pure and free from the smell and taste of sulphuretted hydrogen, which also produces the bilge water effluvium from the hold of a ship. Water contained a length of time in casks of sound oak wood, will nevertheless have a bilge water taste and odor. I recollect some forty years ago being invited on board a vessel returned from a voyage to the West Indies. The captain, as was then the custom, presented his bottle of Jamaica spirits which was mixed with water so nauseous from the bilge water smell, that I could not drink it. I was laughed at as a land lubber, for not being able to stomach the mixture. The captain and crew from habit were unconscious of its unpleasant and unwholesome qualities. Sickness sooner or later follows the use of such water. I could point out some remarkable cases of sickness on ship-board, of fevers and scurvy, from the drinking of similar foul water in former times. But this is unnecessary, as the subject is now well understood, and the evil is remedied by charring the inside of water casks. The same process applied to your wooden curbs, would have the same effect, but they should be charred inside and out. This may be done by burning brush, straw, or prairie grass in and around the curb until it becomes completely charred, and then it will last for ages. A swab with water as used by coopers, can be applied to prevent burning too deep.

One other means of promoting health in the families of your western settlers and log cabins, would be to whitewash the houses and fences. I presume the article of lime can be procured, as I know limestone abounds in all the country around you. Applying a white color to houses in the country, either of white lead or white wash, makes an agreeable contrast with the surrounding green of the grass and trees, and gives an air of elevation and liveliness to the scene. I remember being impressed with these ideas, when in my younger days, I first traveled through your native State of Connecticut. In passing north from Hartford, the scene suddenly changed, and the houses and barns were either not painted, or painted with a dingy red or ochre color, and upon inquiry I found that I had passed the State line, and was in Massachusetts. This kind of paint gives a dirty and sombre appearance to buildings. Whitewash is a cheaper application than white lead, but then it is sooner and easier applied, and must be annually renewed. The renewal however, promotes the healthiness of the locality where it is applied. On this Island, some of the inhabitants, rich and poor, whitewash their houses inside and out, and you may see barns and other out-houses, and long lines of fences about gardens and along the public roads subjected to the same treatment. It promotes cleanliness and health, and preserves the wood to which it is applied. To prevent its being washed off by rains, I slack the lime with hot brine, or boiling salt water.

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[*] "Father of light and life, thou GOOD SUPREME."—Thompson's Seasons.

The want of fencing timber to enclose farms upon your western prairies, caused me, in a former letter, to propose the propagation of forest trees for shade and fencing. The yellow locust tree you say is indigenous there. I also named the red cedar (Juniperus Virginianus,) because I had seen in one of the volumes of the Cultivator an inquiry for the seeds to be planted on the prairies, and I could furnish you with them. Since you have the locust, why not propogate it from the seed, and in a short time, portions of the prairies will be timbered with a valuable tree, and one easily raised.

But at present, as you have not the timber, farms might be enclosed and divided into lots by earthen sodded walls. Some years ago I employed an Irishman who divided a field by such an embankment. Taking off the sod in the line of his wall, three feet wide with a spade, he laid the square portions on one side, and then dug a trench, heaping the contents on the other, and when of sufficient height, covering the mound with the sward.

Thus, on your prairie lands, where there are no obstructions from rocks or stones or stumps, and where the sward is matted together by many roots, such enclosures may be easily effected. Now suppose a site selected for a house on a prairie, and one or two acres for a garden and out-houses, thus enclosed, and locust seed or acorns, or chestnuts or walnuts, planted on the embankment. In a few years a growth of young trees would surround the premises, add utility to beauty, and tend to fix your nomad or wandering population, and lead to other permanent improvements. But these, I apprehend, are remote, as long as so much new land lies still farther west, which will entice the adventurous pioneers until the Pacific ocean arrests their course. Substantial improvements cannot take place with a moving population. Farmers must have stronger local attachments to effect such improvements, and induce others to unite with a laudable pride in making the country to smile with an improved and flourishing agriculture.

But under existing circumstances, the prairies would probably be turned to best account in raising sheep and cattle, converting the grass into beef and wool. Those animals, however, reserved for domestic purposes, as a few sheep for mutton, and cows for their milk, if kept within enclosures, would prevent the necessity of hunting them up in the distant woodland or on the naked prairies, or going without milk and cream as related in your last letter, (Jan. 20th, 1844.)

After the enclosure by earthen embankments of the house, barn and garden, as proposed above, would it not be advisable to extend them and make a number of enclosures of several acres each in extent, about and near the dwelling-house, that the milch cows and calves and sheep should be within a reasonable distance, and easily driven up when wanted, and as the pasture became short in one field, to be turned into another, while the herds of larger numbers were allowed a wider range ?

The farmers in these parts, where land is dear, labor high, and produce low, complain that they are undersold in their customary markets by the abundance of agricultural produce pouring in upon them from the cheap lands and rich soil of the teeming west. This, though a general blessing, is in some cases a local injury. My neighbor who was so skeptical about your cultivating in one field 500 acres of wheat or Indian corn, is now inclined to sell out and go west. He is much discouraged with toiling from year to year and not going ahead. He raises an ample amount of grass and grain for home consumption, but for several years past, if he wanted to sell any of his produce, the price was so low that it did not pay the cost of labor and manure. He would take the Cultivator if he was settled in his mind whither he should go. His land is worth $100 an acre, but he will not readily find a purchaser who would occupy it for mere farming purposes, at the present price of agricultural productions; but for an amateur farmer it would be an eligible location on account of its elevation, gradual slope to the water, and its beautiful and commanding sea prospect.

Farewell for the present. I won't vote for John Tyler, because, among other reasons, he improperly turned you out as Post-Master, a situation in which you was doing more good to the cause of agriculture, than he in all his admihistration. Again I say farewell.

RICHMOND.

SCIENTIFIC EXCHANGES FOR FARMERS.

MESSRS. EDITORS—No class of the community would probably be more benefited by a general system of exchanges in works of nature and art, than farmers. Besides being the largest class, and as individuals equally interested with any other, in general improvement, their profession leads them more directly and practically than any other, to operating among the works, and of course, by the laws of nature. Among the almost endless variety of specimens in the vegetable kingdom, which might profitably be articles of exchange, seeds would be among the most instructive and useful; and certainly not less so to the farmer than the botanist. Nor would his interest be confined to the seeds of plants which are, or may be cultivated. As it is frequently useful to know our enemies, farmers would often be benefited by a more perfect acquaintance with plants which annoy them. A knowledge of the classes, or *natural families* of plants, is exceedingly useful to farmers. This can only be acquired by an acquaintance with individuals, in their different relations, and especially in their fruit or seeds.

As an example of the ease and extent to which exchanges in such specimens, may be instituted, a proposal, a year or two since, in some paper or papers, for young people in different parts of the country to collect the seeds of plants, embracing forest trees, fruit trees, weeds, &c., brought a collection of some thirty kinds from a lad in Ohio, to a gentleman in Philadelphia. With the seeds were specimens of the leaves directly, or impressions of them made by himself, using the smoke of a lamp for the ink, and his hand for the press; an excellent process by the way, for conducting agricultural exchanges, to some considerable extent. The process is so simple, that a child of five years can perform it, and as far as the general texture and shape of the leaf is concerned, the representation is more correct, than can be made by any drawing or engraving. The leaf is used as the type for imprinting itself.

In 1785 the government of France sent two men, the elder and younger Michaux, to this country, where they were employed for eleven years, principally to ascertain what trees and other vegetables found here, could be introduced to advantage into that country. It is perhaps not less interesting for American farmers to know what plants from different parts of the world, could be introduced here for their cultivation. And it must surely be evident, that the most instructive, economical and complete mode of ascertaining this fact, is by a system of exchanges with all parts of the world, in plants, with other specimens, both of nature and art.

In no department of agriculture, probably, have greater improvements been made within a few years past, in none perhaps, are so great yet to be made, as in manures In many instances, inexhaustible deposits, before supposed to be useless, have been rendered *instrumental*, virtually, in producing a new *creation; as they have given* to large tracts of land, previously deemed worthless, the value of from fifty to a hundred dollars an acre. Such are the marl beds in New-Jersey, and some other States. Now suppose that specimens of marl and all other fertilizing substances were collected by those acquainted with them, and sent to different Exchange Lyceums, agricultural depositories, or other convenient places for exchange, exhibition, &c., could they hardly fail to lead to the discovery of new deposits of the same, or perhaps different substances, useful to farmers?

Agricultural implements might be much improved, and those already improved, more widely extended among nations, by scientific exchanges. In some of the oldest countries, the plow is to this day, little more than a crotched stick, sometimes improved by pointing it with iron. In Asia Minor, the Islands of the Mediterranean, and other regions which were the fields of the earliest and most interesting events recorded in history, agricultural implements are of the rudest kinds. They contain not only specimens of antiquity, as curiosities, but fertility *of soil*, variety and richness of natural productions, which if rendered fully available, would not only aid in raising the inhabitants from a state of heathenism and semi-barbarity, but by reciprocating with those advanced in agriculture, in arts, intelligence and Christianity, might give knowledge to others, while they received it themselves. Not long since, some bare-footed girls and boys, collected from the streets of New-York, for and by scientific lectures, given weekly, especially for them, were led to prepare and collect specimens, both of nature and art, which have been sent to different countries, especially to Mexico, and in return, have brought, among other specimens, some Indian curiosities, which have interested and instructed great numbers of our most intelligent citizens. Such exchanges, varied and extended, as easily they might be, and will be, may introduce to Mexico, also to South America, many improvements in agricultural implements, and procure for them some plant, mineral, or other specimen from those countries of mines and of inexhaustible natural resources, to enrich our own fields, both of agriculture and of general science.

But how can such exchanges be commenced and carried out by and for farmers? By means, as simple and direct, as the field is vast, and the enterprise grand and magnificent. If it can be instituted between the street boys and girls in New-York, and the young Mexican Indians, the sons and daughters of our intelligent farmers, can surely find no obstacle in their way. One step they can take, is to pick up, and examine and preserve the first pebble they see, and seek for an opportunity to learn its name and properties. Not unlikely some person may think it a great bargain to give the owner the knowledge he desires, in exchange for a part of the specimen. The specimen, with its name and properties, may then be taken to the school attended by the owner, where some fifty or a hundred others will also know it, and perhaps give for it something brought by them, each leaving a part for the school cabinet. Before they are aware of it, they will have specimens worthy of sending to New-York, Philadelphia, Boston, or some other seaport, whence it may go to Mexico, South America, France, England, Germany, or some other place, bringing in return, other specimens, which may find their way to the school or family, or the hand which picked up the first pebble it met.

This is not only describing what may be, but what has been, in instances too numerous to be mentioned here. Numerous facilities are now enjoyed for extending such exchanges widely and rapidly. Geological surveys are completed or commenced in nearly all the States. By them large collections are made, and much knowledge diffused. These specimens, and this knowledge, may, and ought, and will be used for extending them more widely; and no one step, perhaps, will be as direct, or effective, and certainly no one is more capable of universal application, than that just mentioned. A mineral will lead to a plant, and that to a drawing, and the drawing of a plant to one of an insect, bird, ox, horse, or some agricultural implement, which might be exchanged, greatly to the mutual advantage of Americans and Mexicans, Yankees and South Americans, &c., in addition to a highly beneficial, scientific and agricultural commerce, between the towns and States of our own Republic. Let the word *Begin*, and the thing BEGIN, be shown by boys and girls in schools and families through our country, and the work of *Agricultural Exchanges*, by the side of a general system of scientic commerce, will be more than half accomplished.

Such, at least, judging from long and large experience, is the opinion of your friend, JOSIAH HOLBROOK.

TO THE OWNERS OF THE SOIL.

MESSRS. EDITORS—Now, in the sultry season, is the time to make an impression upon the owners of the soil, in favor of planting shade trees on the sides of our public roads. No one is insensible to the refreshing coolness and enchanting luxury of a drive through a forest; and what man or beast is not delighted to reach a little skirt of wood, behind which to shelter himself from the blaze of a summer sun, even though his journey may be of but a few hours duration. How many there are who own good carriages and horses, that forego the pleasure of traveling with their own conveyance, and betake themselves to canals and rail-roads, because the prospect of traversing shadeless, dusty, or muddy roads, is so cheerless. There would be less labor and more economy in the end, in having good roads the year round, than bad ones, the wear and tear of horses and vehicles over muddy and uneven roads, is one proof; the extra time thus consumed, is another. There has doubtless been labor enough assessed on the highway for the last twenty years to have Macadmized every rod of them had it been judiciously superintended. Why cannot the people feel as engaged in meeting together for the purpose of devising ways and means for improving and beautifying the country, as for a thousand minor purposes. The reason is, because it is merely optional; it can be done or let alone; and letting it alone is the easiest. There is scarcely a man in the State who owns so much land, that he could not in the ensuing fall and spring, set out good forest trees on every line of his farm bordering upon the road, without feeling that he had spent sixpence or lost a day's work, at the end of the year. Instead of seeing farmers taking little jaunts across the country of forty or fifty miles, we see them riding post haste half a dozen miles to reach a rail-road, and are perhaps left in the same predicament—that is, as many miles from their place of destination. It appears to me that farmers should resort to rail-roads only when business compels them to travel faster than horses can carry them, for this reason; while traveling either for business or pleasure, they can enjoy the privilege of viewing the farms of their distant neighbors, noting the prospect of the different crops, and get many useful hints with regard to buildings, fences, water fixtures, &c., and finally, they can take their wives with less expense, than to go alone by public conveyance. One thing more respecting roads; as district schools are becoming so deservedly popular, parents and guardians should see that there is a good side-walk, that their children may get to and from school, with their feet clean and dry; it will save half the distance, and perhaps twice the expense in shape of doctor's fees.

Onondaga County. A FRIEND TO IMPROVEMENT.

DOMESTIC MANUFACTURES.

To the Committee for awarding premiums on in-door manufactures:—Is it policy to award premiums for paintings, worsted needle work, or work of *any kind* that is merely ornamental? The object of giving premiums, (if I understand the matter) for the best specimens of domestic manufactures, is to promote industry in the *useful* arts, and encourage those to work who perhaps would not without this inducement. There always was, and probably always will be, time enough expended in the manufacture of useless articles, without offering premiums for them. Few ladies are so indolent that they will not perform work of this kind, as the means of passing time, even though there may be at the same time, a sad deficiency in the quantity of bedding, linen, &c., in their houses. Besides, the poor are cut off from competition in this branch of industry, they can neither afford the materials, or the time to learn to use them.

Furthermore, would it not be judicious (when awarding premiums for in-door articles) to consult the opinion of ladies who have been in the habit of manufacturing more or less of the same kind of goods; they certainly understand better than gentlemen can, the difficulty in performing different kinds of work, and the time and expense requisite for the completion of the articles. For instance, the premium on table linen and sheeting, is small, compared with the premiums on flannel cloth, stockings, yarn, &c. No one can understand the difference in the labor required to make a yard of woolen or linen cloth, unless they have actually made both. I should be glad to see this branch of labor more encouraged; the foreign article is too expensive for common use, consequently most families are almost entirely destitute of good substantial linen. A Farmer's Wife.

Onondaga Co., Aug. 1, 1844.

THE LATE DR. SAMUEL L. MITCHILL

Of the city of New-York, and his labors in aid of Agriculture.—No. 3.

Our second number contained an examination of Dr. Mitchill's first address delivered before the old Agricultural Society. His second, before the same body, was delivered at Albany on the 7th February, 1798. In 1792 he was a member of the State Legislature from Queens county, but in 1798 a representative in the Assembly from the city of New-York.

In this second address he adverts more particularly, than in his first, to the subject of manures. Therein we shall find that he has anticipated Davy, Liebig, Johnston and other late writers, by pointing out how azote or nitrogen may become a vegetable fertilizer.

"On the subject of manures (says he) there has been a good deal of valuable experiment and speculation. Mr. Kirwan's excellent pamphlet was forwarded to the Society by a member of the British Board of Agriculture; since which I have been favored by Dr. Dickson, late of Dublin, with the last volume of the Transactions of the Royal Irish Academy, which contains this memoir. On perusing it, there appeared to be one memorable defect; there was very little written on the *azote* (or nitrogen) of the modern philosophers, or the principle of putrefaction as a fertilizing ingredient in soils, or a nutritive material of plants. So considerable an omission appeared to me to deserve a supplement; and accordingly I wrote an addition to the work, on the deficient article, which I have forwarded to the author in Ireland. It is very remarkable that so obvious and well known a substance as this should have escaped the particular notice of agriculturists so long."—Transactions, vol. 1, p. 206.

After an acknowledgment of the receipt of numerous communications from the President of the British Board of Agriculture, Dr. Mitchill again observes,

"Finding in such publications as these and others that have from time to time come to hand, that one of the most operative ingredients in animal and vegetable manures (*azote*) was in a great degree overlooked or omitted by European writers, I deemed it worth the while to inquire into it a little more particularly myself. In this undertaking there has been a development of much new and precious information."

"Fortunately, in prosecuting the subject, the important, though much neglected science of Chemistry, which in my earlier days I had studied with some care, enabled me to labor on through discouraging and seemingly insuperable difficulties. The composition and qualities of soils and manures being only to be understood and explained upon chemical principles, there was a necessity of reviewing what had been done already, in order to comprehend what remained to be done."—Trans. p. 207.

By the means of chemistry then, we learn from him, that "the analysis of corrupting bodies has been more carefully attended to; and of course a more correct idea of the nature and qualities of the manures formed from these, has been obtained. Among other things it has become manifest how the septon (azote) or principle of putridity, is evolved or set loose on the earth's surface."

"On tracing the progress of putrid bodies and their unwholesome vapors from their origin and duration to their decline and extinction, it has been sufficiently ascertained that by means of the vegetable economy, the substances whence offensive and noxious steams proceed, are decompounded or taken out of circulation and manufactured anew into forms replete with organization and life."

"Thus the subject of manures when well understood, explains the occasional epidemic influence of the atmosphere, as well as the growth of vegetables and many of their peculiar qualities; and these again, when fully comprehended, reflect light upon the economy of farming, in their use and application; upon the police of cities, in preventing their baneful vapors from getting afloat in the air; and in the healing art by enabling its practisers to prescribe and direct by sure rules what in a given case ought to be done. These new views of this branch of science, have shown a more intimate connection than ever was before known to exist between *meteorology, farming and physic.*"—Trans. p. 209.

Again, it is worthy of notice that this acute observer of nature detected the acidity of manures and soils, and the means of correcting or neutralizing them, showing too, how offensive and deleterious substances may be rendered inert and harmless in relation to the health of human beings and animals, while at the same time they nourish vegetation. Hear what he said on these subjects, as far back as 1798:

"The acid nature of most animal manures and their exhalations, owing to a junction of the principle of putrefaction with a portion of oxygen, is of itself a most interesting discovery. But the inferences from such a fact are of a still more extensive and beneficial kind, and by showing the use and operation of *alkalies*, let us know how they are useful in combining with the acids inherent in the soil, and wafted through the air in a volatile form, and in both cases have a sweetening and neutralizing operation. Hence it may be inferred we are not far from possessing a true theory of lime, ashes, and calcareous earth, and of solving the problem which has puzzled inquirers so long, and which no European writer appears to have rightly understood."—Trans. p. 210.

Thus much from Dr. Mitchill's second address before the old Agricultural Society. In this, he refers to his letter "On Septon," which is published in the volume of Transactions of the Society (p. 245) and though written before his address, it is connected with it on the all important subject of manures. It is headed by the author in the following words:

"On Septon, (Azote) and its compounds, as they operate on plants as food, and on animals as poison; intended as a supplement to Mr. Kirwan's pamphlet on manures. In a letter to the Rev. Dr. Henry Muhlenberg, of Lancaster, Pa., from Mr. Mitchill of New-York, dated October 24th, 1796."

We must here premise that Dr. Mitchill was at this period, (1798) Professor of Chemistry and Agriculture in Columbia College, New-York city; that he had studied Chemistry under Dr. Black, a celebrated professor of that science in Edinburgh (Scotland,) and who was the discoverer of *Carbònic acid gas*, which he called *fixed air*, because he found it fixed or in a solid state in limestone. About the time that Dr. Mitchell left Scotland, with the honors of the University, (1786) the new chemical doctrines and nomenclature of Lavoiser were promulgated, and to him we are indebted for the terms *oxygen, hydrogen, azote*, &c., still in use. When the subject of this communication was appointed to a Professorship in Columbia College, although he had an exalted opinion of Dr. Black, he adopted the nomenclature of the French school as best adapted to convey correct information and precise ideas. In the course of his scientific researches and investigations, however, he suggested several alterations of the terms introduced by Lavoisier, and *Septo* was employed by him instead of *azote*. The irrespirable part of the atmosphere which the French Academicians termed azote, other chemists have named nitrogen as one of the constituents of nitre, and both are used a the present day. Nitre or salt-petre, is a product of putrefaction, and the azote it contains, Dr. Mitchill name Septon, from a Greek word signifying to putrify. H considered it the destructive agent in producing sickness and death when human beings were exposed to the exhalations of masses of animal and vegetable substances in a state of putrefaction. Septon he considered an elementary substance capable of entering into numerous combinations, and by uniting with oxygen forming *Septic acid*, and this when associated with potash producing *Septite of potash* or common salt-petre.

This explanation is necessary to understand his remarks on Septon as a manure. We may consider the terms *Azote, Nitrogen and Septon*, as equivalent terms. Other chemists have not adopted the word Septon, but Dr. Mitchill made it the agent in explaining his ideas of the action of pestilential fluids and the operation of manures.

Farther remarks on Septon or Azote as a manure, must be deferred to our next number, lest we encroach too much on the columns of the Cultivator and the patience of its readers.

Staten Island, July 5, 1844.

We are now, Mr. Editor, in the midst of our harvest, being somewhat earlier than last year. The season has been favorable, and crops look well. Wheat, rye, barley, oats, corn, grass and potatoes all have a promising aspect. I began my hay harvest on the 24th of June, and wheat is this day falling into the cradle, one week earlier than in 1843. Respectfully yours. RICHMOND.

HABITS OF THE CURCULIO.

The late Willis Gaylord in his treatise on "*Insects injurious to the Farmer and Gardener,*"[*] says, "The plum tree, both in its fruit and its wood, seems peculiarly liable to the attacks of insects. The principal of these, is the *Rhynchænus nenuphar*, or plum weevil. Did [this] beetle confine its ravages to the fruit of these trees alone, the damage would be small, compared with what it actually is; since not only the fruit, but the tree itself is frequently killed by them. Every one conversant with fruit, has observed the black unsightly masses that collect on branches of the plum tree, some varieties of the cherry tree, and in some cases in swellings or gummy protuberances on the peach tree. *These are occasioned by the same insect as that which destroys the fruit.*"

This opinion of my late respected friend was not peculiar to him, for the same has been advanced by other writers, though doubtless without sufficient evidence. The curculio had been very troublesome in this vicinity for thirty years before I observed a single excrescence on any plum tree, though I had frequently heard of this malady at the eastward, and was apprised of its advances in this direction. Now to a mind capable of appreciating the force of evidence, these facts must be conclusive against that opinion, unless the curculio has recently acquired this habit.

Circumstances tend to show however, that the curculio has not acquired this habit. I have not observed the "Black Gum" to spare any variety of the plum in my possession, neither does the curculio spare the fruit; but there are many trees on which I have detected this insect in great numbers, year after year, and yet not an excrescence has been produced. What then is the inference? Why, that the curculio never causes an excrescence, though possibly it may deposit a nit in the tumor when it has arisen.

In the same valuable treatise, to strengthen that position by analogy, a remark of Kollar's has been brought forward: that the plum weevils of Europe, *in default of plums*, make use of the soft spring shoots of the plum and apricot trees. So different however, are the habits of different species, that the charge against our little neighbor, must receive very little support from this suggestion; and more especially when plums in abundance, unpunctured by the curculio, are found on the same branches with the "black gum." Here there is no "default;" and it proves clearly, in my opinion, that this excrescence is a different and separate concern, caused doubtlessly by some other insect.

Further,—It is very questionable, if the plum tree is disfigured by the same insect that destroys the cherry tree. It has now been several years since the "black gum" first appeared in this neighborhood; and though I have many kinds of the cherry, including the morello which has suffered so much in the southern parts of Pennsylvania, yet I have never discovered a trace of this malady on any cherry tree in this district.[*] D. T.

Greatfield, Cayuga co., 7 *mo.* 18, 1844.

ANALYSES OF GUANO.

Laboratory of the New-York Agricultural Institute,
University of New-York, Aug. 16, 1844.

The arrival of guano from the African coast, in large quantities, into New-York, has induced the Farmer's Club to require of me an analysis of the article, and remarks upon its value, as compared with that from Peru.

I would have been content with selecting for the Club the analyses given in the Chemical Gazette and Jameson's Journal, had not an inspection of those labors developed a remarkable difference between the African and Peruvian specimens, so great as to call forth a doubt on the part of Dr. Draper and myself as to the accuracy of the examinations. To test the matter, and assure myself on this point, I proceeded to a fresh analysis, and have now the honor of submitting my results to your numerous readers.

Analysis of African Guano.

Oxalate of ammonia,	16.0
Phosphate, muriate and carbonate of ammonia, with animal matter,	12.0
Humic acid,	4.0
Oxalate of lime,	10.0
Phosphate, sulphate and muriate of soda and potass,	8.5
Phosphate of lime and magnesia,	36.5
Silica from the crop of the birds,	.5
Water,	12.5
	100.0

The specimen had a specific gravity of 1.5 and was soluble to the extent of 45 per cent, of a light brown color, and covered with spots of white, increasing in size as the guano became dry—all of which signs indicated its excellence.

The analyses of Dr. Davy, Mr. Francis, and Dr. Ure, are as follows:

	Davy.	Francis.	Ure.
Oxalate of ammonia with muriate, phosphate and animal matter,	40.2	32.89	34 0
Ammonia in a separate form,	——	9.70	9.5
Salts of potash and soda,	6.4	7.06	6.0
Phosphates of lime and magnesia,	28.2	22.32	18.5
Silica,	——	.81	0.5
Uric acid,	——	a trace.	3.0
Water, &c.,	25 2	27.13	28.5
	100.0	100.00	100.0

The point to which I referred as indicating a remarkable difference, is the absence of *uric acid and urate of ammonia*, which are the striking and valuable ingredients of Peruvian Guano. In my analyses, I tested 6 specimens, and could find no trace of those bodies, although incredulous as to their absence; Dr. Davy, (Sir Humphrey's brother,) also made numerous attempts to detect it in many separate examinations, but found it always absent. Mr. Francis was equally assured that it did not amount to 1.100th per cent. In Dr. Ure's analysis, 3 per cent is given, but with due defference to that experienced chemist, I may doubt whether he pursued his inquiry to the production of *purpuric acid*, without which the nature of the precipitate cannot be distinguished from *humic acid*, of which both Francis and myself obtained 3.5 and 4 per cent, whilst Dr. Ure does not mention its occurrence.

If there is a point settled in the varying composition of Guano, it is, that the African variety contains no Uric acid, whilst brown Peruvian contains from 10 to 25 per cent.

This question is not merely of chemical interest—it is all important to the farmer. For these salts, oxalate of ammonia in African, and urate of ammonia or uric acid in South American, severally represent the *expensive* and to a great extent, the fertilizing ingredients of Guano. But whilst the oxalate (African) is very *soluble* in water, the urate is *is insoluble*.

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[*] Transactions of the New-York State Ag. Society, Vol. 2.

[†] Since writing the above, I have been told of a cherry tree infested by the "black gum," some miles from this place. Perhaps it indicates the arrival of the same insect that has been so destructive in Pennsylvania.

Hence the farmer who uses African Guano, may expect a rapid effect, but nothing that is permanent beyond crop, whilst the use of the Peruvian in England has already shown its effects to be apparent on a second and third crop.

In practice, analysis leads us to suggest the propriety of recommending the application of African Guano in small quantities, added at short intervals, rather than the use of the whole at once. For instance if 200 lbs. is to be applied to an acre of meadow, let it be divided into parcels of 50 lbs., and each scattered at intervals of a week, after rain or when it is expected. I should also be disposed to add rather less African than Peruvian Guano, in view of the great solubility of the former. The manure should be applied with three or four times its bulk of fine earth.

There are many other particulars interesting to the farmer and naturalist, connected with this difference in chemical composition, which are however, too long for your pages, and will be published (as requested by the Farmer's Club,) in a short Essay, which I will do myself the honor of transmitting to your office.

Yours respectfully, D. P. Gardner, M. D.

Lecturer on Ag. and Analysis in the N. Y. Ag. Institute.

GREEN CORN FOR WINTER USE.

Messrs. Editors—A correspondent in the July number of the Cultivator, inquires concerning the preparation of green corn for winter use.*

The following is the manner in which it is prepared in my family, of the merits of which he can judge by experiment.

Pluck the ears of green corn when fit for boiling, strip off the husks and throw the ears into a kettle of boiling water, leave them in until the water boils up over them, when they must be taken out. Shell off the corn by running the prong of a fork along the base of the grain, holding the ear with one end against the breast; this is better than cutting off with a knife, inasmuch as it is more expeditious, and saves all the grain, including the heart or germ, which is the sweetest part.

After being thus prepared, it must be spread out thin on cloths in a shaded, airy place to dry; it should be stirred every day until thoroughly dried. When cooked, it should be put in cold water and boiled an hour or more; the water to be pretty well boiled off. When the water is nearly off, a little milk added to it will improve the taste. Respectfully yours, M.

Shawangunk, July 29, 1844.

THE GOPHER OF FLORIDA.

Editors Cultivator—On page 209 of the present volume of your very valuable paper, I observe an article headed, "To kill Gophers, &c." credited to the Prairie Farmer, with a few lines of editorial, from which it would be inferred you believed the Gopher to be a species of the mole. This surprises me, knowing the Gopher to be an animal peculiar to the south, and have always supposed the word Gopher to be of Creole origin. The word, I apprehend, is unknown to naturalists as applied to an animal of any species, and can only account for the discrepancy in this instance by the supposition of the name being given or understood as applied to two animals entirely distinct in every particular.

The appellation is applied to an animal of the turtle species found south and west of the Savannah river, Ga. (it is worthy of remark they are not to be found north of it) along the Gulf coast within the region of the long leaf pine barren to the Mississippi, and for aught I know, much farther west. It differs materially from the Terrapin common in the west and perhaps throughout the country.

They are usually about ten inches long and weigh from five to eight pounds, very inoffensive and slow in gait, living on grass, and whatever may be found in their rambles of a vegetable nature. Holes are made by them in the earth at an angle of forty-five degrees, sometimes to the extent of ten feet; after arriving to a certain depth however, the avenue is level with the surface of the earth to which they resort for incubation and protection.

At Pensacola particularly they are much esteemed as an article of diet, and are preferred by caterers of the mess aboard public ships to fowls of any kind, being equal in flavor and taste, and living much longer at sea. They are caught when hunted and scarce, in pits dug at the mouth of the holes, lined with bark and covered slightly so as to break under their weight. They are never found nearer than a mile or two from any habitation or cultivation. Having wrested the Gopher, which, when well prepared is no mean dish, from the poisonous arsenic of Mr. Sherfry, I might close my letter with a simple expression of kind feeling for you, Mr. Editor, and all lovers of the science of Agriculture, but in justice to Mr. S. will state that his prescription will be well received by the farmers of this country to destroy a little animal very destructive to seeds and roots, of the rat species, called the Salamander. This little pest is very shy, and is rarely seen by man.

Is there not a breed of cattle called the Galloway, without horns? For the sake of humanity, recommend them to J. S. on page 227, to relieve him of such barbarous practices, and your readers the pain of their recital.

Oakey Hill, Florida, 24th July, 1844. G. F. B.

There are four or five breeds of polled, or hornless cattle, one of which is the Galloway. They are considered very good stock, and we *second* the humane suggestion of our correspondent. Eds.

POLITICAL ECONOMY.

Messrs. Editors—Many of your readers must have been greatly surprised by the communication of Dr. Bates, in your last number, calling in question what all the world have heretofore considered a self-evident truth, and one of the great corner-stones of every true system of political economy. It has been the motto of success, whether to nations or individuals, since the world began, and so will be to the end of time.

Your correspondent says there appears to be a "fog" about the matter; and so there is, if his logic be true. But it is more specious than sound, as may be shown easily. He illustrates through a Vermont wagoner; but went no further than suited his theory. Let us go a little further, and suppose the wagoner over-traded; that is, took away some of the ready cash of his town or family, besides the "notions," and brought back groceries to the whole amount, consumed them, and went again, and so kept on exporting, importing and consuming, how long would it be till that town or family came to poverty and want? This would be the inevitable result; and no one would look for any thing else. Now this is a plain case of imports exceeding exports.

But while in his last sentence, he admits the true doctrine, viz. "that a nation or individual who consumes more than they produce, must grow poor," yet calls it a "sophism," "sheer nonsense," &c. when spoken of as imports and exports. What are our exports, but our produce; and our imports, but articles of consumption? The idea is apparently held out that we can buy something which we do not want to consume, which would be another gross violation of one of the first rules of economics, "buy nothing which you do not want."

We are also given to understand that there is nothing so very frightful in having the balance of trade against us; and he intimates that the doctrine is false, that we are 400,000,000 poorer than we should be, because we have over-traded to that amount, as shown by the Treasury tables. Now we have paid for these goods by our labor, and consumed them. No doubt they were luxuries, and much more might be put to the same account. Suppose we had practiced a little more self-denial; would not the fruits of that labor be yet in the country? We should have it in some other shape; say, more improved farms more manufactories, and better ones; and a better development of all our natural resources. Would we not be just so much wealthier, and yet possess that which is now consumed and gone. If we had been thus economical, sufficient capital would have remained in the country for the construction of all our public works, and to have taken all the loans for which we are now indebted to Europe. We have certainly been extravagant, and just as certainly are poorer than we should be, Dr. Bates to the contrary notwithstanding.

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* There is a Dutch name for this article, which I do not give because it cannot be spelled in English.

But after all, the whole "fog" in this matter, lies in the question as to the place of valuation. Transportation to market, is part of the labor which gives value to exports. Till this is added, the valuation is not ready to be settled. Dr. Bates does this at home. It should be at the place where he buys and sells. The "wagoner" should do it at Boston. He has then put all *his* labor to his "notions," and is ready to balance the account. This is the universal practice, and is in exact accordance with our axiom, which has been so rudely assaulted and mystified, by changing the place of valuation, and kicking up a dust about "transportation," "ships," "wages of men," &c.

But once more, and I have done. Let a stranger go through this transaction. He buys the "notions" for $100, carries them to Boston, sells for $125, (freight now being added,) comes back with groceries to that amount, sells out for $150, including transportation homeward, profits, wear and tear, &c. He has got back the $100 left there at the start, and the villagers find themselves minus $50 of their former savings beside. They have the groceries, it is true, for that amount, and use them; and thus they have consumed $50 more than they produced, and such, Dr. Bates says, must certainly grow poor; and so say all—but all cannot see how he can thus trifle with the same truth in other words, and raise a mist and "fog" about matters hitherto plain, and thus repel inquiry into one of the most interesting departments of human knowledge, by making it seem a disputed matter.

Hackettstown, Warren co., N. J. A. R. D.

THE CATALPA—TIMBER FOR POSTS.

I never see a Catalpa tree, that it does immediately recall to my mind a fact stated by the late Gen. W. H. Harrison in an Address before the Hamilton county Agricultural Society of Ohio in 1831, that the Catalpa is more lasting than either the locust or mulberry for fence and gate posts. Many portions of our country, new as it is, owing to the heedless waste and profligate use of every kind of timber, together with the utter neglect every where of any measures for re-production, are already nearly without the necessary supply for common fencing. Indeed there are some places where fence timber cannot be obtained except by importation from distant places. As long ago as in 1820, the writer of this traveled through several counties in the middle States, where nothing but boundary fences were thought of, and the public roads were crossed on the line between every two farms, by *gates*, which the traveler was obliged to open and close in passing. These gates were permitted by law, owing to the deficiency of timber for fencing the fields bordering on the roads. It is believed the same state of things still exists in that part of the country. Now in a country like this, such a want of timber ought not to exist. Every owner of land on which there is a scarcity of timber, should plant the several kinds of seeds and take care of the young plants till they can take care of themselves; or permit spontaneous growths to grow, and thus secure the necessary supply of timber. But to the Catalpa. In the address above mentioned, Gen. Harrison said, "The wood of the Catalpa affords perhaps, a more lasting material than either that of the locust or mulberry; is of a very quick growth, and easily cultivated. Its ability to resist decay has been sufficiently tested in the neighborhood of Vincennes, both under ground and in contact with it. Over the little stream of the Desha, five miles from Vincennes, one of these trees had fallen before any emigration had taken place from any of the States, to that place. It was certainly lying there in the year 1785, when a colony of Virginians, from the south branch of the Potomac, emigrated to that place, and for many years served as a foot bridge over the stream. I was informed by a gentleman of undoubted veracity, that it was only partially decayed a few weeks since, (that is in the spring of 1831.) The same gentleman, (Dr. Hiram Dickson,) informed me, that a bar post which was made by his father, and put in the ground at a little stockade work, which was erected in the year 1770, and which has been taken up and removed to his own farm, by his brother-in-law, Major Andrew Powell, is still sound, and answers the purposes for which it was originally intended." The late Col. Philip Tabb of Gloucester county, Virginia, one of the best farmers in that State, also long used the Catalpa for gate posts, and considered them certainly as lasting for that purpose, as any timber he had ever tried. Now the Catalpa can be grown from seed as easily as Indian corn; the seed can be obtained in great abundance, and I know of no tree that grows so rapidly; I have frequently seen plants come up from the seed in the spring, and attain a height of four or five feet the same season; and in three seasons they often grow twelve to fifteen feet in height. In good rich ground, I have no doubt they would grow six feet each season. If planted three or four feet apart for the first three years, they will grow as straight as reed poles. The fourth season they may be set out at proper distances for the formation of timber. Throughout the middle, western and southern States, the Catalpa is perfectly hardy; I presume it is not so in the northern and eastern States. But there is a sufficient inducement in the former for the cultivation of it. On the prairies of the west it would be an invaluable acquisition, the soil and climate being well adapted to its rapid growth, and I am sure there are few subjects to which the attention of our western friends can be called, of more importance than this. It is well known that the destructive borer is rapidly destroying all the locust timber of our country, and a timely and equally valuable substitute may be found in the Catalpa, in the extensive region indicated. So far as my observation extends, no insect whatever attacks it, either in the wood or the leaf. It is also pretty well known that chestnut requires a peculiar soil, and does not generally thrive well except on "chestnut ridges." It cannot be expected that the growth of this tree will be much extended. The white and red mulberry it is true, thrive well every where; but they are nothing like the Catalpa for facility and rapidity of growth, nor are they as lasting, if the opinion of Gen. Harrison be correct. The writer of this is acquainted with one fact in relation to the white mulberry, that shows its qualities as ship timber. The frame timbers of the oldest steam-boat now in the Chesapeake Bay, the *Maryland*, are of white mulberry. There was a large plantation of white mulberry trees near Annapolis, planted it is said by the French refugees. The owner of the plantation many years ago, cut down most of the trees, and they were used in building the steam-boat Maryland. This boat I should suppose, is 25 years old, and I understand her timbers are still sound. G. B. SMITH.

THE BLACK RASPBERRY.

MESSRS. EDITORS—I would advise farmers to set out in their gardens, two or three dozen of the White Antwerp and Black Raspberry, the latter of which may be found wild in many places in this State. They yield a large and beautiful fruit, to be eaten from the bushes, or as a dessert on the table. When cultivated in gardens, they grow very large; the dark red and polished stalks rise from three to six feet from the earth, then bend over in graceful circles to the ground, on coming in contact with which, the end inserts itself in the soil, forms a new root, and sends up a young shoot for fruit the next year; as sweet as the nicest tooth could desire, likewise making an ornamental appearance. The abundance of fruit which they produce is astonishing. Mixed with a little cream and sugar, they present upon the table a dish that would do honor to the most exalted guest. Therefore brother farmers, try it, and in a few years you will be richly repaid by your shrubbery. Yours,

Shoreham, Vt., May 20, 1844. DOUBLEYOU.

Instead of spending a rainy day idly, repair whatever wants mending, or post your accounts.

CULTIVATION OF FRUIT—No. IX.

THE PLUM.

Those who have seen only the common varieties of the plum cultivated by farmers in this state, can have but a very imperfect idea of the flavor and excellence of the most improved varieties. When the same labor in cultivation, with a little additional care in procuring fine sorts, would afford the very best fruit, it is to be regretted that ninety-nine hundredths, or even more, of the fruit cultivated, should be scarcely fit for eating. To facilitate in procuring better, the following list, with remarks, is given.

White Primordian, Early Yellow, or *Jaune Hative,* is one of the very earliest of plums, ripening generally in western New-York about the middle of the seventh month, (July,) and is chiefly valuable on this account. It is a small yellow fruit, a good bearer, with a sweet taste, though not first rate. It appears to be the best plum at the season.

Wilmot's Early Orleans.—This is a large fine fruit, ripening early in the eighth month (August.)

Green Gage.—This is generally admitted to be the finest of all plums; the genuine fruit is of medium size, and round; the stalk half an inch long, a little bent, and inserted in a small funnel-shaped cavity; the skin is yellowish green, when fully ripe nearly yellow, *mottled* with russetty red near the stem; flesh melting, separating imperfectly from the stone, juicy, sugary, and of exquisite flavor. There are many varieties cultivated in this State under the name of Green Gage, which appear to have originated from stones of the genuine variety, but are greatly inferior in flavor. There are other varieties of a small green plum, scarcely worth cultivating, which are frequently found in the gardens of our farmers, and are also denominated the Green Gage, though they no more resemble the genuine fruit than the wild crab resembles our finest varieties of apples.

Prince's Imperial Gage was obtained from the seed of the Green Gage; the fruit is much larger than that of the Green Gage, and the tree is very productive. Manning says that this is "the most productive and profitable of all plums." Kenrick says, "a single tree of this variety at Charlestown (Mass.) owned by S. R. Johnson, has for several successive years yielded crops which were sold at from $40 to $50 per annum." Some trees in western New-York, called by this name, are not genuine.

Orleans.—Fruit nearly round, middle sized or rather large, skin reddish purple, flesh yellow, firm and good, separating freely from the stone. An excellent fruit, ripening about the time of the Green Gage.

Gifford's La Fayette, figured and described some years ago in the Genesee Farmer, was obtained from the seed of the Orleans, and is an excellent fruit, remarkable for the richness and sprightliness of its flavor.

Huling's Superb.—Fruit very large, often two inches or more in length, not inferior in richness, but more acid than the Green Gage—of very vigorous growth, and of extraordinary excellence.

Washington.—Fruit oblong, very large, orange yellow, with a fine blush next the sun; flesh yellow, firm, sweet, and excellent. Though the flavor of this is inferior to that of some other varieties, it is highly esteemed as a first rate plum. Ripens about a week later than the Orleans.

Imperatrice.—A good plum, ripening in the tenth month (Oct.) One of the best late plums.

Coe's Golden Drop.—Fruit of large size, skin golden yellow, spotted with rich red next the sun, flesh yellow, sweet and delicious. Like the preceding, slightly necked next the stem, a clingstone, and a great bearer. The best late plum. The writer has measured them more than 2½ inches long.

The Egg Plum, or *Yellow Magnum Bonum.*—Is a very large plum, of a sweet agreeable flavor, but as the texture is rather coarse, is chiefly used for cooking and preserving. The same remark applies to the *Red Magnum Bonum,* which is harsh and acid. These two are admired as table fruit where finer varieties are unknown.

The plum is propagated by budding or grafting. The former can only be successfully practiced on the most thrifty stocks.

The principal enemy to the plum is the *Curculio.* This is a small insect with an elongated thorax and head which resembles a proboscis in appearance. The whole insect is not more than a quarter of an inch long, of a dark brown color, the sheaths covering the wings, slightly variegated with lighter colors, the body resembling in size and appearance a ripe hemp seed. About the time the fruit attains the size of a large pea, it commences its work of destruction. It makes a small incision in the young fruit and lays its egg in the opening. Its presence may now be perceived by examination, as these crescent-shaped incisions are very easily seen. The egg soon hatches into a small white worm, which penetrates deeper and feeds upon the fruit, causing it to fall prematurely to the ground, or if it ripens, it is unsound and gummy. The worm, when the fruit falls, makes its way into the earth, where it remains through winter, as is supposed in the pupa state, to be transformed the succeeding spring into a perfect insect and thus to perpetuate its race. Several expedients have been proposed and tried, to destroy it or prevent its ravages. The easiest and most effectual is that of confining a sufficient number of swine with the trees, to eat all the injured fruit which falls, in doing which, they destroy the worm before it can escape to the earth. The crop of the succeeding season will of course escape. When this has been pursued perseveringly and thoroughly, it has proved completely successful. In one instance, known to the writer, the plum trees bore well for seventeen successive years. To render this operation easy and effectual, all trees which are liable to attacks of the Curcul io, should be planted separately, so that they may be enclosed apart for the confinement of the swine, which if permitted to range the whole orchard would not do the work so effectually.

But swine cannot always be admitted, and it is also desirable to preserve the fruit of the *present* season. In this case, the best remedy is the following. Spread white sheets under the tree, and jar it briskly. The insects immediately drop upon the sheet, and remain motionless a few seconds, during which time they may be destroyed by a pinch of the thumb and finger. While lying upon the sheet, they are not readily distinguished by an inexperienced eye from the withered blossoms. The operation should be repeated twice or three times a day so long as any remain. This remedy rarely fails if thoroughly and unremittingly pursued. The importance of *jarring* the tree strongly, will be perceived by the following statement of a correspondent in the Genesee Farmer in the second volume. "Not three days ago, I saw that many of the plums were punctured, and began to suspect that *shaking* the tree was not sufficient. Under a tree in the remote part of the fruit garden, having spread the sheets, I therefore made the following experiment: On *shaking it well,* I caught *five* Curculios; on *jarring it with the hand,* I caught *twelve* more; and on *striking the tree with a stone, eight* more dropped on the sheets. I was now convinced that I had been in an error; and calling in the necessary assistance, and using a hammer to jar the tree violently, we caught in less than an hour, more than two hundred and sixty of these insects."

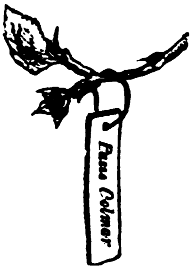
Trees near path doors and other frequented places, are frequently observed to be full of fruit, while others are all destroyed. The insect is frightened away from the former, by frequent passing. Hence favorite trees of the plum, nectarine or apricot, may be often planted to advantage near such frequented places, and the fruit will escape. The black excrescences on the branches of the plum may be prevented by a constant and vigorous excision of the affected parts, and burning them as fast as they appear.

The plum is by some cultivators regarded as only fitted for heavy or clay soils; and some striking instances are given in proof. But the writer has seen trees in abundant bearing year after year, and yielding fruit of the finest quality, on light or sandy soils. A porous earth may possibly furnish a better retreat for the curculio; but to what extent this may be true, requires further examination.

J. J. T.

Macedon, 8 *mo.* 15, 1844.

LABELS FOR STANDARD FRUIT TREES.



Great convenience is found, in large collections of fruit trees, in permanent names of the variety attached to each tree, and various modes of marking have been adopted. The best we have used, is a small slip of wood, two or three inches long and half an inch wide, suspended by a wire loop to one of the horizontal branches. The most suitable wood is red cedar; a block of it should be bored through one end with a small gimlet or carpenter's bit, so that when afterwards split into labels, a hole is left at the end of each for inserting the suspending wire. The best way to mark the name is to rub on a little white lead paint with the finger, and write immediately with a black lead pencil, which will last many years. Copper wire is best for the loop—it should not be less than a large pin or the fortieth of an inch in diameter. If of much less size, it will be repeatedly bent by the rattling of the label in the wind, and finally crack off. Iron wire soon becomes rusted, and brass is too stiff. A piece of wire seven or eight inches long should be attached to each label; and if placed on a small branch, it will be many years before the wire, by the growth of the branch, will cut into it. Twenty-five cents worth of copper wire will be sufficient for one hundred and fifty trees.

Metallic labels, with stamped letters, are more duralbe, but are attended with more cost and trouble. We have those made of wood as just described, which were marked five years ago, the letters still remaining distinct, although the paint and a part of the wood around the letters have worn away. J. J. T.

THE ROCK RIVER COUNTRY.

MESSRS. EDITORS—When I reflect and compare the great advantages, this Rock River country holds out to settlers who seek to better their position, it is a matter of surprise they go elsewhere in the west, while there is room in this fertile region, with an admirable climate both for comfort and health. Here there are no overflowing floods nor baneful diseases to mar their prospects. The roads are always good and crops never fail. The present season is in proof, during which we have had about 50 days rain, (pouring liberally most of the time) out of 90 days—yet the crops are good in quality, and only reduced 25 per cent. of a fair average in quantity. The land is of the richest kind, lies elevated with gentle slope, rolling, &c. Persons of all tastes may be gratified in choosing their *locations*—so may be those who seek only the useful, as well as those who seek the beautiful, and they may be admirably combined in large or small farms. For persons of taste and wealth, who would seek pleasure in retirement in the richest and most seductive country on the globe—here is the spot to gratify their desires and amuse themselves with agricultural pursuits, raising of sheep and other stock (at an annual cost of less than one-quarter of what the expenses are in the old states) and eventually leave rich inheritances to their children in the improved farms, and the greatly increased value of them, that will take place ere ten or fifteen years have passed. Then the sports, field sports I mean, and fishing in our beautiful river, well stored as it is with a great variety of good fish, and above all the *liberty* one so rationally enjoys here, with rides and drives over the verdant and smooth prairies, uninterrupted with fences or even tracks, inhaling increase of health and spirits every moment. Indeed the winds here are more delicious than the land breeze of the tropics. Come and see.

W.

CATTLE-SHOWS AND PLOWING-MATCHES—A communication from Mr. MILO D. CODDING, of Rochester, on the subject of the regulations to be observed at cattle-shows and plowing-matches, came too late to admit of an insertion in the present number. We regret that it did not reach us a few days sooner, as the occasion for its publication will have passed away, before the issue of our next number.

DEVON CATTLE.

HAVING had frequent enquiries last season for Devonshire Cattle, I now have the satisfaction to state, that I can accommodate those who wish, with some good Calves, Yearlings or Two-year-olds, Bulls or Heifers. E. P. BECK.

Sheldon, Wyoming Co., July 1844.—2t.

KENTUCKY BLUE GRASS AND HEMP SEED.

GEORGE, LAPPIG & CO.

Seed and Agricultural Merchants, Louisville, Kentucky,

KEEP constantly on hand a good supply of Kentucky Blue Grass and Hemp seed, which they are willing to sell to eastern dealers on favorable terms. They are also dealers in Millet, Clover, Timothy, Orchard Grass, &c. july—2t.

GREAT SALE OF ELECTORAL SAXON SHEEP.

THE undersigned will sell at vendue the two flocks of *Pure Electoral Saxon Sheep,* belonging to the estate of the late Henry D. Grove, as follows:

1. That at Grainger, Medina co., Ohio, consisting of about 400 sheep, on the farm now occupied by them, on the 30th of *September next.*

2. The home flock, at his late residence in Hoosick, Rensselaer county, N. Y., consisting of about 350 sheep, on the 15th of *October next.*

A rare opportunity is offered to those who may be anxious to improve the quality of their flocks. The following is the opinion of the distinguished manufacturer who has usually purchased Mr. Grove's wool, of the character of these flocks:

"The purest blood in this country was introduced by the late Mr. Grove in his own flocks, the wool from which I have been familiar with since their importation in 1827. In point of fineness and admirable felting qualities, this wool is unsurpassed by any flock in this country, and the fleeces average about half a pound each more than any other I am acquainted with of equal fineness. SAM'L LAWRENCE.

Lowell, April 9, 1844."

Terms of sale, cash.—Reference, Sam'l Lawrence, or either of the subscribers.

Buskirk's Bridge, April 20, 1844.

ELIZA W. GROVE,
W. JOSLIN,
my1.—6t. S. A. COOK.

FIELD SEED STORE.

THE subscriber continues to keep constantly on hand at his long established Seed Store, a supply of the best quality and kinds of Field Seeds, viz:

Red Clover, of the large and small growth,
Timothy, Red Top, or *Herd's Grass, Orchard Grass,*
Lucerne, or *French Clover, White Clover,*
Trefoil, Kentucky Blue Grass, &c. &c.

Also, the different varieties of Wheat, as White Flint, Red Chaff, Mediterranean, and English—for sale in lots to suit purchasers at moderate prices, by ISRAEL RUSSELL,

Feb. 1, 1844.—mar. oct. 26 Front-street, New-York

N. B. The following description of some superior English Wheat sown in the month of October last, the product of which will be for sale at the above Store, is given by a respectable English farmer in the State of New-Jersey, who sowed about eleven bushels, a sample of which can yet be seen. "It is called the Uxbridge White Wheat, and is the most noted Wheat they have in England, it being of fine quality, always commands a high price, as the flour is used by the biscuit bakers in London; it is great for yielding, and puts out a much larger ear than any wheat I have seen in this country. I saw when in England, three years ago, on my brother's farm in one field, 120 acres, that yielded 40 bushels and upwards to the acre. It grows very strong, and is not liable to be laid by heavy rains. I will warrant it free from any soil whatever. I did not see in the eleven bushels, a particle but Wheat; and I have sown it on Clover seed, on purpose that there shall be nothing but Wheat; and I will put nothing in the barn with it, so as to put it beyond the possibility of a doubt of its having any thing in it or getting mixed with other Wheat, which through carelessness is often the case. I have grown a great deal of it myself in England, and know from experience that for yield and quality, there is no Wheat to compete with it. Its general weight is from 64 to 67 lbs. per bushel. It is smooth chaff, and easy to thrash, which is not always the case with smooth chaff Wheat."

☞ ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.

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A FARM FOR SALE.

A VALUABLE FARM of 198 acres, situated in the town of Seneca and county of Ontario, State of New-York, in view of Seneca Lake and the flourishing village of Geneva, about two miles distant from both, from whence are daily communications by railroad and canal with Albany. The neighborhood is of the first respectability, the farm being principally surrounded by the estate of the late Gideon Lee, Esq., and the estates of the Messrs. Nicholas, the location is surpassed by none in western New-York. The land is of the best quality, adapted to grain and grass; not an acre but can be put under the plow; about 160 acres are perfectly clear and ready for the plow without a moment's detention; the balance is in wood, a growth of superior maple, beech, hickory, ash, &c.; the improvements are a good sized two story frame house, with kitchen adjoining; three barns, each forty by thirty feet, sheds, &c.; a well of the best pure water at the door. There is an extensive orchard of fine fruit, and a cider-mill and press. Also, on the north-west corner of the farm is a tenant house, barn, and an orchard of good fruit. If the above property is not disposed of at private sale before, it will be sold at public auction at the Franklin House in the village of Geneva, on the 25th of September next, at 10 o'clock, A. M., by order of the Court of Chancery, to close a mortgage. For further information apply to W. Cox on the premises, or if by letter, post paid, directed to him Geneva, Ontario county, N. Y. W. COX.

Geneva, August 19, 1844.—1t*

STRAWBERRIES, &c.

WM. R. PRINCE & Co., Flushing, offer for sale, all the forty-eight varieties described and priced very low, in their Catalogue of 1843–4, 33d edition, among which are Swainstone, Garestone, British Queen, Victoria, Black Roseberry, Hovey's Seedling, Prince Albert, Ross Phoenix, Bishop's Orange Myatt's Pine & Eliza, Melon, Keen's Seedling, Elton, Southborough, Downton, Warren's Seedling, Black and Prolific and Green Hautbois, Old Scarlet, Large Early Scarlet, Red and White Wood, and Red and White running and Bush Alpine, &c. Also, these additional new varieties, Crimson Cone, Bishop's Wick, Coul, late Scarlet, Turner's Pine, at $2 per dozen.

Orders not less than $5, enclosing cash, will meet prompt attention. 500 Fastolf Raspberries, very large fruit, and very strong growth, and all other choice varieties. From now till November, tho strawberries can be planted.

Prince's Lin. Garden and Nurseries, Flushing, Aug. 9, 1844—2t.

IMPROVED STOCK.

THE subscriber has now on hand and will sell, at fair and reasonable rates, several Durham cattle, consisting of cows, heifers and calves; also two bulls, a cross of the Durham and Ayrshire stock.

SOUTH DOWN SHEEP.—Two yearling bucks, several buck lambs and 16 ewes from 3 to 4 years old.

All letters, (post paid,) will be punctually attended to. Address

C. N. BEMENT,
September 1, 1844. *American Hotel, Albany.*

AYRSHIRE BULL FOR SALE.

A THOROUGH BRED AYRESHIRE BULL will be sold by the subscriber, at the coming State Fair. The animal is in excellent condition, rising six years old, handsome color, perfect and gentle. The dam was selected in Scotland from the very best Ayrshire stock.

Any farmer or breeder who is desirous of securing a very superior animal of this unrivalled breed, would do well to look at this animal before purchasing another, as he has been pronounced by competent judges, to be one of the very best in the country. CHARLES STEEL.

Montreal, Canada E., August 20, 1844—1t.*

LINNÆAN BOTANIC GARDEN AND NURSERY,

LATE PRINCE'S.

Flushing, L. I., near New-York.

THE NEW DESCRIPTIVE and UNRIVALLED CATALOGUE, not only of FRUIT, but also of ORNAMENTAL TREES, SHRUBS and PLANTS, cultivated and for sale, *at reduced prices*, at this ancient and celebrated Nursery, (*the* IDENTICAL *premises known as* PRINCE'S, *and by the above title for nearly fifty years.*)

☞ WITH DIRECTIONS FOR THEIR CULTURE,

may be had *gratis* on application by mail, *post paid*, to the New Proprietors, who will endeavor to merit the confidence and patronage of the public, by integrity and liberality in dealing, and moderation in charges. WINTER & Co., Proprietors

Flushing, August 31, 1844—2t.*

MOUNT HOPE GARDEN AND NURSERIES,

ROCHESTER, N. Y.

THE proprietors of this establishment respectfully announce to the public, that their present stock of *Fruit and Ornamental Trees, Shrubs, Plants*, &c. which they offer for sale the coming fall, is very large and fine. The collection of the various fruits, for the garden and orchard, comprises the most popular and esteemed varieties known in Europe or America. The trees are handsome, thrifty and of the most suitable size and age for transplanting, and being propagated by the proprietors themselves with the most scrupulous care, either from bearing trees in their own grounds, or from others of undoubted genuineness, and being in every other respect, until they are sent from the nursery, under their *immediate personal supervision*, they can be confidently recommended to the most exact and scrutinizing cultivators.

The collection of fruits includes 1,000 Pear trees of the best varieties, selected in one of the best fruit nursery's in France, last spring, by one of the proprietors. They are grown on Quince stocks for dwarf pyramids, &c. and are now in a bearing state.

Also, 3,000 trees of the valuable native Apple, the "Northern Spy," one of the best keeping varieties cultivated.

The stock of Ornamental Trees, Shrubs, Roses, &c. is very large, and will be furnished at very moderate prices; where quantities are wanted for ornamenting public grounds, a liberal discount will be made. The collection of Roses includes 1,000 standards, 4 to 6 feet high, of the finest varieties of Province, Moss, Chinese and Noisette Monthly, Tea scented, &c. A large assortment of Dutch bulbous roots will be received from Holland in September, and furnished to amateurs, gardeners and agents on very liberal terms.

It is expected that all orders coming from persons unknown to the proprietors, will be accompanied by a remittance, or that some responsible reference will be given Priced Catalogues will be furnished gratis to all who apply *post paid*. Address

Rochester, N. Y. Sept. 1844—2t. ELLWANGER & BARRY.

P. S. 50,000 seedling apple stocks 2 years old, will be sold at $6 to $10 per 1,000, if application be made immediately. E. & B.

SUPERIOR FARMS FOR SALE.

TWO superior productive farms in Rensselaer county, 2 miles from Hoosic Falls. The farms are about one hundred acres each, and so situated as to be conveniently worked as two or one farm: each having the necessary buildings, and being judiciously divided into pasture and tilled land, all recently fenced with entire new materials in the most durable manner. The land is all of the first quality, and its present state of cultivation would bear a good comparison with any land in the county. These Farms will be sold together or separate, on terms most accommodating as to price and credit. Apply to

Lansingburgh, July 16, 1844. ALEXANDER WALSH.

FINE FARMS FOR SALE.

THOSE very superior Farms situated near Galway Corners, in the county of Saratoga, collectively known as the Earl Stimson Farm, will be sold cheap and on terms most accommodating to the purchasers as to credit. The property consists of about 340 acres, is so situated as to be conveniently divided into three or four farms, all having the necessary buildings, and will be sold together or in parcels, to suit purchasers. Each farm is properly divided into pasture, tilled and wood land, and is in the highest state of cultivation, fenced in the best manner and with the most durable materials. The property comprises among other buildings, a large and convenient hotel, which is a favorite resort of families in the summer on account of the superior healthiness and beauty of the country. The farming buildings of all kinds are most extensive and convenient for all the purposes of agriculture and the raising of stock. The premises also include a country store, a most eligible location for a country merchant, having been occupied as such for about forty years. It is within two hours drive of Ballston, Saratoga and Schenectady. The farm is well known among leading agriculturists, and in the agricultural periodicals, as the Pattern Farm. For terms, &c., apply to J. OAKLEY,

Oct. 1.—tf. No. 75 Nassau street, New-York

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

Vol. I. ALBANY, OCTOBER, 1844. No. 10.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, PROPRIETOR.

ONE DOLLAR A YEAR.

Seven copies for $5,00—Fifteen copies for $10,00—all payments to be made in advance, and free of postage.

☞ Complete sets of the *First Series* of "The Cultivator," consisting of ten vols., quarto, are for sale at the office, and may be ordered through the Agents of the paper throughout the country. Price, stitched,—vols. 1, 2, 3 and 4, 50 cents each—vols. 5, 6, 7, 8, 9 and 10, $1,00 each—for the whole set, $8,00.

OFFICE IN NEW-YORK CITY, AT

M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,

where single numbers, or complete sets of the back volumes, can always be obtained.

THE CULTIVATOR.

MONTHLY NOTICES

Communications have been received since our last, from S. Tillotson, Rho, W. Forbes, P. Bellman, Quere, (shall be answered hereafter,) M. Y. Tilden, A, L. Bingham, Alex. M'Donald, Index, C. Mock, A Hearer, J. J. T., G. B. Smith, J. M. Harlan, A Practical Farmer, Brutus, Georgius, L. F. B., D. C. Collins, J. D. F., T. P. of Bermuda, H. C. C. M. D., J. Hartman, H. R. Robey, C. Rich.

☞ The second Part of Mr. Colman's "European Agriculture," will be issued early in this month.

D. W. B., Greenwood, Va.—Your letter of 12th March last, got accidentally laid away with business letters, or the information asked for, so far as we could have furnished it, would have been given.

☞ Information is wanted at this office, of *John W. Robbins*, who sent us a list of subscribers to the Cultivator, from Dumfries, Va., in 1840. Any one acquainted with his place of residence, will much oblige us by communicating it.

Poland Fowls.—A gentleman in Georgia wishes to know where he can obtain Poland fowls, with pure black bodies and white crests. Any person having such for sale, would do well to advertise them in the Cultivator. Our western friends can obtain these as well as several other varieties, we presume, of our correspondent, Mr. H. A. Parsons, of Buffalo, to whose communication in this paper, the reader is referred.

The late Mr. Grove's Sheep.—We trust it will not be forgotten that the sale of Mr. Grove's Saxony sheep, will take place at his late residence on the 15th inst. The opportunity here afforded of purchasing some of the most valuable sheep ever in this country, will be likely to bring many to the sale.

Tall Flax.—Mr. Elisha Barlow, of Amenia, Dutchess county, N. Y., has presented us with a specimen of flax raised by him this season, which is five feet in length, exclusive of root. We have never seen any before so tall. Has any body?

Early Corn.—Mr. John Townsend, has presented us with a fine sample of corn grown on his farm near this city. It is similar to the Dutton in appearance, and was ripe enough to harvest the latter part of August.

The State Fair.—Believing that such of our readers as were unable to attend the State Fair, will wish to see a full account of it, we have occupied several pages of this paper with its details, illustrated with two beautiful engravings. A complete list of the Premiums awarded, is also given, commencing on page 325. A portrait of Mr. Vail's bull "Meteor," to which was awarded the first prize for the best bull over three years old, was published in our current volume, p. 17. A portrait of Mr. Crosby's bull "Osceola," which received the first prize for two year old bulls, was published in our volume for 1843, page 149.

Norman Horses.—We invite particular attention to the advertisement of Mr. Harris, for the sale of his Norman horses. His imported horse "Diligence," we have often heard commended by those who are considered good judges of horses. His portrait, which we believe is very correct, will be found on page 193 of the ninth volume of the Cultivator.

Merino Sheep.—We have received from Mr. Collins, a reply to Col. Randall's challenge to show sheep and wool at the State Fair, published in our last. As the occasion has passed by, and the reply, and a rejoinder also from Col. R., have already appeared in the "Spirit of the Times," we do not deem it necessary to publish the reply at length. Mr. C. declines the challenge, and says—"I neither give nor accept challenges in relation to my animals, nor make bets upon them." He also says:—"Many gentlemen, among whom were distinguished growers of fine wool, on seeing my imported merino ram, called *Grandee*, and after critically inspecting his fine and *unusually thick*, heavy fleece, intimated to me a very strong desire that he should be exhibited this autumn, at the Poughkeepsie Show. I had accordingly determined to gratify the public curiosity, by sending old *Grandee* to the said Show, wearing his full fleece, which, with that object in view, I had at shearing time this season, left unshorn. The ram would thus have been shown at Poughkeepsie, but for an unfortunate accident, which about two or three months since, destroyed him, when in fine condition, and in the very fullness of his health and strength. Thus, to my very great disappointment and mortification, ended the life of a most valuable and useful animal. He was indeed, a magnificent ram; but there is, of course, no use in indulging vain regrets on account of his loss."

Culture of the Olive in Mississippi.—Mr. De Buys of Biloxi, in a recent letter to the Editors of the Cultivator, says—"In regard to the cultivation of the Olive,—of course on the smallest scale,—I state that I planted for ten years, in the month of January, in our poor coast ground, Olive cuttings, from which, without farther trouble, after seven years, (the common fruit bringing time of this tree,) I gather in general from every tree, a bushel of, in no part of the earth, surpassable Olives."

Crops in Chester Co. Pa.—Extract of a letter from J. M. Harlan, Esq., to the Cultivator, dated July 25th: "The crops that have been harvested are nearly all good here—hay, wheat, oats, &c.; though wheat was attacked I believe pretty generally in some degree with the fly. Corn and flax have a good appearance, though we are at present suffering from drouth. Potatoes we hope, will be better than last year. Apples and fruit in general are plenty, though pears have failed. I think we have had less thunder and lightning than in any preceding year within my remembrance. We had two days ago a fine rain of three or four hours, without any of the usual symptoms of thunder and lightning, though the weather is sufficiently warm."

Wheat Crop of Vermont.—Mr. Jewett gave it as his opinion, in a communication in our last paper, that the wheat crop of the present year was equal to the supply of its people for the year. A correspondent at Castleton, "L. F. B.," says:—"I have not the least hesitation in saying there was not sufficient wheat grown the past season to supply one-fourth part of the people of Vermont. The large agricultural county of Rutland, from what I have seen and heard, will not raise enough wheat to supply two of its largest towns. The State is truly a wool, cattle, and horse growing State, and marble, iron and timber, also add much to its resources for exportation. I wish for the good of the State and for 'home protection,' your correspondent had *guessed* right."

Merino Sheep.—Mr. A. L. Bingham, of Cornwall, Vt., informs us that he purchased a flock of Merino sheep in 1838, which "sheared that year, 3 lbs. 3 oz. of well washed wool—the second year, 3 lbs. 10 oz.—the third year, 3 lbs. 14 oz.—the fourth year, 4 lbs. 2 oz.—the fifth year, 4 lbs. 4 oz.—the sixth, or last year, 4 lbs. 6 oz.—being an increase of one pound three ounces, and this, by no better keeping than they had before, for they were kept well on hay before, and no better since." He thinks "the weight has been put on entirely by the crosses" he has made. The crosses have been with bucks from the flock, (said to be "full blooded Paular,") of Merrill Bingham. The increase in the weight of fleece, is certainly a matter of no trifling consideration, though Mr. Bingham has not informed us whether its *fineness* has been preserved. Mr. Bingham also informs us that he has purchased twenty-eight ewes of a flock which he says is "full blooded Paular, if there is any in the country;" they were purchased of the importer by Messrs. Buffum & Smith, of Nantucket. "These ewes," says Mr. B. "averaged me of well washed wool, a mere trifle under five pounds per head." Mr. Bingham also informs us that he purchased a buck of this flock for which he "paid $80, which gave this year 10 lbs. 7 oz. of wool, well washed."

Grape Vines.—Mr. Harlan of Chester Co. Pa., in a late letter, says:—"The young and inexperienced vine dresser, might suppose from the voluminous directions to propagate the vine, that choice wine grape vines would not bear to any advantage without being cut and carved in a particular manner, and divested of their native shape. Now if this sentiment is imbibed, I believe it is an entire mistake. I maintain that they will bear at full natural length. I had last year, during the prevalence of the noted frost in June, a seedling vine which grew on an apple tree in the corner of a garden, where hung large bunches of grapes, protected from the frost by the foliage of the tree, thinned out in the heart of the head. This vine exceeded all others in bearing, which were pruned in the usual manner, there being none of consequence on those exposed to the frost. I may add there is a good crop on it the present year."

Experiment.—A gentleman cultivated two hills of cucumbers, each having the same number of plants, under precisely the same circumstances, excepting in the following particular, viz: the ground around one hill was hoed every day, (Sundays excepted,) as long as the state of the vines would admit—the other was hoed just often enough to keep down the weeds, but no more. The hill which was hoed every day, produced more than twice the quantity of cucumbers that the other did. Who can give the "why and because?"

Castration.—Mr. J. J. Reed, of Moravia, Cayuga Co. N. Y., says,—"The method of castration I approve of as being most humane, is called *turning*. The beast is cast, his legs made fast, the hind ones drawn as far forward as convenient. The operator then takes hold of the sack at the lower end with one hand, and with the other commences shoving the testicles into the belly. As soon as they are completely broken loose from the sack, he shoves one into the belly, leaving the other in the sack; then taking hold of the testicle, he turns the upper end down, and commences shoving the end which is then up, around the cord, until it feels as hard as a stick would in the same place. He then shoves it into the belly, (taking care that it does not turn back,) and takes the other down and serves it in the same manner, shoving them both as far up as they can be. He then holds fast the sack, while another ties a stout string around close to the belly. The string is left on about ten days; if it does not then drop off, cut it off, and all further trouble is over. The advantages of this mode of castration are, if bulls, and they are wanted for a team, it will not injure them in the least to commence working them the next day after the operation is done—they will grow as thrifty as steers, only showing by their horns that they are stags—it does not make them slow, and they are less inclined for cows than when altered by any other means."

A Hint.—Don't suffer your revolving hay-rake, and your wagon rack, and hand rakes, and whatever else you have used in the haying and harvesting just finished, to lie out in the fields exposed to the weather, but see them well housed for another season. The weather destroys more tools than hard work, with some farmers; and more valuable time is lost hunting up and repairing lost implements, than their original cost.

Frost.—On the morning of Sept. 5th, there was a slight frost on the plains near Schenectady. We also learn that there was frost in the eastern part of Mass., on the morning of the 5th, 6th and 7th of Sept., but no injury of consequence was done. At Chicago, Ill., we learn there was a slight frost about the 10th of August.

Cost of Fencing.—Mr. Biddle, in an address before the Philadelphia Ag. Society in 1842, makes some calculations as to the cost of fencing, which will surprise those who have paid little attention to the subject. He estimates the expense of farm fences in Pennsylvania, and gives the data upon which his calculations are based, at $105,600,000. He thinks that the interest on this outlay, and the annual wear and tear of fences, is equal to an annual tax of $10,000,000, upon the farmers of that State.

Mortality among Sycamores, or Button-wood.—The destruction of sycamores which has for several years been complained of in Massachusetts and some of the other eastern States, begins to be seen here. We have noticed several trees along the river, and some in other places, which will hardly survive the season. We are not aware that the cause of this destruction has been yet fully ascertained. Some suppose it to be an *epidemic*, which commencing (as did the cholera,) at the east, is sweeping over the country. Others alledge that the cause of death is a minute insect, which corrupts the sap. Mr. R. L. Pell, thinks (as we see by the Farmer & Mechanic,) that the severe frosts of the last three winters have occasioned the trouble.

White native Strawberry.—A. Goodwin, Ashfield Mass., describes in the Mass. Plowman, a kind of strawberry, which he thinks is a native of the Berkshire hills. He says, "It is larger than the common field strawberry, very hardy, and yields a great quantity of fruit, producing in succession three or four weeks. When ripe, it is of a yellowish white, contrasting beautifully with the red strawberry. It has a fine flavor, and when picked always cleaves from the hull. I have distributed them in Northampton and West Springfield, where they are much admired."

Flax Puller.—According to a correspondent of the New Genesee Farmer, they have in use in Seneca county in this State, a machine for pulling flax, which works well. It is manufactured by Wood & Hurd of Waterloo, who have had several machines in operation this season. They "charge one dollar an acre for pulling, they furnishing the machine and one hand. Two hands and a pair of horses will pull four to five acres a day. To use the machine effectually, it requires some practice; a green hand would probably make bad work, if he were not a mechanical genius. They charge for these machines, $90 each, with the right to use the same. It weighs about 700 pounds."

BANKS OF THE HUDSON.

About the beginning of last month, we made a hasty call at some of the fine places near the Hudson, in the counties of Orange and Dutchess. Our first stop was at Newburgh, where we visited the extensive nursery grounds of Messrs. A. J. and Charles Downing. These gentlemen have devoted much time and attention to the improvement and culture of fruits, and in return for their assiduous and long continued labors, have acquired a deserved and extensive reputation, which brings a ready demand for all articles in their line of business. Their principal object is rearing trees of the *choicest* kinds of apples, pears, peaches, cherries, plums, &c. Thirty acres are set to trees, and more healthy, thrifty, or handsome trees, we never saw. We noticed in some instances, the smaller trees were cultivated in alternate rows with sugar beets or potatoes—the latter increased the trouble of cultivation but little, though they afforded a crop which would probably more than defray the whole expense. The trees are cultivated chiefly by a cultivator, the construction of which we think, is in several respects superior to any other we have seen. The teeth are made of wrought iron, the *feet* being laid with steel, the shank shaped somewhat like a coulter to a plow. The feet nearly flat, and very sharp. It is on the *expanding* principle, and by means of a wheel, the depth is regulated, and the work is done in the best manner—even the hardest ground is well cut up and pulverized.

Messrs. Downing pay considerable attention to the rearing of *hedges*. The English thorns have not succeeded—they are not hardy enough—are subject to mildew, &c. Some of our native thorns do well—such as the *white*, and the *Buckthorn*.

One of the most ornamental and beautiful objects about the grounds, is a hedge or screen of the American *Arbor vita*, or white cedar. The trees were taken from a bluff near the river, only ten years ago, being then from a foot and a half to two feet high, set in the form desired, and have never been trained or touched at all, yet they are now from sixteen to eighteen feet high, forming a most magnificent screen, impenetrable to the sight, and as *perfectly true* and even as the sides of a wall.

Messrs. Downing practice a new mode of pruning peach trees; at least, it is new to us. It is cutting off half to two-thirds the new wood of the limbs, every autumn. The advantages are that the wood hardens better—the soft and tender twigs, not sufficiently matured to stand the winter, and which are besides most likely to be injured by the aphis or other insects, are taken away, by which the sap and wood of the remainder, are rendered more sound and healthy. The number of fruit buds for the succeeding year are increased, and there are plenty of leaves, by which the sap is more perfectly elaborated and *the fruit* made larger and higher flavored.

The soil of the nursery grounds, is mostly a gravelly or stony loam, rather moist. Neither the worm or curculio does much damage here. The solidity of the earth, makes it difficult for the insects to enter it for the purpose of undergoing transformation.

Every thing about the grounds of the Messrs. Downing, indicates the best taste and judgment, both as regards ornamental arrangement and profitable cultivation. There is an admirable neatness and order observable throughout, from the original design of the buildings and grounds, to the placing and training of every shrub and flower.

From the Messrs. Downing's, we called at Mr. Frederick J. Betts' place, situated about two miles from Newburgh. The farm is located on a very high swell of land, and commands a beautiful view of the river and surrounding country, embracing the Beacon mountains, on which were kept the beacon lights to direct the movements of the army and vessels on the river, during the revolutionary war.

Mr. Betts is engaged in improving his place by the building of new fences, planting trees, manuring the land, &c. He has made several trials with peat or swamp muck, and with a species of marl, which is found underlying the muck. The natural locality of the muck is some distance from the farm, but is to be had in any quantity, at thirty-seven and a half cents per cart load, *delivered*. Composts have been made by mixing two parts muck with one of stable manure, and on trial the compost has been found equal in all respects to the clear manure. The muck has also been used separately. Spread on grass-ground, it has had the effect of largely increasing the yield of hay. The marl has not yet been tried so thoroughly as to be able to state its value particularly. It is known, however, that its qualities as a fertilizer are very considerable. It is composed mostly of small shells, mixed with a friable clay or loam. It looks and feels between the fingers, much like leached ashes mixed with lime. When laid immediately on the land after it is taken from its bed, it seems rather to injure than benefit vegetation; but after lying exposed to the rains and air for some time, the deleterious qualities seem to be dissipated, and it promotes the growth of all crops. It is often so with muck—when first dug, it is *sour*, as farmers express it, and it is not till this sourness is extracted, that it becomes good manure. It always contains more or less vegetable matters, which need only to be placed in a proper situation to aid the growth of plants. We are glad to see that farmers are beginning to appreciate its value.

We also called on Capt. Robinson, near Newburgh. We found him just on the point of leaving home, and did not examine his farm as we should have done, could he have been with us. We were shown some very good hogs, which we understood were imported from Lancashire, (Eng.) They were white, very thin-haired, long-bodied, and small-boned. They resembled hogs we have seen brought from England, under the name of *Graziers*.

From Newburgh we crossed the river to Fishkill, where we procured a carriage to convey us to Poughkeepsie. Our route lay over a diversified and well cultivated country, and a more delightful ride of eighteen miles, we have seldom enjoyed. The road was excellent—as hard as a pavement, but smooth as a board—just sufficiently undulating, to make the travel easy for the horses, and the change of motion agreeable to the passengers.

The next day we went up by carriage to Hyde Park. Here, also, we found many beautiful places and highly cultivated farms. We called on Mr. Fuller, who has a beautiful place of two hundred acres. The scenery from some of the points overlooking the river, is most charming. The river, with its graceful windings, its banks, now bluff and abrupt, now gradually and beautifully sloping, the green wood and the cultivated field, with lofty mountains rising in the distance, all mingle in a delightful picture.

After enjoying the hospitality of Mr. Fuller, he, together with his neighbor, Mr. Allen, (a most interesting and amiable man, who has a fine place near Mr. F., which we regret having no opportunity of examining,) accompanied us on a visit to the farm of Mr. R. L. Pell, at Pelham, Ulster county.

When we reached Mr. Pell's farm, the day was so far advanced that we had not time enough to make scarcely a beginning in the examination of the many objects of interest to be seen there, and we must therefore defer attempting particulars till another visit, which we intend making. Mr. Pell has made very great improvements during the four years he has occupied the farm. In approaching the farm, the first object which meets the attention of the stranger, is the neat stone wall with which it is enclosed. The avenue leading to the mansion, winds through green fields and among plantations of trees, in a very interesting manner. There is also a delightful carriage-road, leading in a picturesque manner through the vales and among the hills and groves of the farm. There are also not less than *five miles* of walks, as Mr. Pell informs us, leading over the most interesting points. As we pursue these labyrinthian walks, we find ourselves sometimes in the depths of a dark ravine, where the primitive forest and the original wilderness of all objects around, give an air of solitude which would lead us to imagine we were at a great distance from the abodes of man. Several of the ravines are crossed by foot-bridges, one of which is eighty feet in length. They are supported by wires, and were made on Mr.

P.'s farm at a small expense. They are painted with *coal tar*, an article which Mr. Pell has used extensively on his out-buildings, fences, &c. It is a cheap article, but seems to answer well for this purpose. We have seen it highly recommended in the English papers. Its cost is only $2,50 per barrel.

Mr. Pell is making numerous *fish-ponds*, which not only add much to the beauty of the extensive grounds, but may become actually sources of convenience and even profit, for Mr. P. is of the opinion that fish may be reared as cheaply per pound as *flesh*. There are some half dozen of these ponds, and more are being constructed. In one of these ponds we noticed a variety of fish—the gold-fish, pearl-fish, carp, &c., and were surprised at the evidence they exhibited of domestication. On throwing into the water some bran, they came at once so near that they could be readily examined; and Mr. Pell informed us that the ringing of a bell would instantly call them to the edge of the water. Such an instance of the susceptibility of *education* in the finny tribe we never before heard of. In other ponds, there are shad, (put in by way of experiment, to ascertain whether they can be *naturalized* to fresh water all the year,) sturgeon, trout, pickerel, perch, carp, &c. We shall look with interest to the results of Mr. P.'s experiments in rearing fish.

FOREIGN INTELLIGENCE.

The Weather, Crops, &c., in England.—The weather up to the 20th August, was quite showery, but since that date, the atmosphere has been uniformly fine, and the corn has been got in admirable order. The Mark Lane Express says—

"As to wheat, no complaint whatever exists; everywhere it is admitted that the acreable supply will be very abundant, with quality seldom or never surpassed. The straw of all grain, on the other hand—owing to the dry weather in the early part of the season—is very short. Oats are not likely to prove more than an average produce; but that of beans and peas will be quite equal to that of last year."

The importations of foreign live stock during the month of August, were 1,277 head of oxen and cows, in addition to which there were imported 100 sheep and 200 pigs. Some anxiety continues to be felt among the British farmers in regard to this importation, and it is said that in France, Germany, Holland, &c., great efforts are being made, by importations of the best breeds of cattle and sheep from England, as well as by the adoption of an improved system of husbandry, to enter into competition with the English farmer in his own markets. No success had attended the attempt to fatten foreign stock in England. In every instance where it has been attempted, the stock has been immediately seized with the epidemic, and speedily wasted away. Immense quantities of American beef, pork, cheese, &c., have been entered for consumption in London, Liverpool, &c., in, generally speaking, capital condition.

The hay crop is light—and owing to the drouth of the season, the cattle are generally not in as good order as might be wished.

In Scotland and Ireland, the harvest was being secured in good order.

Great preparations are being made for an extensive seeding of wheat for the next year's crop.

Show of the Highland Agricultural Society.—The annual show of this celebrated society, took place at Glasgow on the 8th of August. The weather was unfavorable from rain, but the number of people in attendance was, notwithstanding, great. The receipts for the sale of tickets for admission to the show-yard, amounted to no less than $7,389. The total number of lots was 1,404, among which were 222 Ayrshire cattle, 55 West Highland cattle, 160 horses, 118 sheep, 187 lots of butter, 83 lots of cheese, and 176 implements. The largest number ever entered before, was 1014, at Edinburgh, in 1842.

In the Ayrshire breed, there were shown 61 bulls and 99 cows, said to be a very good and even lot. The West Highlanders produced some remarkable specimens of their excellent breed; the short legs of the animals seemed scarcely able to carry their thick, round and heavy bodies. Some oxen of this breed, belonging to the Duke of Sutherland, travelled 350 miles to the show. The first premium for the best two oxen of any breed or cross, was awarded to Archibald Sterling, for a pair of West Highlanders.

Mr. Colman.—We have been furnished with the following extract of a private letter from a gentleman now in Europe, to a friend in this country:—"I saw Mr. Colman in Southampton—thence he goes to the Glasgow meeting, and afterwards to Dublin. He is really in his element; and the very man perhaps of all others to collect the information you want; though really to a less searching character like myself, the great differences existing between the two countries would create much embarrassment in selecting a great deal that was applicable to American husbandry, when the difference in labor, the value of land, the climate, the prices of produce, and the capital is considered. He has been very well received; and the attentions of the great have been showered upon him. The halls and mansions and banquetings of the lords of the land are every day affairs with him, and must be a source of great satisfaction and gratification, both to him and to those friends who gave him letters of introduction. If Mr. Colman cannot glean from this rich harvest field, who can?"

Defect in Potatoes.—The subject of the defect in potatoes, was discussed at a late meeting of agriculturists in Scotland. There was a very great diversity of opinion in relation to the cause—scarcely any of the speakers agreeing. The age of varieties, the nature of the soil, the state of the weather, cutting and *not* cutting the seed, were all mentioned as tending to produce the defect. Professor Johnston summed up the testimony, and as to a remedy, remarked that all appeared agreed that sound healthy seed, and a well pulverized and well drained soil, were the best preventives of the disease, and best guaranty for a good crop.

Dynamometers.—At a late meeting of the Council of the Royal Agricultural Society, several improved dynamometers, calculated to obviate the defects of those heretofore used, were presented and referred to a select committee for trial. One of them sent by Mr. Clyburn, it is said, would record a strain of draught up to twelve hundred. Its principle of action being self-recording, was different from that of other dynamometers, the box containing the instrument being supported on wheels, which communicated by their axle, a progressive revolution to the recording cylinder within it as the draught proceeded, and its registration was made continuously by the pencil moving over its ruled surface; the average amount of draught being obtained by inspection of the indication thus obtained by the momentary variations during any given time and space. The committee will report on the results of the trial of these implements at a future day.

Improvement of the laboring classes in England.—His Royal Highness Prince Albert, has accepted the office of President of the Society for the Improvement of the condition of the Laboring Classes, which has been liberally patronized by the Queen and several of the nobility.

TENNESSEE AND ALABAMA.

We make the following extracts from a letter from our friend Col. Alex. McDonald, of Eufalla, Alabama, dated Bedford county, Tennessee, Aug. 25.

"I set out in company with my family, on the 24th of June, from the town of Eufalla, Barbour county, Alabama, in latitude 31½, being what may be termed the cotton growing region. I have traveled over ten counties and parts of counties in Alabama, and six counties and parts of counties in Tennessee. That portion of our route through Alabama, was mostly confined to the new section of the State; we however saw many fine crops of cotton and corn, which are the principal crops in southern Alabama. These crops are reported as good the present year. It was however, too early to determine as to the extent of the cotton crop. We were struck with the large body of land lying in a state of nature in Alabama, that could be taken up at the reduced price of $1,25 per acre. After traveling three hundred miles through Alabama, we crossed that bold and beautiful stream, the Tennessee. Here we found ourselves entering on the rich lands of the west, as well as the fine McAdam roads which are becoming universal in Tennessee, and are doing much for this interesting section. Of all the countries I have yet seen, middle Tennessee affords the finest home for the cultivator of the soil; although they cannot make money as fast as we of the south, still their soil is so rich, the climate so mild and pleasant, and the water so pure, that it appeared to me, that of all the happy men in this world, the Tennessee farmer could be the most happy, if he would only determine to own less land, study agriculture, improve his farm, have not only a snug and nice farm, but a snug and nice garden; and he would be encouraged to do this from the circumstance that he can better improve those valuable lands than in most sections of the south, for the reason that they will last for ages. The farmers of middle Tennessee are improving their lands with clover at this time. Provisions are so cheap here, that it costs almost nothing to live. I am at present paying $3 a week for myself, my wife, two servants, and two horses, and our fare is excellent. While in Nashville, I attended the markets to price the articles of provisions. The following are the prices: flour, 2 cts. per lb.—beef, 2 cts. per lb.—3 doz. eggs for 10 cts.—butter, 5 cts. per lb., and a great abundance of every thing at the most reduced prices."

HARVESTING CORN.

We find the following detail of an experiment in harvesting Indian corn, in the Massachusetts Spy, by a correspondent who dates at Bloomfield Farm, Harvard. It will be seen that its results agree with the practice of many of our best farmers.

"Last fall before the time for cutting stalks had arrived, I reserved twelve rows of nearly a square acre of corn to test the comparative utility of cutting the stalk (*or topping*) and stooking—or cutting up stalk and butt *with the ear on.* The rows were alternate, thus, No. 1, the easternmost row, was topped. No. 2, the second row, was stooked. No. 3, topped. No. 4, stooked. No. 5, topped. No. 6, stooked. Thus on to No. 12 inclusive. The stooked was bound with straw and carried out on the grass, when the rest of the field was topped. All was harvested at the same time.

The corn was husked into baskets, holding one and a half bushels of ears, 2d Nov., 1843.

Weight of stooked baskets of ears.	W'ht of unstooked baskets of ears,
No. 1 weighed 79 pounds,	No. 1 weighed 75 pounds.
No. 2 " 72 "	No. 2 " 73 "
No. 3 " 74 "	No. 3 " 74 "
No. 4 (not full) 67 "	No. 4 (not full) 19 13-16

Whole weight of stooked,.................. 292

" " not stooked,.................. 241 13-16

50 01-16

Balance in favor of stooked, 50 lbs. 3 oz. in ear, by weight.

Balance in favor of stooked, 3 pecks, in the measure.

On the 17th of Jan. last past, both parcels were shelled.

The six unstooked, yielded 2 bushels and 3 pecks of shelled corn.

Difference in favor of stooked, 3 pecks of shelled corn.

On weighing the shelled corn, the difference in favor of the stooked was 47 lbs. 7 ounces.

On weighing the ears in November last, Mr. Wood, one of my men, my brother and myself observed that the stooked was not so dry as the unstooked. Consequently, the stooked weighed more and lost more on the cob than the unstooked. But the shelled stooked more than held its own on the last weighing. On using the stalks and buts of the stooked, which were cut up in four inch pieces, by Hovey's Spiral Hay Cutter, both parts, or rather the whole was found equally sweet and green. If it is added, that the rows of corn were 3 feet 6 inches apart and that the labor of harvesting the stooked, was, in every stage, less than by the usual mode (except in husking) you and your readers in general—and our old Harvard farmers in particular—will have all the elements necessary to make their own calculations, and may draw such conclusions as are warranted by the premises."

ESCAPE OF MANURE FROM THE SOIL.

Mr. S. M. Brockway of Hamburgh, Conn., proposes the following query:—"Does manure pass off from a sandy soil by evaporation, or does it descend deep into the earth with the water?"

We have no doubt that manure may be carried off in both of the ways suggested by our correspondent. If a quantity is taken and exposed to the action of the air and rains, its value is after a while dissipated. A person in close proximity to this manure, may have noticed a disagreeable odor issuing from it. This was an indication that some of the most valuable portions of the manure, were escaping in the form of gas. At the same time that waste is thus going on, rains may be washing away the valuable particles that are not taken off in the atmosphere, till at length, by the combined process of washing and evaporation, nothing is left but a mass of inert matter. Now the wasting process here described, may go on in a greater or less degree when the manure is deposited in the soil—modified, of course, by the nature of the soil, and the depth to which the manure is buried. In a very light and porous soil, a deeper covering is required to prevent waste from evaporation, than would be necessary in one more compact; but the more loose the soil, the greater would be the liability of waste from the descent of the manure by water. That manure, in some cases does thus descend, is proved from the fact that earth has been taken three or four feet from the surface, where barns and stables have stood, which exhibited evident traces of the enriching deposit, and which on being applied to the soil, plainly showed its fertilizing properties in the increased luxuriance of vegetation. On moist and cold lands, manure should be kept near the surface—if it is deeply buried, it lies inactive. On *wet* soils, especially for grass lands, we should prefer applying manure entirely to the surface. No specific rule can be given in regard to the depth to which manure should be placed in the soil; it must always depend on the kind of manure, the nature of the soil, and the kind of crop to be cultivated. In general, we should prefer to cover it no deeper than should appear to be necessary to prevent the escape of the gases evolved by decomposition; and this depth will depend as before said, on the character of the soil; an inch in some cases would be equal to three inches in other cases.

NEW PUBLICATIONS.

New Ag. Journal.—Prof. Emmons of this city, and Dr. A. J. Prime of Newburgh, have issued proposals for "*The American Quarterly Journal of Agriculture and Science;*" to be published in this city, in numbers of at least 150 pages, forming two volumes of 300 pages each per year, at $3 per annum. The first number to be issued early in January next. Prof. Emmons is well known as a member of our State Geological corps, from its first organization, and is now engaged on the part of the State, in the preparation of a work on the character of the soils of New-York, as ascertained from analysis; and Dr. Prime, though less known, has given evidence in his contributions to this and other journals, of his acquirements in agricultural science. We believe the time has arrived for the establishment of a work of this character and if properly conducted, as we doubt not it will be, we believe it will be sustained.

Townley on Bees.—"A practical treatise on Humanity to Bees, or practical Directions for the management of Honey Bees, upon an improved and Humane Plan, by which the lives of Bees may be preserved, and abundance of Honey of a superior quality obtained." The above is the title of a manual of 162 pages, duodecimo, published by Edward Townley, New-York. It contains valuable information on the subject of management of bees, and is recommended to all who feel an interest in these useful insects.

MANUFACTURE OF CIDER.

If any cider is wholesome, that which is made right, is most so; and both as a matter of health and pecuniary profit, that which is of good quality, is most to be desired. There is no difficulty in making cider of such a quality that it will command from three to four dollars per barrel, by the quantity. The expense is but little more than is incurred in the dirty and slovenly mode of making the miserable stuff which generally passes by the name of cider.

Cool weather is necessary for making good cider, and the quality of the liquor is improved by letting the pomace lie as long before it is pressed, as can be done without fermentation.

There is a great difference in the quality of apples. Those should be chosen for cider, which yield the richest juice, though the quantity is usually less in those of this character, than in others. The apples should be *ripe* when ground, but not *rotten*, and care should be taken to put those which ripen about the same time, into the same pressing.

In the management of the liquor, the first and grand object should be to free it from all sediment. When this is properly done in the beginning, it will be easy to regulate the fermentation afterwards. The best mode which we have ever known practiced, is to pass the cider, as soon as it comes from the press, through sand and charchoal. Clean river sand, rather coarse, is best. For only a moderate quantity, a large tub or vat, may be used. Put in the sand and coal in alternate layers—having the coal in pieces of half an inch to an inch square. Lay a piece of flannel over the top, and turn on the cider as it comes from the press, as fast as it will run through. The flannel will catch much of the pomace, &c., which will after a while so fill the pores as to render it necessary to remove the cloth, and wash it, or substitute another in its place.

If the filtration is well done, the cider will appear perfectly pure as it runs from the sand, and should be at once put into casks and deposited in the cellar. After the casks are placed, the bungs should be taken out, till the fermentation has subsided. The fermentation will be somewhat retarded, and its activity much lessened, in consequence of the filtration. The casks should be kept entirely filled during fermentation, that the froth or scum may work out. As the fermentation abates, the bungs may be put lightly into the casks, and when no foam continues to rise to the top, the bungs may be driven tightly. The cider will sometimes keep well without further attention, for years; but in general, it is better to rack it off into other casks in the latter part of the winter. There will be found only a small portion of dregs in each cask, but in racking, care should be taken that none of the sediment runs off with the pure cider. If the casks are sound and good, and are kept in a good cellar, the cider will keep a long time without changing. If it is wanted for bottling, it will answer well for this purpose, when managed in the way described, the following May or June from the time it is made.

The casks for keeping cider should be made of the best of oak, well bound, and must be perfectly sweet. The cellar for storing, should be cool and dark. The temperature should be at all times as nearly as possible the same, in order that the cider may remain in the same state. The exclusion of light is necessary for the same reason, as the tendency of light is to produce decomposition.

Different substances have been recommended to be put into casks with cider. Salt, clay, alum, mustard-seed, fresh meat, eggs, and a hundred other things, have been tried. We have at different times seen cider in which many of these things were used, but never yet saw that which was as good as that made in a proper manner without any thing being added. Most of the articles tend to deaden the cider, and lessen its most essential qualities. Made as we have recommended, it is free from the *syrupy* taste of new or sweet cider, is spirited and lively, with a fine, rich vinous flavor.

To cleanse musty or foul casks.—If due care was always taken, casks would never get musty. As soon as the cider is out of a cask, it should be rinsed out thoroughly, dried, and then bunged tightly. But if from negligence, a cask becomes musty, the best way, as far as we know, to cleanse it, is to put in a quantity of unslaked lime, and pour boiling water on it till it is thoroughly slaked. Put in the bung, and shake the cask about so that the water and lime may come in contact with every part. Let it stand six or eight hours—empty it out—smell of the cask—if it is still musty, repeat the process, and after having again emptied out the lime, burn a strip of cloth dipped in melted brimstone, in the cask, fastening it by the bung. It must be a very bad smelling cask, that will not be rendered sweet by this mode.

DEFECT IN POTATOES.

For several years past, complaints have been made, in different parts of Europe, of a defect in potatoes. The injury to this important crop in some sections of Great Britain, has been very serious.

A similar defect, so far as we can judge from descriptions, has been more or less prevalent in this country the last and present season. The disease (if so it may be called,) has been before so well described in our columns, that we deem it unnecessary to say any thing particularly on this point. We hear considerable complaint of the present crop being affected in this State—especially, to the south and west. In a late trip to Orange and Dutchess counties, &c., we saw scarcely a field of potatoes, that did not exhibit signs of a premature ripeness, or blast, which is, we think, the first indication of the defect and tendency to rot. In a trip of some forty miles to the north, made since returning from the southern counties, we did not find the indications of this defect so prevalent, and heard little or no complaint in regard to it.

The *cause* of the defect, seems to be involved in as much obscurity as ever. We have heard many conjectures, all more or less differing from each other. Some have supposed the trouble was produced by an insect. We have made some examinations, but found no evidence of any. So far as we are at present enabled to form an opinion, we are inclined to believe that the occurrence of unfavorable weather for the potatoe, at a particular stage of its growth, has been the exciting cause of the defect—that the least hardy varieties, and those planted in ungenial soils, or too late in the season, have been most predisposed to suffer. We saw the other day some striking contrasts of the condition, product and quality of different kinds, at Professor Hall's place, near this city. Among several kinds, planted on the same description of soil, we found a variety called *Mercers*, (called in Pennsylvania, Ohio, &c. *Meshanicks*, *Neshannocks*, or *Chenangoes*,) had suffered most. Some other kinds, planted in adjoining rows, and at the same time, were but little affected. Of the latter, we were much pleased with a kind called *Early June*, a good sized, round, white potatoe, of a quality (as we have proved) unsurpassed for the table, and giving a good yield. They were ripe sufficiently early to sow the ground with turneps for a fall crop. So far as we have seen or heard, the kinds called *Flesh colors*, the round blue sorts, and the *Merinos* or *Long reds*, have not been much affected, unless on wet, heavy soil.

Mr. M. Y. TILDEN, of New Lebanon, writes us under date of Sept. 6, as follows:—"I have this day been through a field of three acres of potatoes that would have given us at least 1,000 bushels, and find it badly affected with the new potatoe disease. What portion of them will be left, is beyond conjecture. We opened many hills, and the result of our examination satisfied us that the early planted, or those which were nearest ripe, were the least affected. Where the tops were green, we found scarcely a sound one. We also found that the flesh colored were less affected than the Mercers, Carters, or Pink eyes. In another field, I examined some of the old fashioned Merinos, and did not find any injured; the tops of these were quite green. I will examine them again by and by, and give you the result."

☞ THE CAMELLIA, or rose of Japan, in its native clime, attains the height of 12 to 15 feet.

SALT MARSHES.

The expediency of reclaiming salt marshes, seems to have been heretofore looked on by some as questionable, from the fact that many marshes which have formerly been diked, have proved unproductive after the lapse of a longer or shorter time, and have consequently been suffered to relapse into their former condition, or be flooded again by the tides of the ocean. This, we are informed, has been the case in several instances in Mass. But the results do not seem to have been uniform, for though in some cases the anticipated profits have not been realized, yet in others, success has been quite satisfactory. The productiveness of these reclaimed marshes seems to be regulated in a great degree by local circumstances—as the nature of the soil, the perfection of the work of reclamation, &c. The expediency of diking, was considerably discussed in the New-England Farmer some twenty years since. Hon. John Welles wrote several articles to show that the advantages to be derived from diking, were so uncertain, that the operation was in general inexpedient. Among other reasons for his views, Mr. Welles held that "an acre of salt marsh is worth as much as an acre of any grass land whatever." Mr. W. says further in regard to this land, "that it requires little or no fencing—it takes no manure from the farmer's yard, but is recruited for the product it yields, wholly from the sea; and it requires few or none of those natural or incidental labors which are common to all upland. The product of the marsh is of great advantage to cattle, especially in the interior, as a change of food, and as a gradual and natural supply, in the best state, of saline matter. This is apparent in their thrift, and it has long been known to our farmers, that the value of the manure has been much increased where this fodder has been used."

In opposition to the views of Mr. Welles, that the diking of marshes is injudicious, a correspondent of the New-England Farmer (for March 2, 1827,) cites an example of reclaimed marshes in the Little Harbor of Cohasset. As early as 1789, the marshes of this place were diked by a company incorporated for the purpose. From some accident, the dike fell into decay. "In 1792," (says the account,) "the proprietors rebuilt the dam, and succeeded in converting the meadows into English grass, which from that time to the present, has yielded a more certain crop than almost any other land. None of the meadows extend further than thirty rods from the upland, and abound with fresh water springs."

In the American Farmer's Encyclopedia we find the following directions for reclaiming marshes, said to have been derived from Mr. T. F. Lambson, of Salem, New Jersey:

1st. *The marsh* should be secured from the tide by a permanent bank. 2d. A sluice or sluices of sufficient capacity must be laid to discharge the rain water and back water which proceed from adjacent uplands, so that at no time the water-courses and ditches will be filled to overflowing. The sluices should be laid deep enough to draw the water through them from the lowest part of the marsh; great care should be taken to have the doors made tight, so as to exclude all the tide water possible. The water-courses and drains should intersect each other at right angles, and no lot of marsh should contain more than ten acres. If any rain water should remain upon the middle of these lots, it will be necessary to cut small drains to let it pass off freely; these might be covered, where the materials are at hand. The mud and earth which come out of the water-courses and ditches, should be removed into the lowest part of the marsh; by a neglect of this, the rain water will be confined too long upon the surface, and the most luxuriant growth of timothy or clover may in a short time be converted into a nursery of rushes.

The best time to sow down with grass, is when the tide is first shut off, and when the mud is soft; a growth of coarse grass will spring up sufficient to protect the young grass in its tender state; this crop should be mown off, and not suffered to lodge upon the marsh. Timothy and herds grass require about one bushel to sow four acres. The former will flourish where the water can be kept 2½ or 3 feet below the surface; where it approaches nearer than this in the ditches, the latter will succeed best. In order to avoid having it sown in rows, it should be sown a second time across the first sowing. It is not advisable to mow longer than three years in succession; to mow and pasture alternately is the better plan. If the high marsh becomes bound and unproductive, plowing will be necessary; and after raising two or three crops of rye, Indian corn or broom corn, without the application of any manure, the soil will be quite renovated, and when sown down in grass will be much more productive. When the earthy deposit is several feet in depth, it will not soon be exhausted; when it is not desirable to plow, lime may be used with success. Low marsh or turf, or as we term it here, "*horse-dung*" mud, should not be plowed; when it becomes unproductive, a covering of clay or loam to the depth of two or three inches, will be found the cheapest application.

ROT IN FRUIT.

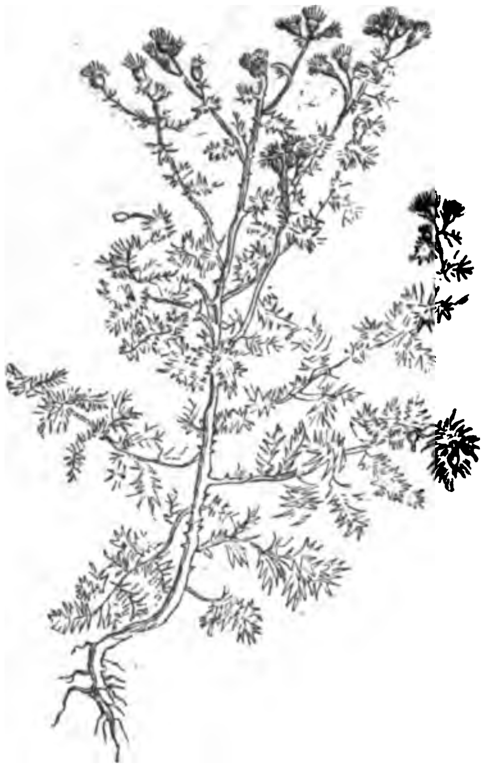
All those who are in the habit of putting up fruit for use or for sale, are sensible that a large portion of it is lost by rot or decay. There are two causes of this; one the natural decay of the fruit, and the other a fungi or parasite, which, when once it fixes its roots in the fruit, spreads with destructive rapidity.

The result of the first is seen, when it is attempted to keep fruit beyond the time fixed by nature for its decay. Thus apples that are ripe in August, will rarely keep sound till January; decay usually beginning at the center, and progressing until the whole is destroyed. So with plums, peaches, grapes, &c. The second kind of decay, or that which arises from fungus, usually commences at some point on the exterior part, and penetrates into the inside, as well as spreads over the surface. The *bitter rot*, so destructive in some cellars, and to some particular kinds of the apple, is an example of this parasitic destroyer.

Mr. Hassall of London has lately been engaged in a series of microscopical experiments on these fungi, determining their characters, and the manner in which they are propagated. He produced apples inoculated with the sporules of the fungi only three days previous, in which the rot had already extended to the size of half a crown; and the fruit was unfit for the table. It appears from the experiments of Mr. H. that the seed-like bodies of these fungi are too minute for the eye to detect, even in masses of considerable size, and they are always floating in the air around the place where such plants are able to fructify; wherever they meet with a portion of the skin of a fruit, a little torn or abraded, there they can establish themselves; and when the surface of a fruit is in no way injured, they are able, but with less rapidity, to introduce their microscopical spawn through the pores of the skin.

It is not improbable that the disagreeable odors so common in fruit cellars where decaying fruit is present, is in a great degree owing to these microscopic sporules that fill the air of such places; and the propriety of thorough ventilation would suggest itself as the means of checking the progress or spread of the fungi. It may seem incredible at first, that such minute substances should operate so quickly on living vegetable matter; but the instances mentioned by Liebig of the action of putrid animal matter applied to the living tissue, would seem to place this rapid action of vegetable poison on fruit in a clear light. We observed not long since an account of a fruit grower in Herefordshire in England, who preserved his fruit in a perfect condition, even when piled in large masses, by dashing over them once a week a sufficient quantity of pure water to wet the whole thoroughly, the apples being so placed on hurdles in the cellar, that the water could drain off readily. It is evident such an application of water would displace any sporules or fungi, unless they had taken very firm root, and it is probable the water would have the effect of imparting a vigor to the fruit, that would enable it to resist for a longer time the attacks of this insidious and destructive enemy.

Save all your straw for winter feed and litter.

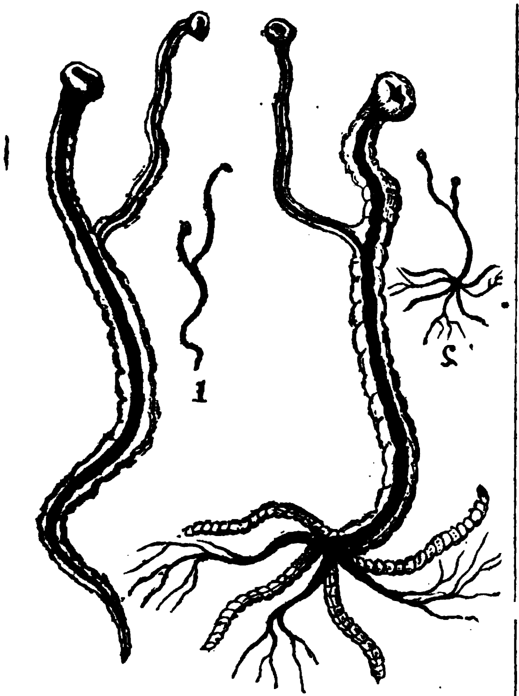


CANADA THISTLES IN MARYLAND, &c.

In compliance with the suggestion of Dr. Smith, we here give a cut of a Canada thistle. It was taken from a plant growing somewhat by itself, and has many more branches than are found on those which stand near together. When this plant has obtained full possession of a piece of ground, it grows very thickly, running up in a slender stalk, with only a few lateral branches, and a few blossoms at the top. Unlike every other description of thistle, the root of this variety is perennial. Almost the smallest quantity of the root possesses the power of reproduction—the roots run a great distance, both downwardly and horizontally, which makes its eradication very difficult. A few days ago we saw some growing finely which had sprung from roots that were cut off at least two feet from the surface of the ground, where some workmen were grading a street. The best way to kill them is by mowing when they are in bloom. This is often quite effectual, but if they start afterwards, they should be cut again the same season. In the specimen from which our cut was taken, not much of the root was obtained, in consequence of the hardness of the ground. Its lateral roots are very numerous, and of the size of a goose-quill. Mr. Smith, says:

I hope the farmers of Maryland, and of the middle and southern States generally, will keep a good lookout for this terrible pest. They may be assured that they never have had an evil of one-tenth part the magnitude of this when it once becomes located upon their land. Loudon in the Encyclopedia of Agriculture, thus speaks of it: "*Cnicus arvensis*, (the Canada thistle,) is well known as one of the most troublesome weeds in arable land. It is never found, however, in very sandy, gravely or peaty soils, (in England,) but generally in such as are loamy and dry. An instance is given in the Farmer's Magazine, of the descending roots of this plant having been dug out of a quarry *nineteen feet long*; nor is it less remarkable for its horizontal roots. Mr. Curtis planted about two inches of a root in his garden in April, and by November following, it had thrown out under ground stolones (creeping shoots from roots,) on every side, some of these eight feet long; some of which had thrown up leaves five feet from the original root. The whole together when dug up and washed, weighed four pounds. In the spring following, it again made its appearance, on or about where the small piece was originally planted. There were between fifty and sixty young plants, which must have sprung from fragments of the roots that had eluded the gardener's search, though he was particularly careful in extracting them. From these facts it may readily be conceived how difficult it is to eradicate this weed from arable land. A naked fallow, with frequent and deep plowing, will not accomplish it, unless the season is more than usually dry. Laying land down to grass, keeping it in that state seven or eight years, and during the whole time pulling up every shoot as soon as it appears, is found fully more effectual than a naked fallow. But the plant is so common by road sides, and seeds so abundantly that it is hardly possible to effect its extermination. In common field lands and others indifferently cultivated, it often forms the larger half of the produce, and formerly used to be pulled up when beginning to come into flower, and given as food to horses and cows. Those who pull this weed require to be furnished with strong gloves or thistle pincers." I have made this extract not for the information of the northern readers of the Cultivator, nor any others who have the misfortune of being acquainted with the pest from their own experience; nor is this article written for those; unfortunately *they* know enough about it already; but my object is to put such information in the possession of the farmers of those sections of our country not yet cursed with this thistle, as will enable them to know the extent of the evil if it should ever come upon them, and that they may be prepared to prevent it. Let them be forewarned, and consequently forearmed. The Canada thistle will undoubtedly be among us (in the middle and southern States,) before long. It is indeed, even now in Delaware, and very likely indeed in Maryland, and possibly even further south and further west, in single plants here and there. If so, the work of extermination should be at once commenced. Every plant and vestige of root should be taken up and *burnt*. It will not do to throw them over the fence into the road or into the cow-yard, or any where else; fire alone will destroy the roots and seeds. A gentleman, just returned from the northern part of New-York, has kindly presented me with a specimen of the thistle, and he has left another at the office of the American Farmer. The object is to keep these specimens for exhibition to all farmers, that they may be enabled to know it when they see it on their land. It is sincerely hoped that we may be able to arrest the progress of the pest before it shall have taken possession of our fields in this region; but it will require the united and hearty co-operation of all farmers. Each farmer must watch his own land and look for it carefully; he must keep a good look out for it on his neighbor's lands, and on the road side. Let him never pass by a plant of it *any* where, but secure its destruction. The destruction of a single plant this season, will prevent the growth of some thousands next year. Its seeds are so numerous, so light and so provided with a feathery pappus, that a single plant would seed the grounds for miles around, the wind blowing them in every direction. I hope I shall not be considered as an alarmist without cause. I assure all that may question the propriety of this warning notice, that the evil is not exaggerated; my fingers even now *seem* to smart with the stings received when a boy in the north, from pulling Canada thistles; nor is the evil as far off, nor the time of its coming, as distant as may be supposed. It is in Delaware now, to a small extent, it is true, and it will be among us, further south, speedily. And as to the earnestness with which I recommend its being watched and taken hold of in time, let us consider, that if our predecessors had adopted the measures now recommended towards this thistle, we should not now have had our fields overrun with Richardson's pink, (the ox-eye daisy,) wild carrot, cheat, garlic, ripple, and many other pests; none of which, however, in extent and inveteracy, compare with the evils inflicted by the Canada Thistle. Gideon B. Smith.

The rot in the potatoe is extending over all this region.



GAPES IN CHICKENS—(Fig. 91.)

Messrs. Editors—From all I have seen and heard on the subject of what is called the gapes in chickens, it is a disease which is not generally understood. I shall therefore give you my opinion on its nature and cure. This spring, having my chickens attacked as usual with the gapes, I dissected one that died and found its *Bronchus or wind-pipe,* (not the throat,) filled with small red worms from half to three-quarters of an inch long. This satisfied me that any particular course of feeding or medicine given would not reach the disease. I therefore took a quill from a hen's wing, stripped off the feathers within an inch and a half of the end, trimmed it off with a scissors to about half an inch wide, pointing it at the lower end. I then tied the ends of the wings to the legs of the chicken affected, to prevent its struggling; placed its legs between my knees, held its tongue between the thumb and fore finger of the left hand, and with the right, inserted the trimmed feather in the windpipe (the opening of which lies at the root of the tongue,) when the chicken opened it to breathe, pushed it down gently as far as it would go (which is where the windpipe branches off to the lobes of the lungs, below which I have never detected the insect,) and twisted it round as I pulled it out, which would generally bring up or loosen all the worms, so that the chicken would cough them out, if not, I would repeat the operation till all were ejected, amounting generally to a dozen; then release the chicken, and in the course of ten minutes it would eat heartily, although previous to the operation it was unable to swallow, and its crop would be empty unless filled with some indigestible food. In this manner I lost but two out of forty chickens operated on; one by its coughing up a bunch of the worms which stuck in the orifice of the windpipe and strangled it—the other apparently recovered, but died several days after in the morning; in the afternoon upon examining its windpipe, I found a female worm in it, differing from the others by branching off at the tail in a number of roots or branches between each of which were tubes filled with hundreds of eggs like the spawn of a fish; and although the chicken died in the morning, the worm was perfectly alive in the afternoon, and continued so for half an hour in warm water. While I was examining it in a concave glass under a microscope, it ejected one of its eggs, in the centre of which was an insect in embryo.

From this fact, I have come to the conclusion that when the female worm breeds in the chicken and kills it, these hundreds of eggs hatch out in its putrid body in some very minute worm which probably after remaining in that state during the winter, change in the spring to a fly which deposits its eggs on the nostril of the chicken from whence they are inhaled and hatched out in the windpipe and become the worms I have described.

There is one fact connected with this disease—that it is only old hen-roosts that are subject to it; and I am of opinion that where it prevails, if the chicken houses and coops were kept clean and frequently whitewashed with thin whitewash, with plenty of salt or brine mixed with it, and those chickens that take the disease, operated on and cured, or if they should die, have them burned up or so destroyed that the eggs of the worms would not hatch out, that the disease would be eradicated.

I am also satisfied that the chicken has not the disease when first hatched; several broods that I carried and kept at a distance from the chicken-house where the disease prevailed, were entirely exempt. And chickens hatched from my eggs where they had never been troubled with this disease, were perfectly free from it; and a neighbor of mine who built in the woods half a mile from any dwelling, and has raised fowls for six or seven years past, and has frequently set my eggs, has never had the gapes among his chickens.

With my first broods of chickens, there was not one escaped the gapes. But all that have been hatched since I had the chicken-house and coops well whitewashed inside and out, with thin whitewash, with plenty of brine in it, and kept clean, have been exempt from the disease, with occasionally an exception of one or two chickens out of a brood.

In operating on the chickens, although one person can effect it, it is much easier done to have one to hold the tongue of the chicken while the other passes the feather down its windpipe, and by having a small piece of muslin between the fingers, it will prevent the tongue from slipping, which it is apt to do upon repeating the operation.

Accompanying this, I send you drawings of the gape worms in their natural sizes, and as they appear when magnified. Nos. 1 are the male worms, and Nos. 2 the female; you will observe that the heads of both male and female branch off in two trunks with suckers like leeches at the extremities of the trunks, one trunk longer and thinner than the other. The intestines extend from the branching of the trunks downwards towards the tail, and are perfectly apparent when magnified. This female branches off like the roots of a tree at the tail with intermediate tubes filled with small oval eggs.

Yours, &c. C. F. Morton.

Mill Farm, New Windsor, Orange co., N. Y. Aug., 1844.

ON THE BLIGHT OF PEAR TREES.

It appears that they are subject to blight from two causes—like other trees, if placed in land which at times is very wet—in a dry time such trees will suffer from want of moisture at the roots, and like forest trees in similar cases, will die off—they should be placed on rolling land where the water can run off freely. But the most common cause of blight in pear trees is a worm, the egg of which is deposited in the branches by a small insect. If iron ore or cinders of iron, or any other articles of iron be placed around the roots of the tree, the insect will bid adieu to the tree. Having tried this remedy in a sandy soil, and also on a stiff soil, and in places far distant from each other, and having driven off the insect when the trees of others were very much injured or destroyed in my neighborhood, I feel as if all who are troubled by these insects should carefully try the use of iron articles rather than to be under the necessity of continually topping off the limbs which contain the worm or young insect. It is probable that the iron is unfavorable to the worm which drops from the branches and makes its wintering place at the root of the tree, and then the insect avoids an unfavorable location for its young. But whatever may be the theory, it is sufficient that iron has the desired effect. C. D.

PLUMS.

One of the most successful cultivators of plums, is Mr. Isaac Denniston, of this city. For more than fifty years, the production of choice fruits of various kinds, has been with him an object of attention, and he has the gratification of having on many occasions borne off the palm as the exhibitor of the finest specimens of plums at the New-York Horticultural Shows. He has upwards of *forty* valuable kinds, ripening from July to November. Perhaps the richest of all these varieties, is the *Schuyler Gage*. The history of the introduction of this fine kind, Mr. Denniston informs us, is as follows. The original tree was brought from France by Aaron Burr, and given to Col. Schuyler, formerly of this city. For some reason or other, Col. Schuyler did not feel disposed to disseminate the variety, but after his death, Mr. Denniston bought the identical tree which had been brought from France, and transplanted it to his garden. The fruit, which ripens in August and September, resembles in appearance, the Green Gage, but is higher flavored, and more spicy. The tree is much more hardy and thrifty than the Green Gage.

Among other very rare and superior kinds, is a seedling called *Mrs. Bleeker's Large Red*. This originated from stones sent Mrs. B. from Germany. The fruit is large, of a bluish red—very melting and rich. Ripens in August and first September.

Murray's Queen Claude.—Green, good size—very rich and sweet. Ripens in August.

Lawrence's Favorite.—This is one of the richest of all plums. It is said to have been produced from the seed of the Green Gage, by Mr. Lawrence of Hudson, N. Y. The fruit is of large size, nearly round—the skin a dull green, covered with blue bloom. A clingstone, ripens in August and first September.

Mr. Denniston has several very choice seedlings originated by himself. He has no less than *seven* kinds which came from a tree obtained several years ago from Mr. Banker of Esopus. All these are good—some of them superior—but all quite distinct in their characters. To one of these seven seedlings, the name of *Denniston's Imperial Seedling*, has been given. This, besides being of very superior quality, is one of the most beautiful of fruits. It is large, round, of a golden yellow color, with a beautiful damask blush on one side. Ripens in September. Very productive.

Another of these seedlings, which was a great favorite with the late Judge Buel, is yellow, with a slight pink tinge. Ripens in August. Very productive.

Mr. Denniston kindly offers to give buds of any of his fruits to those who may wish them.

Mr. D.'s garden consists of four acres, and a greater product of four acres than he obtains, is rarely seen. Of these, the greater number are plums, but there are many apple and pear trees. All are managed in the best manner, and produce abundantly. Notwithstanding the large number of fruit trees, which seem to stand as closely as trees ought to stand, Mr. D. manages to raise a large quantity of vegetables of all kinds, and considerable Indian corn, besides an abundant crop of the finest red and white Antwerp raspberries. The latter are equal to any we have ever seen. Mr. D.'s mode of managing them, is to train them to stakes placed in rows four feet apart, and about three feet apart in the rows. In August, all the stalks or canes that have borne fruit, are cut down, reserving from four to six stalks of the new growth, for bearing fruit the next season. The tops of these are cut off to about four-fifths of the growth, and the stalks are then, by a piece of matting, bound round near the top, fastened to the stake. In this way they are kept up so that they may be conveniently hoed—they bear abundantly, and require no protection in winter. The raspberries are generally grown under the plum trees—indeed, nearly all the ground in the garden is made to yield, annually, a double crop.

The soil of Mr. Denniston's garden is a loam, lying on a pretty compact clay, which is not generally more than a foot or two from the surface. He thinks this kind of soil, made rich by street manure, is the best for plums. A thousand dollars worth of plums, and several hundred dollars worth of other fruits have been sold from this garden in a year, besides much that was eaten, given away, or wasted.

TREES FOR SHELTER AND ORNAMENT.

It is a great defect in our American management, that there is a too indiscriminate destruction of forest trees. It is the general practice to sweep off every thing, leaving the ground as bare and desolate as the deserts of Arabia. This is bad policy in more than one respect. First, it destroys the *beauty* of the grounds, which should never be done unnecessarily; for there is as much reason in allowing the *eye* the gratification of viewing agreeable objects, as there is in permitting the gratification of any other sense. This is a matter too much overlooked. A taste for the beautiful, properly regulated, should be indulged and cultivated. Too many of our people seem to be almost totally ignorant of this principle, and consequently, one of the chief sources of human happiness, is to them a sealed book.

Second, in this climate, subject as it is to extreme heat and cold, the preservation and growth of trees, either as shade or shelter, becomes an important pecuniary object. Pastures and fields should be as much as possible protected against bleak winds, by dense plantations of trees. Suitable trees should also be left in proper places for shade. An animal exposed in an open pasture to the scorching heat of midsummer, suffers great misery, and cannot be made to yield milk or take on flesh. Horses, in such situations, soon become poor, and sheep sometimes die from such exposure.

All steep side hills should be left in trees—they need not be left very thick—the best way is to leave them just thick enough to make what are called in the west, wood or grove pastures. Then, if the ground is smoothed a little, grass seed may be sown, and a fine sward will be soon formed. If the ground is natural to grass, it will soon become swarded without sowing any seed. These places will thus produce a good deal of feed—the grass will keep the land from washing—the trees serve for shade, and ultimately for fuel. All gorges, gulleys, &c. should be left in trees, or planted with them; they will frequently produce a good growth of wood, but will bear nothing else, and if the trees are destroyed, the land is soon cut up and washed away by rains. Managed in the right way, these steep side hills and gulleys serve to give interest and even beauty to a place, instead of wounding the senses, as they frequently do, by their unseemly nakedness.

The maple, oak, elm, hickory, ash, &c. among the hard wood trees, are suitable for preservation or planting, and among the soft wood kinds, the various sorts of pine, fir and larch. The pine and fir, being evergreens, should be allowed their due representation in all groves, both as a matter of ornament, and for protection against the cold winds of winter. In Scotland, great attention is paid to the protection of mountain and hill land pastures, by plantations of trees. The *larch* is there recommended as one of the most profitable kinds that can be used—particularly on account of its rapid growth, and its value as timber. How would the American larch do in this respect ? It may be well to say that the American larch is what in some neighborhoods is called juniper, though the real juniper is altogether a different tree. It is an evergreen of the cedar family, whereas the larch is deciduous. We have only noticed this tree growing naturally in wet and boggy ground. Will it flourish well in other locations? Would the Scotch larch do well on common uplands ? and would it be an object to plant it in such situations? What is the distinguishing difference in the Scotch and American larch, as regards their natural habits of growth, quality of wood, &c.? We shall feel obliged if some one will answer these queries.

Cattle Shows.—Niagara, at Lockport, Oct. 9, 10—Wayne, at Lyons, Oct. 8, 9, instead of 28th, as stated in our last—Herkimer, at Herkimer, Oct. 3, 4—American Institute, New-York, Oct. 16, 17.

House all tools—plow for spring crops.

VEGETABLE NUTRITION.

The writer scarcely expects to be able to offer any new views to those who have studied the subject thoroughly. His object is to endeavor to explain the subject to the understanding of practical men,—the farmers and gardeners, those who work the soil and derive their sustenance from it. Generally speaking, *all tillers* of the soil know that if they apply a load of horse stable manure to a certain quantity of land, the product will be increased by it to a certain extent; but they do not know the minute principles on which it acts. We all know that when we eat our dinners, our hunger is satisfied, but how many of us know the true cause of that hunger and the mode or true cause of its satisfaction? It is precisely the same with plants as with animals, including men. If we do not get enough to eat, we languish, and ultimately perish; if plants do not get enough to *eat*, they also languish and perish, or yield a stinted product. Plants and animals are enabled to grow by what they eat, and although their modes of eating, is different they both act upon the same principle, and both grow by what they feed on, and in no other way. This is vegetable and animal nutrition. The increase of a plant in size, is supplied by its nutrition, so is that of an animal—if neither have any thing to eat—if a plant have no manure, an animal no food, neither can grow, both must perish. These are plain matter of fact principles that all understand. Now a new soil—that is, a soil just cleared of the timber, possesses a quantity of nutrition, from leaves and other substances that have decayed on its surface in the course of time, and hence new land is proverbial for good crops; but it is soon exhausted, and then a supply becomes necessary from some other source—just as your corn crib or meat house requires replenishing when exhausted of its contents, that your table may be supplied. This is the plain common sense reason why manure is necessary to a soil—if your meat house and corn crib require a new supply of meat and corn when their old supply is nearly or quite exhausted, so does your soil require manure when that approaches exhaustion.

But how does manure act in a soil, is a question most frequently asked, and the answer is, it acts precisely as does the meat in the meat house, and corn in the crib. Plants eat as well as men. If you have no provender for your cattle, you do not expect them to thrive; if you have but a scanty supply of poor straw, you do not expect your cows and oxen and horses and sheep to get fat on that alone; so, if you have no manure of any kind to apply to your land, you do not expect large crops of wheat, or corn or rye. These you will say are all common place remarks—every body knows all this very well. The object of bringing all this common place matter before you, is merely to lay the foundation, as it were, of the building. You all admit that food is as necessary to plants as to animals. The next question is, how do they take it, and how appropriate it to the supply of their necessities? We do not *see them* take it by the mouthful and masticate it, and swallow it; but it does not follow that they do not do this because we do not *see* them do it. There are at the ends of the roots of all plants, small, extremely small mouths through which they take food. Those little, extremely fine hairy roots, have small openings by which they take from the soil such matter as is nutricious. This matter is dissolved by water in the soil, and thus rendered fit to be taken up by the roots of the plants. That is, the nutritious principles that may be in the soil are dissolved by and combined in water. They in this medium enter into the sap vessels of the plants; just as do the nutricious principles taken into the stomach of animals, enter into the blood. In this way they are carried up the plant to the leaves, where they are exposed to the action of the atmospheric air; as is the blood carried to the lungs in animals for the action of the air. When the sap or circulation of the plant has had sufficient exposure to the action of the air, through the medium of the leaves, it commences its return downwards towards the roots, supplying in its way such parts of the plant as need renovation or addition of woody fibre, &c. and when such quantity as is needed has been thus taken by the various parts of the plant, the balance, if there be any, and that which has been rejected as innutritious, is voided in the form of excrement, by the roots, just as is done by animals.

We now come to consider the form or nature of the nutritious principles taken from the earth. All the different constituents of nutrition are in the soil and mixed together mechanically or chemically. They are dissolved and held in solution by water. The roots of plants absorb this solution in such quantity as may be required by the plant, and it passes into the plant through the channels formed for the purpose called sap vessels, analogous to veins in animals, and immediately ascends to the leaves, where it receives the necessary action of the atmosphere—some say it receives the necessary supply of carbonic acid gas; I suppose it receives in addition to carbonic acid gas, nitrogen; that is, that it is nitrogenized as well as carbonized, just as is the blood of animals oxygenized. It then returns towards the roots, through another set of vessels, analogous to arteries in animals, and as before remarked, supplies each part of the plant with the necessary material to restore its waste or aid in its growth. In this process, the plant does not take up crude matter, charcoal or lime, or potash, but the elements or gases that are found in the sap, and that constitute these and other portions of the plant. This whole process is precisely the same as that through which the nutrition of men and animals is carried. Now if we apply common salt to a piece of ground, we must not understand that the plants growing on it will take up salt in substance. If they take any thing at all, it will be the elements that constitute salt, or those formed by the combination of those elements with such suitable materials as may be found in the soil. And so with other articles. Suppose we apply potash to the soil, in the form of ashes or otherwise, if there be silicic acid in the soil, then silicate of potash will be found mingled in the sap of the plant, from which the plant will obtain that glossy coating which we see on the outside of straw, cane, &c. If there ~~be no~~ silicic acid in the soil, and there be potash there already, then it is obvious that silicic acid~~, not potash~~, is to be added. So with all other constituents of plants. It is perfectly impossible for a plant to take from the soil any organized substances, woody fibre, potash, &c., but it must take the elements of such in solution, and form and appropriate them by means of its own organs, just as animals do. Hogs do not take their *pork* and *bristles* from the corn they feed on, but they make them from the elementary principles they obtain from the corn and atmosphere. We hear people talk of *sour soils;* there can be no such thing as a sour soil, *as such*, or *per se*. Some vegetables grow on any and all soils; and if nothing else grows there, it does not follow that the soil is *sour*, but simply that there are none or not enough of the elements of other plants to supply their growth. For example, starch is composed of carbon, oxygen, and hydrogen; and sugar is composed of the same elements, only in slightly different proportions. Now oxalic acid, (the acid of sorrel,) is composed of carbon and oxygen, and these elements must necessarily exist in all soils; add hydrogen, which will certainly be supplied by rain water in abundance in all soils, and you will have the elements of starch and sugar, as well as those of oxalic acid. But you may add potash to what is called a sour soil, or lime, or soda, and still sorrel will grow there; because each plant takes from the soil and from the atmosphere, that which it requires to constitute its substances, and nothing else. You may make the most perfectly rich soil that ever lay *out of doors*, and plant sorrel or the oxalis, in it, and you will find that they will thrive equally with all other plants; just as all varieties of animals, thrive; horses, hogs, sheep and birds, on the same farm, each one taking that sort of food that suits it. The great mistake, and that which has caused much loss to farmers, is the supposition that plants convert compound or combined substances as such, into nutrition. The fact is, that all substances that afford food for plants are reduced to their original elements in gaseous or watery form, or in both, mixed. Water affords in itself a valuable source of nutrition to plants. It contains hydrogen, and there are few portions of the plant that do not want hydrogen; it contains oxygen, and there is not a single part or portion of the plant, (let it be what plant it may,) that does not contain oxygen. Water is besides, in plants as well as animals, a solvent for the other elements of nutrition. The blood in animals, cannot exist without it; or if it can exist, it cannot circulate to the advantage of the animal; just so with the sap of plants. Water not only affords as it were a vehicle for the conveyance of nutrition to the various parts of plants and animals, but also a considerable and indispensable portion of the nutrition itself.

As an illustration of these principles of nutrition, a well known fact in horticulture may be mentioned. If in the fore part of summer, after the tree has shed its blossoms, you *ring* the limb of an apple tree, that is, take off the bark for a quarter of an inch around the limb,near the trunk of the tree; or, which answers equally well, place a small wire around the limb near the trunk, drawing it tightly so that it shall be made to sink into the bark all around; you will find the limb will increase in size above the ring, but not below it; and the fruit, if it bear fruit, will be larger and ripen sooner on that limb than that on any of the others. The reason is, that the ring has intercepted the descent of the nutricious sap from the leaves at the top, and thus compelled its conversion to the growth of the limb and the fruit above the ring.

The conclusions to be drawn from the principles above laid down are obvious. 1st. Plants take nourishment precisely as animals do, except the apparatus, (the mouth) and mode of taking it, differ in form. Plants as well as animals, reduce all substances that contain nutricious principles to their original elements, before they convert any portion of them to their own organism. Therefore, when we apply stable manure to soil, we do so merely to enable the soil and the plants to extract from it the nitrogen, &c. that its ammonia contains. The plants do not take up ammonia, but simply one of its elements, nitrogen. The elementary principles of the manure are all in like manner taken up and combined. If there be an excess of any one element, that excess is excluded from the sap; and if the sap contains an excess of any principle, that excess is ejected in the form of excrement. Indeed this paper may be appropriately concluded witth the remark that *life is supported by death*. Death must take place in *something*, before *any thing* can receive nutritive matter; because it is from the death and dissolution of one thing, that the nourishment of another is obtained. If animals and plants do not die, man cannot live or be supplied with meat and bread; and if animals and plants do not perish, plants cannot live. From the dissolution of one body, animal or vegetable, another body derives the elements of its own growth, its woody fibre, sugar, &c.; its flesh, bone, &c. But every thing must be reduced to its original elements, before its constituent principles can be appropriated to other forms. In fact, all processes of life, in both kingdoms, animal and vegetable, and the mineral too indeed, are nothing more than the changing of places of the elements of organization. An animal dies, its body *decays*, as we call it. But this body does not decay. The elementary principles of which it is composed, merely *separate*, and form new combinations—one portion enters into and becomes a portion of a plant, probably a rose or a lilly, probably of a skunk; just so with a plant. A portion of its constituent principles becomes absolutely a part and portion of the body of Queen Victoria, or of that of a goose, or of that of any other animal. But let us stop. The IDEA intended to be conveyed in this paper, must by this time have become obvious—vegetable nutrition is the same thing, neither more nor less than animal nutrition; governed by the same laws, resulting in the same effects, requiring the same provision. GIDEON B. SMITH.

NEW KIND OF CABBAGE.

Mr. John Lossing showed us the other day, what he calls a *Roman Cabbage*. The variety seems to possess some peculiarities. It is more solid, and heavier in proportion to its bulk, than any we have seen. It also grows very quick. The head shown us, weighed 20 pounds on the 20th of July. Its shape is oblong, and much pointed at the top. It is said to keep better than any other cabbage. The seed was brought into the country by some Germans.

APPLES AS FOOD FOR ANIMALS.

Apples, when ripe, afford more or less nutriment to animals. Sweet apples are generally supposed to be most nutricious, though we are not certain that this supposition is correct. Our fathers and grandfathers held that sweet apples would fatten hogs; but in latter years, it has been proved that hogs will fatten on apples that are not sweet.

A hog is naturally an epicure—(we don't say an epicure is a *hog*)—and when left to himself is a pretty good judge of what is best. Observe, then, what are his natural habits. Put him in an orchard where there are various kinds of apples, and see how he will work, or rather how he will *eat*. He will always select the most *palatable* apples—he will not confine himself to one kind, nor to sweet apples alone; but will go over the orchard and pick out the choicest fruit, always choosing that which is in such a state of ripeness that its qualities are nearest perfection. Like the boys, his regular haunts are the "*best trees,*" whether the apples are sweet or pleasantly sour; but he never eats a real *crabbed* apple, or an unripe one, unless forced by hunger. We should therefore infer from the natural habits of the hog, that if we wish to obtain the greatest thrift from him when feeding on apples, it is best to feed him partly with those which are sweet, and partly with those which may be called sub-acid.

When hogs or cattle are being fed principally on grain—their appetite, health and thrift, will be found much improved by a small allowance of raw apples, occasionally. As a regular food for hogs, the value of apples is undoubtedly much improved by cooking, either by steaming or boiling. If they are to be fed by themselves, steaming is probably best. But it is believed that the most judicious way is to boil or stew them thoroughly, and mix with them while hot, a portion of meal. This checks the laxative nature of the apple, imparts additional value, and causes the food to be retained in the stomach and intestines a sufficient length of time for the whole nutriment to be extracted. The meal may be made from Indian corn, rye, barley, buckwheat or oats and peas. We think we have never seen hogs fatten faster, than when fed on the following kinds and proportions of food, viz: a bushel of potatoes and a bushel of apples boiled together, and when sufficiently soft, a peck of oat and pea meal stirrèd into them, having the mixture when cold, about the consistency of good stiff mush, or "hasty pudding." The pork was solid, sweet and good. Some experiments made several years since by Payne Wingate, Esq. of Hallowell, Maine, a very close and accurate observer, showed that apples were worth more than potatoes for fattening hogs, especially when both were cooked and mixed with an equal portion of meal. Apples are also excellent for cattle. We have repeatedly witnessed their effects in the thrift and smoothness of the coats of cattle to which they were fed at the rate of about a peck per day, during the winter. Fed regularly, in this quantity, they increase the quantity and richness of the milk of cows, while the condition of the animal is likewise improved.

It is the opinion of some very judicious farmers, that a given quantity of ground will afford more nutriment for any kind of stock, when appropriated to apple trees, than when devoted to any other crop. Our own experience inclines us to favor this conclusion, and we think our friends, who for the promotion of temperance, have cut down their orchards, have shown a "zeal not according to knowledge." They seemed not to be aware that the same substances which produced the deleterious effects that thoy desired to avoid, might be converted into wholesome and substantial articles of human sustenance.

CEMENT FOR GLASS WARE.

Cover the broken edges with a thin coat of common white-lead paint, and then pass a cord round the glass article or vessel, to bind the parts closely together. In a few weeks it will become perfectly dry, and will be found to have adhered very firmly together. Tried by the writer, and known to be good. J.

PLANK ROADS.

George Geddes, Esq. of Camillus, N. Y., has visited Canada for the purpose of examining the plank roads there. From his report, we gather the following. On the great road from Toronto to Kingston, there is 14 miles of planks. They were laid eight years ago—16 feet long and 3 inches thick, on 4 sills, 4 inches square, fastened by one spike in each end of the plank. These planks are just worn out, and are now being replaced on the old sills, which are yet sound. A part of the road above alluded to, was McAdamized, and Mr. Geddes was informed by one of the commissioners, that the repair of the McAdamized part had cost $400 per year, while the planked part had required no repairs for eight years. Heretofore only one track has been used, by which the planks have been worn out in the middle, while the ends are sound. It is now proposed to lay two tracks, 8 feet wide and 4 feet apart, which will obviate the inconvenience of meeting teams or carriages on the same track. Large loads are carried on these roads—a single pair of horses haul three cords of pine wood at a load—and they are the most agreeable roads to ride on imaginable.

The experiment of plank roads has been fully tried, and the success has been such, that in Canada West, four are now building.

Mr. Geddes submits an estimate of two tracks, each 8 feet wide, made of 3 inch hemlock plank, and sills 4 inches thick and 6 inches deep, estimating the price of the lumber at $5. per M. delivered on the track, and the necessary grading, based upon the contract prices in Canada, for the like work.

Estimate.

126,720 feet of plank per mile, at $5 M.....	$633 60
31,680 feet stringers, at $5 M..............	158 40
Laying down per mile,....................	272 00
	$1,064 00
For two tracks, double,..................	2,128 00
Ditching per mile,...........	160 00
	$2,288 00
Add 10 per cent,.........................	228 00
	$2,516 00
For 10 miles, at $2,516 per mile,..........	25,160 00
Three gate houses, at $300 each,...........	900 00
Engineering, say,........................	500 00
	$26,560 00

Mr. Geddes has no doubt that where lumber can be had at these prices, plank roads are to be preferred to any other kind.

ANALYSIS OF SOILS.

Every farmer should have an understanding of the nature of the soil he cultivates, of its constituents and their proportions, as else he may add that which is of little use, and withhold that which is most essential. The most material parts of soils are sand, clay and lime. All are essential to a good soil, though the last is much more sparingly distributed by nature than the first, and some plants are found to flourish in that in which no trace of lime can be discovered. Some of the most fruitful soils on the globe, such as the alluvial of the Nile or the Mississippi, contain but two or three per cent of it. In ordinary soils, however, one per cent is one pound to the cubic foot, which would give ten and a half tons to every six inches of depth in soil on an acre. From the quantity of the earths found in the cereal grains, and particularly lime in some of its forms, it seems probable that where it exists in but small quantities, and no immediate source of supply is at hand, that substance may be exhausted by constant cropping, at least to such an extent as to render the perfection of such grains impossible. It would appear necessary then by analysis of the soil to determine whether any of the matters essential to vegetation are absent, that they may be supplied. We have in former volumes of the Cultivator, given distinct modes of analysis, but the one adopted by Dr. Jackson, appears to be very complete in its results, (though perhaps partaking too much of the chemist's laboratory for the common farmer,) and we copy his process as given in the Geological Report of Rhode Island. The analysis was of the soil from the valley of the Nile.

"One hundred grains of the soil dried at 300 deg. Fahrenheit lost 7.05 grains. Its vegetable matter was then burned out in a platina crucible, and the loss was 6.90 grains. The soil was then mixed with four times its weight of potash, and was fused at a full red heat in the platina crucible, so as to render the whole soluble in water. The mass was then dissolved out from the crucible by means of boiling water, and was acidulated with muriatic acid, and then evaporated to dryness, so as to render the silica insoluble. The whole mass was then rubbed to a fine powder with an agate pestle, and moistened with muriatic acid. Then all the matters soluble in acidulated water were taken up by means of distilled water. The whole was then poured on a double filter, and the silex was collected, washed till pure, dried and ignited; the second filter being burned and counterpoised against it. The silex, weighed while warm, amounted to 47.39 grains. The solution that had passed the filter was then treated with a little nitric acid, and boiled to per-oxidize the iron. Ammonia then being added in slight excess, the alumina and per-oxide of iron precipitated together, and were collected, washed thoroughly for several days with boiling water, until the water came through the filter pure. The alumina and per-oxide were then separated by means of a boiling solution of pure potash, in a silver crucible. When all the alumina was taken up by the potash, and the iron had subsided, it was filtered in a double filter, and the per-oxide being collected, washed, dried, ignited and weighed, amounted to 11.20 grains. The alumina was separated by neutralizing the alkaline solution, and was then precipitated by means of a solution of carbonate of ammonia. When collected on a filter, washed, dried, ignited and weighed, it amounted to 32.10 grains. The solution from which the alumina and iron had been separated, was then treated with a solution of oxalate of ammonia, and the brine was precipitated in the state of an oxalate, and when collected, washed, dried, ignited and converted into a carbonate, weighed 2.85 grains. The solution remaining being treated for magnesia, gave no trace, but a little manganese was detected by hydro-sulphate of ammonia."

The soil of the Nile then, (and this method of analysis is applicable to all other soils,) contains in 100 parts of dry soil—

Vegetable matter,................	6.90
Silex, ...	47.39
Alumina, ...	32.10
Per-oxide of iron,...............	11.20
Phosphate and crenate of lime,....	2.62
	99.61

For further examples of the analysis of soils from some of the best farms in New-England, from Batavia, Africa, Cuba, New-Orleans, &c. we must refer to the Report itself, which on this point is one of the most instructive that has yet been presented to the American public. We are not of the number who imagine that lime applied to *poor soils* will give them fertility; but we have reason to believe that although in a soil destitute of lime in any of its forms, manures will produce a great growth of plants, wheat for instance, yet the stalk will be flexible, the grain likely to lodge, and the berry light and worthless, without the presence in some form of this necessary earth.

To kill Crows.—A writer in an English paper says, "a short time ago a farmer took a quantity of corn (grain) and steeped it in arsenic, and placed it in different parts of the field, to see whether the rooks (crows) would eat it or not. They soon carried it off, and they were found dead many miles from the place where they had got it, and the man was of course troubled with them no more."

AGRICULTURE AND HUSBANDRY OF THE SOUTH.

We are furnished by the last number of the Southern Agriculturist, with a most excellent Address on the Agriculture and Husbandry of the South, delivered by Gen. James Hamilton, at the formation of an Ag. Society at Fort Mitchell, Russell Co. Alabama, on the 4th July last. The author evinces a thorough acquaintance with agriculture in general, and particularly with that of the region of country for which his remarks are especially designed. We cannot doubt that such addresses as this, in connexion with the spirited and praiseworthy exertions of many enterprising citizens of the South, will exert a most salutary influence in the improvement of agriculture.

We present our readers below with several extracts from Gen. Hamilton's Address. The handsome tribute therein paid to our friend Dr. N. B. Cloud, we have no doubt is well deserved, and we heartily rejoice that his labors in endeavoring to introduce a new and vastly more profitable mode of cultivating the great staple of our southern neighbors, are beginning to be properly appreciated:

"I think it may be assumed as a postulate, that about as much cotton is produced now as can be gathered, but I am equally certain by the improved mode of manured and checked culture, that half the land now in cultivation will give the same return. In other words, I believe five hundred acres of cotton in the new mode of its cultivation, will produce as much as a thousand in the old. In order to embark in this recently recommended culture, it is admitted that a large and accumulating stock of manure is necessary. It is however to be remembered, the seed of one crop will nearly manure one-half of the succeeding one, by resorting to the check culture, and by carefully littering and stabling our working animals and stock the whole year round, an amount of compost to manure the other half may be made. But after all, the great magazine for restoration and improvement of our soils, is at our own doors, through the region of country we occupy. Marl constitutes a never failing source of renovation. It renders porous soils more compact, and clay soils more friable, and is the most powerful agent yet discovered for decomposing vegetable matter, and converting it at once into manure. It is in this last particular it performs its most beneficial office. It has been found equally as fertilizing to cotton as to any of the cereal or root crops. Virginia has been renovated by its use. It has checked emigration in that State, doubled the product of the counties in which it has been used, and very nearly increased the price of farms in the same ratio. Yet the marl in Virginia does not average more than 60 per cent of the carbonate of lime, its constituent element of usefulness, whilst the marl of Georgia and Alabama reaches nearly 90 per cent—a vast difference in our favor. Let every farmer commence at once a search for that valuable mine on his farm. It is easily detected by its brown and greenish incrustation, in which are imbedded small fragments of sea-shells."

"In many parts of South Carolina where marl has been applied, the cotton crops have been nearly if not entirely duplicated, and although our soils are less worn than hers, it behooves us at once to commence a resort to this great mine of agricultural wealth. It ought at once to constitute an object of our Society, to obtain detailed instructions for its use and application. It is not, however, alone by the use of manures, that our cotton crops are to be increased—the great elements of solar light and heat are no less essential. Hence our cotton rows ought invariably to run south and north, that not only the least amount of shade should be cast on the plant, but that as our winds prevail in the summer months, the highest amount of atmospherical nourishment may be given to the plant. The necessity of this will be manifest, when it is recollected how much atmospherical nutrition the cotton derives from absorbents of its redundant foliage. I believe moreover, after the full moon in July, the perpendicular stem of all. cotton over four feet and a half high, should be topped, and the two or three of the long lateral branches on the full moon in August. I am satisfied that in rank and wet seasons, we should make at least one-third more to the acre by adopting this process."

"By this improved mode of culture, through the instrumentality of a system of manuring, I believe, we may make one acre produce as much as two by the old denuded process, by which we take every thing from the soil and return nothing to it. The consequences to our operatives from this mode of cultivation, by which we give to one acre the productive energies of two, are of inestimable consideration. First, one half of the horses and mules which we now use to go over an immense space of imperfectly cultivated soil, may be dispensed with, or used for the garden cultivation of a diminished number of acres. Secondly, to our slaves how greatly will the burthen be lightened, by tilling one-half of the quantity of land, yet in the end having a harvest equally or perhaps even more abundant to gather? To say nothing of the increased facility of the harvest itself, by pulling two thousand pounds of seed cotton on one acre, instead of one."

"At the Bend, I have this year planted in the check, twelve hundred acres of cotton, six hundred I have manured, the other six are planted in the first rise of the swamp, in a rich alluvium of untouched fertility requiring at present no manure. Two hundred acres of the former, on the second level of the swamp, are on a stiff clay flat. The cotton was planted in this field on the 1st of May. It did not receive a drop of rain until the first week in June. The consequence has been, that I have encountered incredible difficulty in obtaining a stand; some of the land was re-planted five times, and none less than three. It was not until the 10th of June, by unremitted efforts, I at last succeeded in setting the crop in this field. I advert to this miscarriage for the purpose of indicating its remedy, to wit:—of giving a deep winter close furrow plowing, to all the lands you design for the check culture, and harrowing them early in the spring before you check off, after they have been rendered friable by the winter rains and frost, and another spring plowing. I believe I might have thrown up and abandoned these two hundred acres, and still that at the first level of the Bend, I will make more cotton, from present appearances, than my whole force can gather between the 15th of August and 15th of January, from manuring and adopting the check, and discarding the drill culture. On my first level, I have checked five feet by four, and on the second level four feet square. I believe, however, five feet by three in the most fertile soils, and four by three in those of less richness, will be the right distance."

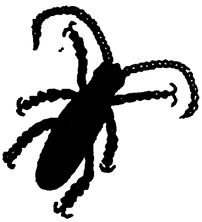
"My corn on Cantey's fraction, which I think the richest piece of high river bottom I have seen this side of the Brasos and Colorado, I have planted in squares of three feet, and thinned to a single stalk. It is the best eared corn on my place, and will average, if no disaster occurs, nearly two ears to the stalk."

"In noticing the check culture, I should be singularly unmindful of the claims of an individual who has most successfully directed the public attention to it, if I did not pay a willing tribute to the intelligence and ability with which he has illustrated the philosophy on which it rests. You will understand, gentlemen, that I can allude to no one but Dr. Cloud, of Macon county, who by his careful analysis and induction of facts, has done much I believe to diminish the labor and augment the product of the cotton crop of the United States. That his theory rests on the true philosophy of the plant, I entertain as little doubt, as I do that its introduction will mark a new era in the culture of our beneficent staple. You will permit me to remark, that this system of manuring and planting in the check, takes off half the tax on our lands, by allowing us to fallow half, or enables us to double our product in provisions and stock, if desirable. Indeed, a system of steady and efficient manuring, combined with an alternation of our crops, and of fallowing the most exhausted of our soils, constitute the best recipe for renovating an old country and preventing a new one from growing old."

Pick carefully all winter apples for sale and for use, and save all other apples for pigs and other farm stock, for which they will be found very valuable in winter.

APPLE-TREE BORER.

In most of the older settled parts of our country, the owners of apple orchards are aware that their trees are frequently attacked, and much damaged, if not destroyed, by insects which perforate the bark of the tree, and penetrating the wood, destroy the circulation of the sap, and thus effect great mischief. The history of this insect, called the apple tree borer, has been involved in much uncertainty, and even now there are some perhaps unessential points not fully elucidated; but the main things, the appearance of the insect itself, the time of its depositing its eggs, and the way in which the evils they occasion may be remedied, may we think be considered as very well settled. Dr. **Harris**, the well known able entomologist of Mass. led the way in this investigation; but we think, so far as the practical results are concerned, the greatest credit belongs to Mr. **Buckminster**, the veteran editor of the Plowman. By a long series of careful observation and experiments, he has arrived at the following conclusions:



Saperda bivittata—Apple-tree Borer.

"That the beetle, the parent of the grub or larvæ, (in which stage the mischief done by the insect is produced,) makes its appearance on the stage in June, and about the first of July, she is in the habit of making provision for her offspring. That she usually lays her eggs, ten in number, on the body of the tree, near the surface of the earth, and in this form, not larger than the head of a pin.

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"That the eggs are hatched out in a little more than eight days, when a white maggot appears. That the maggot or grub burrows in the bark of the tree, and proceeds no farther the first season. That during the second year he bores into the body of the tree, upward. That in the third year he is found up eight or ten inches higher than where he commenced; and that in June of the third year he or she comes out of the tree fully winged, when she is ready to lay more eggs."

Mr. Buckminster very well remarks that considerable allowance must be made for the time of the insect's depositing its eggs, as from observations made by himself and others, there are some ten or fifteen days difference between the first and the last of their appearing. Mr. Buckminster confidently recommends washing the apple trees about the time the eggs are deposited, or near the time of hatching, with lye strong enough to float an egg, as his experience shows that this application will kill the eggs and the young larvæ without injury to the tree. It would appear, however, from the papers of correspondents in Mr. Buckminster's Journal, as well as the other Mass. Ag. papers, that the application of lye has not in all cases prevented the attack of the borer.

We would suggest there may be several reasons for this. It is possible the application of the lye was made before the eggs were deposited, or the larvæ had proceeded from them; or it may have been delayed so long that the young borer had entered the bark so far as to prevent the wash from reaching him. It is also possible that the trees themselves contained larvæ in some of the stages of their existence, and as these would not be affected by the application of the lye, they would go on, form the perfect insect, and thus perpetuate the evil in spite of the single washing, even admitting that such washing with lye destroyed as we think it would, all the eggs and young grubs it touched. It is also possible the tree was not sufficiently scraped before washing, to remove all rough bark, as under such bark the eggs are frequently deposited; and if not removed by scraping the tree thoroughly, it might prevent in many instances the contact of the ley with the egg or the young. We think then, those whose orchards are infested with the borer, will do well to wash their trees with lye, first paying attention to the following things:—First, see that all grubs existing in the tree are thoroughly eradicated by cutting them out with a knife or narrow chisel, or destroying them with a flexible barbed wire. Second, see that the trees are thoroughly scraped before the wash is applied. Third, apply the lye wash twice in the season at such an interval as shall embrace all the eggs deposited, or the grubs hatched; and fourth, repeat the washings for two or three seasons, or until the insect has wholly disappeared. Washing with lye is one of the best applications for trees we have ever seen used, giving a smooth fine bark, and unusual vigor to the tree. It is possible that a heavy coat of whitewash, laid on after the scraping of the tree, might prevent the eggs from hatching, or hinder the beetle from depositing them, but we have no experiments to prove conclusively that such would be the result, and it is certain that neither whitewash or lye will affect the grub after it has once penetrated the tree, or prevent the emergence of the perfect insect. Insects are so injurious to fruit trees, that they deserve more attention than has yet been given them by the public, or by those best qualified for the task of observation, the men of science in our country.

LARD OIL.

This new article of manufacture, bids fair to be of incalculable benefit to the great pork-growing region of the west. Although it is only about three years since the making of oil from lard was commenced, it already to a very great extent supercedes the use of sperm oil. A great deal has been made, as was to have been expected, in the outset of the business of an inferior quality, which has been offered at a low price, and purchased on account of its cheapness. The poor quality of this oil, has led many to conclude that it cannot be made to answer in place of sperm oil. From a Cincinnati paper we learn that one firm in that city, manufactures 80 kegs of lard per day. The product in winter is one-third elaine and two-thirds stearine; in summer, the proportion is exactly the reverse. The oil thus manufactured is equal to 200 gallons per day. The value of the oil and stearine shipped from this single establishment during the last sixteen months, is over $100,000. In the pork season, oil is made directly from the hog.

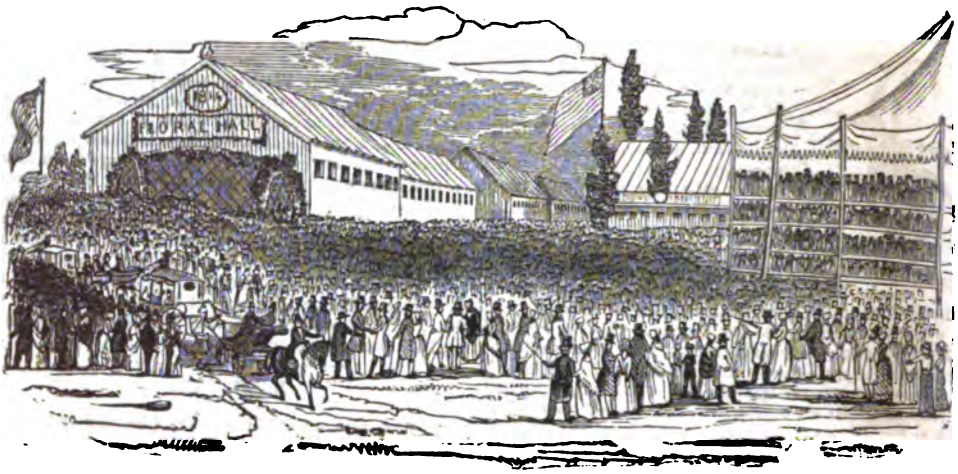
The paper referred to, states that before the manufacture of lard oil, sperm oil was sold at from $1.25 to $1.50, and that the corresponding qualities of lard oil can now be had at 50 to 62½ cents.

There is the same difference, and from the same cause, between summer and winter *lard* oils as in summer and winter *sperm* oils. The article made in summer holds more or less stearine in solution, which the access of cold weather readily detects, and renders necessary that the winter supply should be made as that season approaches.

Lard oil is made in Cincinnati in twenty-two establishments, which manufacture an aggregate of 600,000 gallons per annum, value at 50 cents, nearly one-third of a million of dollars. The value of the stearine and other residuum, must be at least as much more, these articles having steadily advanced in price since the introduction of the lard oil manufacture.

NEW GRAIN DRILL.

The *Argus*, published at Marietta, Pa., notices a machine for sowing grain, invented by Messrs. Haines and Kilburn. It is stated to have performed its work perfectly, though the ground was not in a very good state for sowing. It is described as follows:—"The manager of the drill stands upon the hind part of the machine, with a handle that reaches from the large wheel in front by which he is enabled to guide the machine. It sows the seed in drills nine inches apart, and five drills at a time. The seed passes from a hopper or box to the hollow teeth that open the ground, and the seed passing down directly behind, falls in the furrow, and the dirt falling back directly upon the seed, and a roller following, presses the seed in. The depth of the planting can be varied by simply turning a screw. The teeth are fixed in pieces of scantling, which are separate from each other, that they may follow the unevenness of the ground, and so plant the seed at a regular depth in the ground." The price is $50.



VIEW OF THE NEW-YORK STATE CATTLE SHOW.—Fig. 90.

THE STATE FAIR AT POUGHKEEPSIE.

Another great State Fair and Cattle Show, with its attendant and innumerable objects of interest to the enlightened agriculturist, its superb assemblage of striking products which every tributary of the great flood of agricultural improvement had poured, in their concentrated vastness, to this spot, its congregated myriads of people, brought together by the thrilling interest which ever clusters around this great art of the arts of Peace,—has taken place, and passed away. Few or none of the many who have attended from all parts of the State and from other States, can ever regret the pains they have taken to witness the exhibition, and its truly noble scenes and magnificent display.

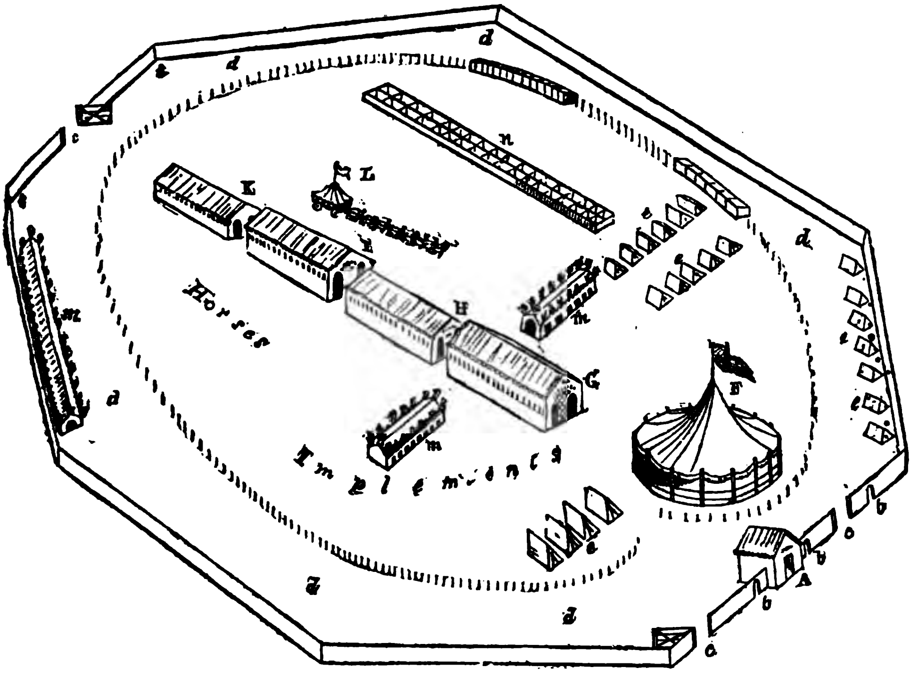
The ground selected for the occasion was an elevated plain, commanding extensive views of the surrounding country, to which the mountains in the west, and the blue ranges of the distant Highlands, gave a varied outline and interest scarcely to be surpassed. A large field of ten acres was enclosed by a high fence, within which all the objects of the fair were collected. The number of people admitted to the grounds on the two days of the exhibition is supposed to be not less than from twenty-five to thirty thousand.

A line of large buildings, erected for the purpose, extended for several hundred feet through the center of the grounds, and formed a leading feature of attraction. The first, which was 36 feet wide and more than 100 long, was inscribed over the entrance, "FLORAL HALL," in rich letters of evergreen on a white ground. The whole interior of the building, as well as the entrances, was richly ornamented overhead with beautiful and massive wreaths and festoons of evergreen. In the centre of the building was a splendid outline Temple "Dedicated to Agriculture and the Arts," consisting of a high evergreen arch in the middle, interwoven with flowers, flanked with square wings, equally tasteful, on the sides. In the center and surmounting the whole was the inscription "Agriculture," and the numerous articles arranged within this arch, were the appropriate details of the great leading subject, among which were the tall lance-like stalks of corn crossing the middle, the suspended heads of wheat and other grain, the paintings of domestic animals, and a large assemblage of other articles, beneath the whole of which was a beautifully ornamented miniature plow, the origin and foundation of the whole. Under "Manufactures," were collected specimens of fabrics, domestic silks, and numerous others of an appropriate character. Under the chaplet inscribed "Horticulture," was a most interesting exhibition of rich fruits and brilliant flowers. Numerous tasteful emblems and inscriptions were interspersed through the whole, and with some fine ornamental figures, decorated the base. The whole of this outline temple, which contained thousands of appropriate specimens, and which occupied a space of 26 feet in length and 12 feet in height, was designed by **Alexander Walsh** of Lansingburgh, to whose imaginative taste and unwearied labors, the public are very largely indebted for the interest and attractions of these extensive halls. We have a drawing of this Temple, an engraving from which we shall hereafter present to our readers.

A double line of tables extended through the center of this building, densely loaded with a magnificent display of fruits on either side, and a long range of flowers arranged in wreaths, temples and pyramids in the center. Among some of the best collections of fruits, were handsomely arranged specimens of a hundred fine varieties of apples, eighty of pears, and many of other fine fruits, from **A. J. Downing** & Co. of Newburgh, extending compactly for 40 feet along one side of the table; also extensive collections of apples from **R. L. Pell** of Ulster, **J. R. Comstock** of Dutchess, **J. F. Osborn** of Cayuga, **Alex. Walsh** of Lansingburg, from his Hoosick farms, and large and fine collections of pears from **James G. King**, Highwood, N. J., **J. R. Comstock**, **Wm. Reid** of Murray Hill, N. Y., and also excellent specimens of grapes from **R. Donaldson**, **J. Merritt**, **S. Van Rensselaer**, and many others. The whole display of fruits, though defective in a few particulars, exceeded in variety and extent that of any previous exhibition of the State Society.

The vegetables, suspended from the sides of the tables and beneath, presented a very fine array; among which was a superb lot from the garden of **R. L. Pell**, of Pelham, Ulster county, consisting of very large mangold wurtzels, true blood-beets, carrots, parsneps, sugar beets, Patagonian gourds, 5 feet 8 inches long, squashes weighing 152 and 200 lbs., monkey bread very curious, ten varieties of table squashes, cabbages weighing 30 lbs. Mr. P. also presented very beautiful samples of fine heavy wheat, rye, oats, buckwheat, Egyptian corn and wheat, Indian corn 17 feet high, yellow and white flint and sweet corn, 40 varieties of seedling and 27 of grafted apples, Catawba and Isabella grapes grown under glass, very large gooseberries, 3 kinds of currants, a floral ornament 17 feet high, shad from his fish ponds, &c. Some other collections also exhibited great excellence and skill in culture.

Among the Agricultural and Horticultural products, we observed an enormous pumpkin of the *seven years* variety, weighing 126 pounds—some heads of millet a foot in length—and some Washington peaches ten inches in



ISOMETRICAL VIEW OF THE ENCLOSED GROUNDS.—(Fig. 91.)

A. Business Office—b. b. b. Foot Entrances—c. c. c. Carriage Entrances—d. d. d. d. Carriage-way, with posts and sheds for cattle and horses within—e. e. e. e. Committee's Tents—F. Large Tent—G. Floral Hall—H. Ladies' Home—I. Manufacturer's Lodge—K. Farmer's Hall—L. Hyde Park Agricultural moving Temple—m. m. m. booths—n. Pens for Sheep and Swine.—Area, 10 acres.

circumference and weighing eleven ounces, all presented by Mrs. M. Vasser, of Poughkeepsie.

One of the most truly valuable and meritorious articles ever shown at any fair in this country, was a neat glass case containing 35 varieties of wheat; heads and shelled specimens of each variety, being arranged with great neatness in separate apartments of the case. A large portion of these were cultivated, and all arranged and presented by Gen. R. Harmon of Wheatland, Monroe co., whose labors in testing the various qualities of different sorts, have already proved of so much value to the agriculture of this country.

Numerous paintings of cattle, horses, and of rural scenes, decorated the walls on each side.

The second building, inscribed "LADIES' HOME," was enriched with a gorgeous display, consisting of a vast collection of articles of taste, splendor, and skill, among which were superb specimens of needlework on screens, coverlets, rugs, chairs, and in landscapes; temples of shell-work,—and hundreds of other things of great splendor. So fine indeed was this display of fancy productions, that we were almost led to question the propriety of thus eclipsing the more humble, but pre-eminently useful and substantial products also handsomely arranged here, among which were many excellent specimens of quilts and other articles of domestic use and comfort, conferring the highest credit on the truly worthy contributors.

The third building, entitled "MANUFACTURER'S LODGE," contained an excellent collection of fabrics, including a large assortment of cottons and mixtures from the Mattewan Company; a superb display of cloths, consisting of 62 different kinds, from the Middlesex Woolen Company, Lowell; fine carpets from the Thompsonville Company, and from C. M. Pelton, A. Ross, and others of Poughkeepsie. There were specimens of good solid-head pins, made by Mosely, Howard & Co. Poughkeepsie; and models of many useful domestic and rural contrivances and machines of great interest.

The fourth building, "FARMER'S HALL," was occupied with an exhibition of flour, salt, butter, cheese, sugar, and all coarse articles of domestic production, as well as cooking stoves, fanning mills, washing machines, &c.

These four buildings, being in one continuous line, and open at the ends, presented a vista 500 feet long, which, with the innumerable articles there exhibited, and the congregated thousands constantly passing through, gave an extraordinary interest to the scene.

One of the most truly magnificent objects of the kind ever seen, was the "FARMER'S CAR," from Hyde Park. This vehicle, from the nature and style of its decorations, might have been taken as the combined work of the most refined votaries of the divine trio, Ceres, Pomona and Flora. The body, or frame work, was 26 feet in length, by ten in breadth and twenty in height, covered with a magnificent canopy of evergreen festoons and wreaths, and presenting the form of a sylvan temple, the walls or sides of which were nearly one entire mass of vegetables, fruits, flowers, and farm productions generally, some of them of extraordinary size and excellence. The inside had the appearance of a bower, with rustic chairs, made of the grape vine, cedar and oak. These chairs were occupied by ladies and children, who from this cool and agreeable shelter, quietly viewed the surrounding scene. The car was drawn by ten yoke of superb oxen from Hyde Park, to which was awarded the premium for the best ten yoke from one town. The color of all was a deep red, with scarcely the variation of a shade—they were well matched in shape and size, and showed much Devon blood. When this splendid car, with its flying colors and coat of arms, first entered the grounds, like a moving miniature temple, among the thousands there assembled the effect and interest produced was almost electric, and several distinguished persons pronounced it as decidedly superior in design and display to any thing of the kind they had ever witnessed. It is no more than justice to say that the decorations of this beautiful Car, were designed by Mrs. D. B. Fuller, and arranged and executed under the direction of Mrs. F. and Mrs. J. W. Wheeler. We had a drawing made of it, which we regret our engravers have not been able to finish for this month.

Cattle. *Short-Horns.—Bulls.* In this department we believe the show was considered superior to any previous one. At any rate there were many excellent Durham bulls. We noticed "Marius," a young bull, twenty-one months old, bred by Earl Spencer (England,) imported and owned by Thos. Oliver, Esq., Sing-Sing. A very superior animal—the first from Earl Spencer's noted herd we have known imported. "Prince Albert," owned by R. Donaldson, Blithewood—a beautiful animal, 4 years old, 2110 pounds. "Meteor," and "Symmetry," own brothers, Geo. Vail, Troy, both good. "Osceola," two years old, said to weigh 2300 pounds, C. F. Crosby, West Troy. "Royal William," Mr. Ableman, Albany. "Hawthorn," James Mabett. "Sir Temple," Thomas Addis Emmett, New-York, a very pretty animal. "Orpheus," a bull of immense bulk—suppposed to weigh nearly 3000 pounds—girths 8 feet 6 inches—five years old. Owned by James R. Dickson, New Windsor, Orange county. Mr. D. imported this bull when a calf from Gainsford, (England). This was an exceedingly muscular animal, of prodigious quarters, and seemed to answer the description given by Middleton, of the once famous Teeswater cattle—a variety of Short-Horns. He says, "It is supposed that this breed yields a greater proportion of lean meat in a given weight of beef, than any other; therefore there is less waste of fat, and the meat goes farther in any family. This is the criterion of serviceable animal food; *the greatest quantity of lean meat in proportion to the fat.*" We do not admit the correctness of the "criterion." "Rotterdam," D. D. Campbell, Schenectady. A noble bull. "Trusty," a very well made bull, Wm. A. S. North, Duanesburgh. "Charles the 2d," a white bull which attracted much notice, J. Lenox, Dutchess county. "Sir Peter," Wm. Salisbury, Leeds, Greene county.

Of bull calves, there were several fine ones offered by C. N. Bement, Albany, Mr. Vail, Troy, L. S. Barnard, Platte-kill.

Cows. "Red Lady," (imported,) a cow of most superior symmetry and fineness, showing also good points for the dairy. Owned by Mr. James Lenox. Also several other cows by the same gentleman. Several cows, some of which showed good points, by J. F. Sheafe. A cow of Geo. Vail, showing remarkable milking properties. Also one by D. B. Fuller, Hyde Park.

Heifers. Mr. Prentice, Albany, sent several very superior heifers—particularly Esterville and Nell, which are "hard to beat." "Victoria," an excellent heifer, D. B. Fuller. Several fine heifers belonging to D. D. Campbell, Mr. Sheaf and Mr. Lenox.

Herefords. The only specimens in this class, were eleven head from the capital herd of Messrs. Corning & Sotham, Albany. These were splendid animals. The two years old bull and bull calf, which were all of the masculine gender exhibited, were good—they had fine limbs—very capacious chests, round bodies, &c. Several of the cows were very extraordinary. "Perfection," is one of the most massive cows of her age to be found any where, and "Aston Beauty" and "Victoria," for beauty and finish, can scarcely be surpassed, if equalled. It is but justice to say, that no animals on the ground excited more praise than these.

Devons. We saw no bull in this class. L. F. Allen, Black-Rock, exhibited an excellent cow and bull calf. The cow was one of the best Devons we have seen. Mr. Lent, of Poughkeepsie, had also a good cow of this breed, remarkable for the richness of her milk and the fine quality and quantity of her butter. The Devons are a very valuable breed, and we hope to see them increased.

Ayrshires. Several good bulls—particularly "Sir William Wallace," presented by John Archibald, Montreal, Canada, and one owned by Joel Rathbone, Albany. Mr. Rathbone had also a beautiful cow and a fine bull calf of this breed. "Victoria," an Ayrshire, belonging to J. Lenox, was a fine cow.

Grades. We noticed a very superior heifer, 20 months old, with a fine calf by her side, 6 weeks old, said to be Durham and Devonshire. Owned by Joseph Silkman, Westchester county.

Natives. A good dairy cow by Z. Pratt, Green county, and another by R. L. Pell, Ulster county. The "native Americans" ought to have been more numerously represented.

Fat Cattle. The competition in this department was quite extensive. A Durham ox owned by D. D. Campbell, of Schenectady, was universally admitted to be the best animal of the kind on the ground. Mr. Swift of Amenia, Alfred M. Uunderhill, Dutchess county, and James Van Wyck, of Dutchess, had also fat oxen which attracted much attention.

Horses. In this department, the show was considered uncommonly good.

Among horses of the lighter class, we noticed "Sir Painter," owned by E. Howe, North-Salem, Westchester county. This animal was distinguished by uncommon beauty of head and limb, with many marks of spirit and high breeding. "Florizel," belonging to C. F. Crosby, West-Troy, was well liked by many.

Of those of a larger class, and better calculated for carriage and coach-horses, we noticed "Diomede," belonging to Gen. Salisbury, Greene county; "Seneca Chief," a half-blood Cleveland bay owned by Mr. Ableman, Albany, and a three yrs. old colt, 16 hands high, by "Haphazard," out of a Hambletonian mare, owned by Albert Pray, Union-Vale.

Of *Draught-horses*, Mr. Sotham's imported "Sampson" was looked upon as a great *curiosity*. He is an animal of prodigious muscle and strength, and will be the means of much improving the breed of horses for heavy draught.

There were several pairs of beautiful *match-horses*, among which we particularly observed a pair of splendid bays belonging to Gen. Davis, of Poughkeepsie, another pair a shade lighter in color, belonging to Dr. J. P. Beekman, the President of the State Ag. Society, and a pair of sorrels belonging to Mr. Landon, of Albany.

Working Oxen. There were many fine cattle, (in appearance,) in this class, but we think there should be some mode of trying them at work. So far as we can judge, the want of some such test, was the greatest dedefect in all the regulations of the show. The value of a working ox, consists in his ability to perform labor, and to perform it in a proper manner. Before a proper decision can be made, it is necessary to have some *demonstration* of their discipline and power. The natural appearance of cattle may be ever so good, and in some of the most important requisites of working cattle, they may be totally deficient. Hence the obvious necessity of *proving* the faculties and strength of oxen, by a trial at *work*. We shall speak of this subject again, for we consider it one of great importance.

The fine team of Mr. Wadsworth, from Genesee co., consisting of ten yoke, was much admired—so also was that of the same number from Hyde Park. We noticed a pair of large size, and good form, 3-4ths Durham, from Luther Comstock, of Oneida county. Another pair by H. D. Grant, Amenia, half Devon. Another pair by Isaac Doughty, half Devon, from the stock of Mr. Hurlbut, Conn. These were bred by Mr. Thrall, who was present, and showed his superior faculty of educating oxen, and the susceptibility of *these* oxen to be educated, by making them perform all sorts of maneuvres, both in and out of the yoke, surrounded by a crowd of men. These cattle seemed capable of any degree of discipline; they appeared to understand every word of their driver, and were as prompt in obedience as a company of well trained soldiers.

Plowing-Match. There was much less competition in this department than we expected, and the manner in which those engaged in it performed their work, was, with a few exceptions, any thing but what it should have been. There were only nine teams engaged. The great fault in the work, arose from a desire to do too much in a given time—the teams were not well disciplined, were too much hurried, and the furrows were crooked and turned too wide,—were too much broken, and left with too much grass in sight. The objections we have here enumerated would not, many of them, apply to the team entered by Wm. Worrell. The plow used by this team was made by H. Delano, of Onondaga county—the name of the plowman was James East. A yoke of brindle cattle, the lightest on the ground, was used, but they showed themselves perfectly adapted to their business. They wasted none of their strength in crowding each other or pulling apart, but threw their whole force directly and straight-forward into the yoke. The consequence was, they did their work easily to themsevles, and in a proper manner, without whipping or noise—they were no more worried than if they had been in their pasture. Other cattle of much larger size, and with more strength, (if they had known how to use it,) went puffing and blowing along with their tongues hanging out, before the work was half done. We have only been thus particular, to show the necessity of having the team, the plowman and the plow, adapted to each other, and all fitted to their work. We noticed one or two other teams which worked pretty well, and which had evidently good plowmen. Such was the case with the team of P. F. Proseus, Kinderhook, and Mr. Hallock. These were horse-teams. We have no doubt there will be an improvement in this department of the State Show in future years.

SHEEP. The show of sheep was good—in all the classes there was a spirited competition. Among *Long-wooled* breeds, we noticed fine bucks belonging to Mr. Dunn, Albany, L. D. Clift, Carmel, Putnam Co., E. Hallock, Milton, Dutchess county. A lot of fat wethers, (Cotswolds,) by J. C. Haviland—very good. Of ewes, we noticed five Bakewells or Leicesters, from Henry Mesier, Fishkill, showing very fine breeding, great beauty of head and eye, with carcasses of the most perfect symmetry, and very light bone and offal. Mr. Clift's ewes were also good, as were the ewes and lambs of Mr. Hallock.

South-Downs. Fine bucks from the flock of J. McD. McIntyre, Albany, D. B. Haight, Washington, Dutchess county, S. and J. Wait, Orange county. A most remarkable fat ewe from Mr. McIntyre, a perfect beauty, as well as *several other* good ewes from the same flock, and some very *fine ones* from the Messrs. Wait.

Saxons and Merinoes. Of these there was a large and generally good delegation. Of Saxons, there were good bucks and ewes from Chas. Hull, New Lebanon, Columbia county, W. Wakeman, North-East, A. Brown, and S. B. Crocker.

Of Merinoes, there were very good yearlings and lambs offered by H. S. Randall, Cortlandville, from the flock of S. W. Jewett, of Vermont, and Mr. Carpenter of Poughkeepsie.

There were some excellent Merino sheep from other *states*—particularly those from Jacob N. Blakeslee and Stephen Atwood, of Litchfield county, Connecticut. These were represented as purely of the Spanish blood imported by Col. Humphrey in 1802. They were splendid sheep, both as regards fleece and symmetry of carcass. Several bucks which were exhibited, have been sold, as we learn, to Mr. L. A. Morrell, of Tompkins county. We shall probably give some further particulars in regard to these sheep hereafter.

Messrs. Jewett, Sandford and Wright, of Vermont, also sent specimens of sheep from their well known flocks. They are generally strong constitutioned, with remarkably heavy fleeces in proportion to their size--the wool in general of medium fineness.

SWINE. Thos. F. Doughty, of Poughkeepsie, sent to the show one hog, 15 months old, weighing 610 pounds, and 6 pigs, five months old, whose aggregate weight was 900 pounds. Thos. Swift, Dutchess county, 6 fine pigs—white, though as he stated, with a *little* Berkshire blood—very good. Fourteen thrifty Berkshire pigs, D. B. Lent, Poughkeepsie. A pair of cross-bred Neapolitan and Chinese pigs, from C. N. Bement, Albany—very fine form and small boned—well calculated to give the nicest quality of meat. An enormous Berkshire boar, "Maximus," by "Reading," out of "Maxima," Benjamin H. Hart, Lagrange, Dutchess county. Also "Major," by the same owner. A mixed Berkshire and grass breed pig, W. A. S. North. Leicester boar, owned by John Wilkinson, Unionvale—a very good hog.

POULTRY. Four splendid Chinese Geese, and some Poland fowls, were offered by H. Mesier, Dutchess Co. Some very fine Poland fowls by D. B. Fuller, of Hyde Park. These were comfortably *at home* in a cage at one end of the beautiful car before noticed, and showed their cheerfulness and contentment by frequently crowing. There was also Malay fowls, and some called the "Edam" breed, shown.

IMPLEMENTS. At the trial of plows which took place on Tuesday, there were some eight or ten different kinds. Mr. T. D. Burrall, of Geneva, had on the ground his shell-wheel plow, and one on the same pattern without the land side wheel. Mr. Chase, of Amsterdam, presented several plows of his make, which seemed to be made on very correct principles, and will no doubt do excellent work without great power to use them. H. Delano showed a very good plow. There were several others which we did not see tried. Mr. Bergen, and Messrs. Codding & Co., Rochester. Several from Isaac Tice, Poughkeepsie.

STRAW-CUTTERS. There were several of these machines, some of which we thought very good. Hovey's is well liked. Thos. P. Thorne, Fishkill, presented a straw and corn-stalk cutter. which worked well, especially for stalks. Price $25. Another very simple and excellent one was shown by J. C. Conklin, Peekskill. It is very simple and works well—price $18. Both these last named machines may be readily made to cut any desired length from a quarter of an inch to two inches. There were also cutters from George Smithson, Poughkeepsie, and A. A. Hall, Croton.

VEGETABLE CUTTERS from Adriance and Collar, Poughkeepsie. Smut Machines, Wm. Delaney, Canterbury, Orange county.

Fanning Mills, by I. T. Grant & Co. Schaghticoke, and D. Bryan, North East. *Hay and manure forks*—very superior, by Taylor, Buttolph & Co., West-Stockholm, St. Lawrence Co. *Horse powers*—Warren's—Wheeler & Brothers, Chatham, N. Y.—Arnold & Frost's—Allen's &c., seemed to work well. *A dog power*, for churning, &c., by Brewster & Drake, Hyde Park. A superior cart by John Wilkinson, Union Vale. A clover gathering machine, by B. H. Hart, Lagrange, and a clover cleaning machine, by the same. A model of *cow stables*, by Peter Van Vliet, Newburgh. The stalls are separate; the cow goes in, and a small door is then shut, which closes the stall. A superior smut machine, by W. G. Borland, Little Falls.

A very superior harrow, by George Geddes of Onondaga county; also one very similar, by John Wilkinson, Union Vale.

Gang Plows, for seeding—three shares in one frame; very neat, and from their appearance, might be supposed to work well, by Thos. Wiard, East-Avon. Several *plow cultivators*, B. Langdon & Co., Troy.

An improved revolving horse-rake. G. White, Middlefield, Otsego county. A horse-rake with iron teeth, made, we think, (we have lost the card,) by Wm. B. Stoddard, Cayuga county—said to work exceedingly well.

A model stump-machine. R. H. Hall, Owego. This is a very superior invention. We shall give a cut and description of it in a future number.

A model *clod-crushing roller*, by T. D. Burrall, Geneva. This will prove a very useful implement.

Andrew Menely, West Troy, sent specimens of church bells. They attracted much attention. One of them had a very superior tone, and was particularly admired. Mr. M.'s bells are generally esteemed.

Excellent carriages were presented by John Wood, Poughkeepsie.

There were various cooking and other stoves. Those of Smith, Lockwood & Co., Troy, attracted much attention.

We deem it a matter of regret that there was no subsoil plow exhibited. We think the utility of these plows well proved in this country, as well as in England. The State Fair would have been a most favorable opportunity for demonstrating the advantages of this implement to farmers who are unacquainted with it.

Among the many distinguished strangers who honored the society by their presence on this occasion, were the Hon. Adam Ferguson, and Mr. McDonald, of Canada; Dr. Smith and Col. Allston, of South Carolina; J. S. Skinner, esq., Assistant Post-master General, and the originator and former editor of the American Farmer, the first agricultural paper published in the Union; Mr. Gowan, of Philadelphia; Mr. Hambleton, of Maryland, Mr. Hall, of Virginia; Dr. Poole and Mr. Newbould, of New-Jersey; Mr. Terrill, of Georgia; Messrs. Whitney, Collins, Hurlburt and many others from Connecticut; Messrs. Jewett, Sandford, Wright, and others of Vermont.

On the afternoon of the second day of the exhibition, the officers and members of the society, with the thousands, both male and female, in attendance, assembled under the great tent to hear the annual address from George Bancroft, of Massachusetts. This address was such as might have been expected from this great American historian and writer. It was at once dignified, chaste, energetic and sublime. The chief object of the speaker, was not to enter into the details of practical agriculture, but to exhibit the dignity and importacne of this great art, in whose pursuits some of the most eminent statesmen of our country had exerted their powerful minds, and whose labors and influence in its advancement were eloquently described. After the address, the reports of the various awarding committees were read from the stand. A correct list of the premiums awarded will be found in this paper, page 325.

The admirable regulations, the excellent police arrangements, and the uniform good order which prevailed throughout the fair, from beginning to end, among the great mass of human beings on the grounds, confer the highest credit on the committee of arrangements, and citizens of Poughkeepsie generally, who have given an an example which should be held up for imitation wherever the future shows may be held. Indeed, the spirit, energy, liberality, and hospitality of the citizens of Poughkeepsie, so conspicuously exhibited at this Fair, will be long remembered by the tens of thousands of visitors, and by none more gratefully than by ourselves.

SUPPLEMENTARY NOTICES.

☞ The receipts at the State Fair amounted to about $3,650, from which very few expenses had to be paid; the citizens of Poughkeepsie and its vicinity, having raised by subscription, a sum sufficient to defray all the expenses incurred in fitting up the grounds, erecting buildings, &c., amounting to about $1,600. What other place will do the same next year?

The Committee on Discretionary Premiums say: Specimens of very superior fine wool in the fleece were presented by Dr. Beekman of Kinderhook, and Stephen B. Trowbridge, of Poughkeepsie. Alexander Walsh, Esq. of Lansingburgh, exhibited specimens of American Madder and Filberts. J. & E. Backus of No. 31, Bowery, New-York, a patent Steam Boiler, which the committee deemed a very useful article: not entered for Premium. J. Gurney, of New-York, beautiful specimens of Daguerreotypes. C. Chaffer, New-York, a mineral preparation for mending broken china, which appeared to be a valuable article. W. A. Folger, Poughkeepsie, two window shades—Thomas Reid, Po'keepsie, a superior sun dial.

Isaac W. Wood, Po'keepsie, exhibited two very large fowls—Mr. Verplanck, Fishkill Landing, a Malay fowl, very large and fine—Henry Mesier, four geese of China breed, and pairs of Poland and Bucks county fowls—these Geese are remarkable for layers and fine quality for the table; the mother of the geese shown, has laid nearly all winter, and has now the second brood of goslings raised this summer.

Several pictures were exhibited, painted by the pupils of Mr. Bartlett's Collegiate School, which were very creditable both to the pupils and their tutors. All were so well executed, that the committee will not venture to discriminate.

The great variety and excellence of the fruits and vegetables exhibited by Maurice Cunningham, gardener to R. L. Pell, Esq. cannot be too highly commended by the committee. None but those who witnessed the exhibition, can properly estimate it.

The Committee on Flowers say—A Harp and Cornucopia, designed by the Ladies of the Mansion Square Female Seminary, was one of the most interesting ornaments of Floral Hall. In addition several most beautiful specimens of Needlework were exhibited by the ladies of this Seminary.

A Hoop Garland by Miss Booram of Hyde Park—a standard of Cyprus vines and Dahlias, by Robert Kelly, Rhinebeck, and Wm. Horrack, Hyde Park, and very tastefully arranged boquets, by Mrs. T. L. Davies of Pokeepsie, and Mr. Langdon of Hyde Park, attracted much attention.

The following resolutions were adopted with a most hearty good will:

On motion of John A. King, of Queens, Resolved, That the thanks of this society be tendered to Mr. Bancroft, for his address, and that a committee be appointed to solicit a copy for publication.

On motion of Mr. Johnson, Resolved, That the thanks of the Society be most cordially tendered to Alexander Walsh, of Lansingburgh, for his unwearied efforts in preparing the Floral Hall with unexampled taste and ingenuity, and which contributed more than any other portion of the exhibition to the gratification of the thousands of ladies who were present at the fair.

On motion of B. P. Johnson, of Oneida, Resolved, That the thanks of the Society be presented to Mr. Joel Woodworth, of Watertown, Jefferson Co., for a splendid specimen of maple sugar exhibited by him and presented to the Society.

On motion of Henry O'Reilly, of Albany, Resolved, That the hearty thanks of the New-York State Agricultural Society are eminently due, and are hereby gratefully tendered, to the citizens of Poughkeepsie, including particularly their efficient Committee of Arrangements, for their liberality and hospitality, (unexampled on any previous occasion,) for receiving the thousands of friends of Agriculture, from other states as well as this, who were in attendance at the recent Anniversary Fair and Cattle Show of the State of New-York.

And be it further Resolved, That in evidence of our grateful appreciation of the efforts made by the committee and citizens of Poughkeepsie on this occasion, during all the transactions between them and the State Society during the months that have elapsed since their arrangements for the annual fair and cattle show were commenced, that a marquee be erected devoted to their special accommodation at the next Annual Fair, in whatever part of the State that fair may be held.

On motion of Thos. Hillhouse, of Watervliet, Resolved further, That the Corresponding Secretary be directed to enclose copies of these proceedings to the Committee of Arrangements on the part of the citizens of Poughkeepsie.

We tender our thanks to the Secretaries of the Society, B. P. Johnson, Esq. and H. O'Reilly, Esq. for the facilities they have rendered us in making out our account of the Fair, to whom also the thanks of the Society and the public are due, for their indefatigable and well directed labors in making and carrying out the arrangements for the Fair.

Orchards.—**Daniel Leland**, one of the most experienced and successful orchardists in Massachusetts, recommends (through the Boston Cultivator,) pruning in May. His reasons are, that at this time the sap begins to flow—the wounds are not dried by the wind, and the healing process soon commences, whereas if the pruning is done in March, the wound dries down a quarter of an inch or more, and it is a long time in healing. Mr. Leland is not in favor of pruning much at a later period in the season than May, though he thinks trees should be looked to in June, and any suckers that have started should be taken off. June is also a good time to take off dead limbs. Care should be taken to cut the limbs close to the body—a wound thus made six inches in diameter, will heal over in far less time than one of half the diameter that is cut two inches from the body.

THE LATE DR. SAMUEL L. MITCHILL

Of the city of New-York, and his labors in aid of Agriculture.—No. 4.

We concluded our third number with the title and some remarks on Dr. Mitchill's letter to the Rev. H. Muhlenberg, on "Septon," or azote and its compounds. This letter on Septon we may consider as a valuable essay on manures. After some introductory remarks on gypsum, and stating the fact that it was then (1796) "said to be found plentifully in Onondaga county," the author proceeds to remark;

"*In* my letter to Chancellor Livingston, of February 20th, 1796, an attempt was made to show that plants had the power of destroying pestilential fluids, and of rendering the atmosphere, which had been contaminated by them, healthy. It was stated that Septon (azote,) was taken up as a nutrient material, and retained in the vegetable economy; while the oxygen was discharged, and in company with caloric and light, renewed the respirable portion of the atmosphere. I shall now prosecute the inquiry a little further, and go into some practical details relative to this sort of manure."—(Trans. p. 246.)

"What I have to remark will be comprised under three heads: 1. That animal manures contain Septon, (azote.) 2. That plants nourished by such manures, contain it also; and 3. That hence may be derived a principle elucidating the use and operation of such manures."

"1. The whole history of decaying animal substances leads to prove the abundance of septic, (azotic, nitric,) ingredients they afford. The urine and excrements of neat cattle and sheep, the soakings of dung-hills, the earth of horse stables and cow houses, the soil of graves, and generally speaking, animal relics, and putrefying carcases of all kinds, afford every one of them, Septic (nitric) acid. This acid is composed of Septon, (azote) and oxygen. Water aids the formation of this acid, by promoting intestine motion among the decaying materials, and by its own decomposition furnishing any quantity of the principle of acidity which may be wanted. And when formed, water acts as a vehicle to convey and apply *it to the* various substances it meets with."—(p. 247.)

In this extract, Mr. Editor, we have the principles contained in what are considered, discoveries of the late Chemico-agricultural writers. According to their doctrines, as I understand them, a compost of manure, street dirt, or other mass of animal and vegetable substances, when undergoing fermentation and putrefaction, evolves numerous gases. The principal of these are carbonic acid gas and ammonia. Carbonic acid gas may be formed by the carbon of the dung heap uniting with the oxygen of the air, or the oxygen of water. Ammonia may be formed by the union of hydrogen and nitrogen (or azote, Dr. Mitchill's Septon.) In a compost heap, the hydrogen is produced by the heat of fermentation decomposing water, and the nitrogen or azote, either from the atmosphere or from the decomposition of azotized substances in the manure heap. Other gases may also be evolved, as by the union of carbon and hydrogen, we may have carburetted hydrogen, or if sulphur be present, sulphuretted hydrogen, &c.

These are all compatible with the theory of Dr. Mitchill, or the *doctrine of Septon*, as he was pleased to call it, in which it was his principal aim to show that fermentation progressing into the putrefactive state, produced nitrogen in abundance, or azote, which he termed Septon or Septic gas, and which acted injuriously on the human constitution, and favorably on vegetation. Alkaline substances arrested this and other deleterious gases, neutralized and rendered them harmless to animal life, while they did not impair their action as fertilizers. But I am anticipating too much; let the author of the "Doctrine of Septon," speak for himself.

"Septic substances, the offal of slaughtered animals, the refuse of house keeping, are when mingled in due quantity with the soil, justly ranked among the best fertilizers. The impregnation of land around houses and barns long occupied with such materials, is the acknowledged cause of its superior productiveness."—(p. 248.)

But it nevertheless sometimes happens, that in cellars, and around country dwellings, in pig-styes and cow-pens near the house, there are accumulated great quantities of excrementitious and corrupting substances, which if seasonably carted away, tend eminently to fertilize the fields, and promote the growth of vegetables, while at the same time by remaining, they render the house foul and unhealthy by the extrication of *septic vapors*. Neatness and elegance are thus found to be as conducive to good health as to good husbandry."

"When I see a farmer permit such unwholesome substances to collect around his habitation, I cannot help reflecting on the danger which awaits him. The manure which ought to have been carried away and spread over his lots, serves, as it lays, but to make his family sickly, to disable his laborers, and lead him to the dubious and expensive routine of physic."—(p. 249.)

"The street manure of cities consists of pretty much the same materials with the yard manure collected about farm-houses. Both are unhealthy, for a similar reason."

"If further proof was wanting of the real nature of these manures, it would be easy to state, that besides the affinity of septic compounds with water, they have a strong attraction for other bodies. With potash and soda, of which large quantities are daily poured into the streets with the soap-suds employed in washing, and from other sources, the septic acid forms the septite of potash, (common salt-petre,) and septite of soda, (cubic nitre.) With lime, which from measuring, carting and building, is sprinkled plentifully along the streets, as well as in the mortar of walls and the ceilings of rooms, it forms the septite of lime, (calcareous nitre,) and with clay it forms the septite of argil, (nitrate of alumine.")

"2. There will be no great difficulty in showing that Septon (azote,) is one of the component materials in certain vegetables. If it can be made evident what plants especially abound with it, we shall be furnished with a clue, leading us to the true use of the manures containing it. From an analysis of plants, we have become acquainted with several of their component parts, and thence are enabled to form some judgment concerning the qualities of the manure best adapted to such and such particular kinds. There is good reason to believe, that particular manures ought to contain ingredients of the same nature and quality with those which the plants so manured, are found by analysis to consist of. By proceeding in this manner, there can be rarely a mistake made in the application of manure. It is observable in the order of creation, that certain vegetable bodies approach more than others towards animal nature. The presence of Septon (azote) is the circumstance in the composition of organized beings, which particularly denotes animality or the approximation to it. Septic manures, being of animal derivation, ought therefore, if they entered into the constitution of plants, to make such as are nourished by them, take on somewhat of an animal nature. Let us now examine how this principle accords with facts. A familiar example may be taken from *wheat*. Wheat is most benefited by manures that contain Septon. *Street manure, door dirt*, and *well mixed barnyard composts*, all of which abound with Septon, are among the best manures for that vegetable. And the efficacy of wood ashes in making ground capable of producing great crops of that grain, is probably owing, if modern conjecture be true, to the Septon (azote) composing a part of the alkali it contains. Some of the *swamp manures* will also produce good harvests of wheat; but others of them, though they cause a sufficient growth of straw, fail to fill the seed in the ear. The reason appears to be this: when swamp manures happen to be charged with the septic matters derived from animals, or from vegetable substances that approach toward animal nature, they will produce plentiful crops of wheat; but when they consist merely of decayed plants, they are incapable of elaborating the grain in the head. The cause of this can easily be investigated by attending to the analysis of wheat. Mr. Parmentier assures us of the presence of Septon in the *mucous* part of the meal; and he affirms, that the *glutinous* portion affords products quite similar to animal substances. If then the land upon which wheat grows, contains a scanty quantity of Septon, the seed will be poor and light in proportion to the deficiency of that article of food in the soil. Yet in this very ground, the roots of turneps and radishes may thrive exceedingly; and so may other plants that do not employ Septon as an article of their diet."—(Trans. p. 252.)

Under the third head the author of the "Doctrine of Septon" further remarks,

"3. There now occurs an obvious explanation of one of the operations of lime as a manure, when mingled with dung and soil. The common opinion has been, that it promoted the putrefactive process of animal and vegetable matters, and thus made them more fit for absorption and nutrition. This may be the case, but there is yet another effect which has not been generally attended to. Calcareous earth combines with the septic acid into a septite of lime, (calcareous nitre) and thus becomes a very valuable manure; and at the same time, by its attractive power, it prevents the evaporation of that fluid in the form of pestilential steam. I believe likewise, it has a further use in retaining the septic substances longer on the land, and thereby lengthening out their fertilizing effect. Old walls and rubbish, abounding with septite of lime, frequently answer valuable purposes as manures. Lime in its simple state, destroys vegetation. Before it is fit to promote the growth of plants, it must be combined with some neutralizer. Its combination with carbonic acid, is the most frequent; but in dunghills and heaps of manure, a more common compound is formed with the septic (nitric) acid. By this connection, both the lime and the acid are deprived of their causticity, and preserved upon the land, a sufficient duration of time, to undergo that gradual decomposition, by the vegetable economy and other causes, which favors the production and growth of plants."—(Trans. p. 255.)

If my previous remarks, Mr. Editor, on the early agricultural essays of one of our countrymen, who was an excellent and learned chemist, and for a while a practical farmer, are agreeable to you and your readers, I may continue them, and quote from other essays of his, all showing what has been stated by your late associate, that some of the members of the old agricultural Society were "*before their age.*" RICHMOND.

SORRELL AND SOUR SOILS—*Errors Excepted.*

I was much amused a few days ago by an article in the American Farmer, credited to the American Agriculturist, by Wm. Partridge, criticising the scientific errors of Dr. Dana and Noyes Darling. Among these corrections, he says, "It is still more strange that Mr. Dana should prescribe lime as a cure for the growth of sorrel, when it exists in this place as an oxalate of lime, and could not grow in any soil unless lime was present." How ready we all are, and how able, too, to discover errors in *others*, and at the same time heed not our own. Now I have always been taught that oxalic acid exists in sorrel and oxalis only in combination with *potash*, in the form of oxalate of potash. I have also been taught, that by a careful evaporation of the juice of wood sorrel, (*Oxalis acetocella*,) or of common sorrel, (*Rumex acetosa*,) we obtain the binoxalate of potassa in chrystals. Hence it would seem, that potash, not lime, is necessary in a soil to produce either of the sorrels. Is it not a fair presumption that the poverty of the soil and not the absence of lime *permits* the growth of sorrel? If the ground be well limed and manured, and then seeded with wheat or other grain, would not the growth of the crop prevent the growth of the sorrel? I have no belief in the actual existence of *sour* soils; that is, soils with such a predominence of acid of any kind as to induce the growth of one plant and prevent that of others. We all know that sorrel and oxalises will grow in common garden soil most thriftily, even in the midst of all other kinds of plants, as can be at any time observed in the public gardens, where may be seen thousands of species of plants, native and exotic, all growing together in the most luxuriant manner. The fact appears to be, that the plants take from the soil, water and air, such matters as suit them, analyse and take from them the various elementary principles that constitute when combined, the various constituents of the plants themselves. That a plant takes an acid ready formed, from the soil, I do not believe; but that it takes the elementary principles that constitute an acid, thence, and from water and air, I can readily conceive. For example, I often cultivate the *Cicer arietinum*, or Chick Pea, in my garden, for the pea is one of the most delicious vegetables I ever ate, amid all other kinds of vegetables. And yet the chick pea is the only vegetable known to possess oxalic acid in a perfectly free uncombined state. And yet on this same soil, I never saw a single plant of common sorrel, though the wood sorrel grows in it spontaneously and luxuriantly. This soil is heavily charged with lime. What is still more strange, if the doctrine of sour soils be correct, wormwood grows in the same soil with equal luxuriance; and we all know that wormwood will not grow in a soil where there is not abundance of potash. Can an acid and an alkali, especially those of oxalic and potash, intimately exist in the same soil, the one giving the character of a sour and the other that of an alkaline soil? True, it may be said that wormwood will take the potash, and sorrel the oxalic acid, each to themselves, and thus each thrive. But it surely cannot be called a sour soil. There is abundance of the *elements* of oxalic acid (*carbon* and *oxygen*) in the soil and air of all places, and it is just as likely, and rather more so, that the plants manufacture it (the acid,) for themselves, it being their nature to do so, than it is that they take it ready prepared from the soil. Now I shall feel obliged to Mr. Partridge for any correction he may think proper to make of the facts and reasonings put forth in this article. ACETOCELLA.

REFINING SALT FOR BUTTER, CURING MEAT, &c.

Would it not be an improvement in the domestic economy of farmers if they were all to adopt some simple method of purifying the salt they use in curing butter, meat, &c. I have often thought that the bad quality of butter is attributable almost as much to impurities in the salt as to any other cause. Let any one consult a practical chemist, or a good chemical book, and he will be informed that the *purest* salt of commerce contains small quantities of sulphate of magnesia and lime, nitrate of soda and muriate of magnesia. Rock and bay salt are the purest, but even these contain the above named impurities. The more common salt, that generally used in domestic economy, not only contains these but other impurities in considerable quantities; all which are well calculated to impair the effects of the salt for the purposes intended. A very little trouble and less expense will enable any farmer's wife to render the salt she uses perfectly pure. In the first place put a peck of salt into a large kettle with just clear rain water enough to dissolve it; boil it and skim off every particle of scum that rises to the surface. Then dissolve one ounce of carbonate of soda in four ounces of water, put it in the kettle and stir it well; then boil again for ten minutes, taking off all the scum that rises; then strain the brine through several folds of flannel. A considerable quantity of earthy matter will be found in the bottom of the kettle, and that is the cause of the impurity. After this straining, a small quantity of muriatic acid must be added to the brine to neutralize the soda; say half an ounce or so; then the brine is to be put back into the kettle and boiled again till it chrystalizes, or it may be put into a shallow wooden vessel and the water evaporated in the sun. Boiling is the quickest method. As soon as the salt is re-chrystalized, it should be washed by putting it in a clean basket, and throwing a bucket of perfectly pure water over it and letting it drain off rapidly; then dry it. In this way, salt perfectly pure may be obtained. I am aware that many people will say that the process is too troublesome; but let me suggest, that every kind of process for all kinds of objects, is troublesome, and that it is only because this is new or never before practiced by them, that it appears troublesome. It is true that it is more troublesome than it is to take the common salt as it is and use it; but then we propose a valuable object to be obtained by the process of purification, that is not attainable from the use of common salt. If it is troublesome, it pays well for itself in the increased excellence of the butter, &c., in which it is used. A high degree of purity may be attained by the above process, even if the carbonate of soda and muriatic acid be omitted, though not absolute purity; common salt will be rendered by it much purer than the best rock salt without the carbonate of soda and the acid. D.

CHEMISTRY IN COMMON SCHOOLS.

Why not introduce the study of chemistry in all our common schools, at least the rudiments of chemistry, and especially the meaning of chemical terms? Why should not a boy, a farmer's boy, be taught the meaning of oxygen and hydrogen, as well as that of the word water? When he is now told by the papers or books he reads, that *water*, (the meaning of which term he understands very well,) is a fluid composed of certain proportions each of oxygen and hydrogen, (terms he knows nothing about,) he is at a loss. His education has left him with the idea that water is a simple element, as the ancients thought it was; and he also complains of the use of these hard words, when the fact is they are no harder than any other words to learn or to speak; but they are *new* to him, and thence he thinks them hard. All farmers should understand the rudiments of chemistry at least, and as much more as they can command; no one can be a good farmer without this knowledge, except by accident. It is in vain for writers on the subject, to try to use language that can be understood by those who have not learned the meaning of chemical terms. The word oxygen, for example, has no *common term* that would be understood more readily by such people, neither has hydrogen, nitrogen, carbon, &c. See what a list Webster makes in defining these terms. "*Oxygen*—in chemistry, oxygen or oxygen gas, is an *element* or substance so named from its property of generating acids; it is the respirable part of air, vital air, or the basis of it; it is called the acidifying principle, and the principle or support of combustion." "*Hydrogen*—in chemistry, a gas which constitutes one of the elements of water." "*Nitrogen*—the element of nitre; that which produces nitre; that element or component part of air which is called azote." "*Carbon*—pure charcoal; a simple body, black, brittle, light and inodorous." Now, what information will one who does not understand the rudiments of chemistry, derive from these definitions? None whatever. But if chemistry made a part of common education, all these terms would convey a meaning to the reader of them as readily as do those of water, atmospheric air, and charcoal. It is not supposed that the science at large could be taught in common schools; for if it could, there would be no necessity for high schools. All that is intended by these remarks, is to recommend that the meaning of all *chemical terms* should be there taught. For example, the school teacher should teach the scholars the meaning of the word water thus: *Water*, a compound fluid, the elements of which are by weight, eight parts oxygen, and one part hydrogen; by measure, one part oxygen and two parts hydrogen. Oxygen and hydrogen are gases; they are both colorless, having neither taste nor smell. Oxygen gas is heavier than atmospheric air, and it forms a portion of the air itself. It is essential to animal life and combustion. Hydrogen gas is the lightest of all gases, and hence it is used in filling balloons; being about sixteen times lighter than oxygen. Now if such instruction was given in schools, there would be no complaint of the use by writers of hard names, hard words, &c.; and farmers would know just as well what was meant by the words calcareous earth, gypseous earth, &c., as they now do of the meaning of marl, plaster of Paris, &c. I can see no more reason in restricting the education of boys to the common place words of our language, in our common schools, than I do in confining them in their farming operations to the old common place routine of practice. Their education should be such as to fit them for the profession they are to follow, let that be what it may. Chemistry and botany are as essential elements of an agricultural education, as any others whatever. But how few are there amongst us who know even the meaning of the most common terms of either science? S.

Every farmer should supply his table with fresh meat from his poultry-yard, instead of the butcher's shambles. A butcher's bill presented once or twice a year, to be paid in cash, is a very annoying affair. With proper care it may be avoided as above. Some farmers dispose of their calves and lambs to the neighboring butcher, and thus square off his bill; but this is not a good plan.—*Farmer's Cabinet*.

STUDY ON THE FARM.

MESSRS. EDITORS—More exercises of the mind, in observing and reflecting upon the course of nature and the processes of cultivation, would be of vast benefit to most farmers and to their sons. Some few among them do pass over their grounds and along the roads with their eyes open. They notice the adaptation of different crops to the different soils; they observe the effects of the different processes of cultivation. Such farmers find work for the mind as well as the body; they thus keep themselves bright and contented. The tediousness of hard labor is lessened by the activity of the mind. Nor is the good result confined to themselves alone. Their sons and their laborers catch the same spirit of observation and reflection, and thus they become intelligent and more efficient laborers. The sons are more contented with home and the farm. Where the various crops in the field are made matters of study, they possess an interest and a value distinct from the amount of money they may bring in. They become one's teachers; they give him lessons to be treasured up, and to be used. And it is those only who seek to learn and to profit by these lessons, which are furnished by the growing corn and fruits of various kinds, who really are intelligent and exemplary farmers. A few, by dint of unwearied toil from year to year, and by soul pinching parsimony, may get money, and this too, without observing any lessons, excepting a few brief ones, which were inculcated by others while they were young. But those who stick to the old way in every thing through thick and thin, and for no other reason than *because it is the old way*, are not good farmers; they are little more than brute laborers; who by dint of perseverance get some money, but get little else that is worth having. I am not ridiculing old ways, but only say they should be compared with new ones, before one can with any propriety maintain that they *certainly* must be the best. That the old are, in very many cases, the best, is undoubtedly true—that new ways are sometimes better than old, is also as undoubtedly true. And it is only by comparison that we can satisfy ourselves fairly and properly, which path will lead us most directly to the desired object. The matters upon which farmers, and good farmers, differ, are so numerous that no one can expect to settle them all for himself in one year, or even in one life. This to me is a matter of rejoicing, for every farmer may be assured that he can never exhaust his opportunities for learning something new. The pleasure of acquiring knowledge—and this is one of our highest pleasures—is always to be possible with the tiller of the soil. Books and papers upon agriculture are valuable; they give many correct general principles, and many useful hints, but they were not written with especial reference to the soil and subsoil of *your own farm;* and their teachings need modifications which your own experience and observations must point out. Thus, some of my brethren object to what they call "book learning;" therefore take no agricultural publication. But if we will use our experience and common sense in connexion with books and papers, we shall find them *valuable* aids.

I come to the point from which I ought to have started—that the *farm*, *your own farm*, is a place for study and observation, and that in order to learn with correctness and satisfaction, keep something like a regular journal in which your "book learning," and observations, should be noted down; then you can bring them to bear upon your future practice. DOUBLEYOU.

Shoreham, Vt., July 26, 1844.

REARING PEACH TREES.—Mr. Allen W. Dodge, says in the Mass. Ploughman, that he prefers the following mode of planting peach stones:—"Deposit the stones, after being taken from the peach, in sand or dirt; put them in the ground, slightly covered, in the fall. As for the cotton bag in which to keep them under ground, I have never tried it, or any other covering but the ground itself. Take up the stones early in the spring, crack them, and plant immediately the meats or pits. In a week or ten days they will all be up, without fail, just as certain as so many peas or kernels of corn."

CUT WORM.

Errors in natural history may do much harm, and I conceive the one I am about to notice, is not an exception. James Corwin in the Boston Cultivator, noticing the remark of Mr. Ruffin, in his recent survey of South Carolina, "that cut worms in corn may be destroyed by continued tillage and a naked and open soil," remarks that "the cut worm would not be found in corn were it not planted in sward or sod land; they are the progeny of a species of beetle or other insects, which could never propagate its kind without the aid of dung, which is found in grass fields that have been fed by horses or cattle, and in this they enclose their egg or eggs and sink them a given distance below the surface," &c. &c. Mr. Corwin has mistaken the grub of the common beetle for that of the cut worm moth. The latter does not lay its eggs in dung, but in the ground. The cut worm is the caterpillar of a *moth* belonging to the lepidoptera and genus *Agrotis*. There are several species, the larvæ of which are injurious to various plants, cabbages, corn, &c. They confine themselves to no particular vegetable, but prefer young corn a few inches high. The *moths* fly only at night, lying concealed during the day under the bark of trees, in the chinks of fences, &c. The only effectual remedy that has yet been discovered, says Harris, in his excellent Treatise on insects injurious to vegetation, "is to go round the field every morning, open the earth at the foot of the plants, and you will not fail to find the worm at the root, within four inches. Kill him, and you will save not only the other plants of your field, but probably many thousands in future years." The reason, probably, why corn on a clover lay is more subject to cut worm than in any other preparation, is that the clover has been affording the insects excellent food and shelter for two years or more, and they have thus increased in numbers greatly beyond what they could have done in cultivated fields. It is believed that Mr. Ruffin is right in his remark, if he includes in his meaning of the words "continued tillage," the necessity of destroying every worm that can be found. But as the moth has wings and uses them freely at night, one farmer may destroy every cut worm in his land this year, and yet have an abundant supply in his fields next year, the parents of which have emigrated from his neighbors who were not so industrious. If every farmer would, however, adopt this means of getting rid of this formidable pest, then Mr. Ruffin's remedy, with the proposed addition, would certainly be effectual. The truth is, that we are all too inattentive to the destruction of insects at the commencement of their career. One minute's work in 1840 would have saved a week's labor of a dozen men in 1844. There is nothing easier than to catch and kill the first two or three insects that appear in a field or garden; but they are generally unheeded, because "two or three insects can do no harm;" they are permitted to lay their eggs. Next year there are several hundred of them, and even if one-half of these are caught and killed, (which will not often happen,) the other half will lay their eggs, and on the third year we shall have 50,000 or more, and then there will be work on hand to kill them. The depredations of the common caterpillar, for instance, can easily and certainly be prevented in this way, as the writer of this knows well from his own experience. In a garden full of shrubbery, every year this caterpillar makes its appearance, as an emigrant from the neighboring gardens; but it is a rule never to allow the first insect to escape. Each and all are destroyed as soon as they make their appearance, and consequently there is no multiplication of them by the 500 for one. C.

PRESERVATION OF MANURE.

An English paper recommends the application of a solution of common salt, (one pound to the gallon of water,) by means of a watering pot, to the floors of horse stables, before clearing the dung out, for the purpose of fixing the ammonia that is evolved from it. By this means, he says all the ammonia evolved will be converted into muriate of ammonia, and a portion of carbonate of soda formed, all which will be a valuable addition to the manure. A much easier, and as cheap a plan, is to spread ground plaster of Paris over the manure. Indeed this should always be done; all stable manure should be well mixed with plaster, that none of its valuable properties be allowed to evaporate. There is no one thing with which farmers generally are so careless as they are with manure. How common it is to see piles of horse dung under the stable windows outside, exposed to the washing of rain and bleaching of the sun for months together. If farmers will not or cannot keep their manures under cover, let them apply plaster of Paris as above, and at least prevent its valuable properties taking wing and flying away. Even then, however, the rain will dissolve much of the salts, and wash them away into the adjacent grounds. Why not take care of manure as well as any thing else? INDEX.

WHEAT-GROWING IN THE SOUTH.

Among the many intelligent southern planters whom it has been my lot to meet during their northern tour of summer recreation, was WILLIAM TERRILL, Esq. of Hancock Co. Georgia. I mention him particularly, from the satisfaction derived from his remarks on the wheat culture at the south, especially in the region where he resides. Conversing about the grain crops of this State, which he had carefully examined with the eye of an intelligent farmer, and after noticing particularly the laudable endeavors of General Harmon of Wheatland, (Vice President of the N. Y. State Agricultural Society,) in testing the qualities of various kinds of wheat for the purpose of designating the best qualities of *seed wheat*, Mr. Terrill remarked substantially that his own experiments in Georgia satisfied him that the wheat crop in that and other southern States may be made far more extensive and profitable than has generally been supposed. Mr. T. raised last year fifteen acres of a kind known in that region as "*Moore* wheat"—the variety being appropriately named after a worthy post-master in his neighborhood, who had taken the trouble a few years before to obtain specimens of such articles enclosed in letters from friends in other States, with a view of promoting agricultural improvement. The specimen from which this and other crops in his neighborhood were raised, was originally contained *in a letter* from Norfolk, Virginia, five or six years ago. The land was a reddish clay, manured with about twenty-five bushels of cotton seed, worth about six pence a bushel at the gin-house. The crop was sown on the 5th and 6th of October, and harvested on the 10th of May. The yield on a patch of about an acre, was at the rate of twenty-five bushels; and the average of the whole fifteen acres, was eighteen bushels per acre. The grain was plump, and measured in standard measure. The berry is yellowish, making a cream-colored flour that is much approved.

Mr. Terrill remarked, farther, that with his improved mode of cultivation, he has realized more wheat from these fifteen acres than he ever before raised from double that quantity of land—indeed, he has had smaller crops from more than twice the quantity of land.

These simple facts may induce others to "go and do likewise." What can be done by one intelligent planter or farmer, may be done by others.

Let us hear of many such experiments in all quarters of the south. Let the intelligent and reflecting planters, whose minds are well stored with facts bearing on the improvement of agriculture, apply those facts thoroughly in the management of their estates; and our word for it, they will find rich and pleasant harvests for their pockets and their minds, whatever may be the "prospects of cotton" or the "fate of the tariff."

N. B. We must not forget to state that an Agricultural Society was formed two or three years ago in Hancock county, which Society offers liberal premiums for the best crops of wheat, corn, and other kinds of grain, and from the labors of which much good may reasonably be anticipated. The example is worthy of imitation in every county, not of Georgia alone, but throughout the whole south. Nothing rejoices us more than to hear of such enterprising movements among our agricultural brethren in that "sunny clime." RHO.

TREES INJURED BY MICE, &c.

MESSRS. EDITORS—Seeing in your July number, a notice of fruit trees injured by mice, reminded me of a fact which may be worth communicating. A year ago last winter, I had five young apple trees girdled by rabbits, one of them having the whole bark gnawed off for a foot in length, and entirely around the tree. I wound around each tree a thick woolen cloth and tied it fast, thinking it might have some influence in preserving the life of the tree, though I had no expectations that the one injured most could be saved. All except one appeared in blossom last year, but bore no fruit. This year they are all covered with fruit, and appear very thrifty. On removing the cloths for examination a short time since, I found that the bark had grown considerably on each, though not sufficient to join the upper and lower parts. The tree most eaten, has no bark now on its body for the space of six inches, and yet has leaves and fruit. I suppose the cloths have afforded a medium of communication between the upper and lower bark for the sap, so as to preserve the life and promote the growth of the tree. Is not this fact worth remembering?

SQUASHES.—Having for some years had the most gratifying success in raising the Valparaiso squash, I take the liberty of recommending it to others, as on the whole, the most profitable winter squash with which I am acquainted. It grows very large, weighing frequently from 60 to 100 lbs.; yields abundantly, is delicious food both for man and beast, and will keep perfectly sound for a year, if kept dry and away from frost. In June last, having a wish for some *pumpkin* pies, I used the last of my winter's stock, and found them as sound and fresh as when gathered last fall; and I have no doubt they would have kept perfectly good till October.

CABBAGES.—If cabbages are set out near common field turneps or ruta bagas, the peculiarities of each are destroyed. The cabbages grow without heads and the turneps without bottoms. This I have learned by sad and repeated experience.

[Does the writer mean that cabbages and turneps intermix *so as to* produce the results he speaks of, the first season of their growth, or before blossoms are produced? The effects of intermixture through the blossom, are what they are here represented.—EDS.]

POULTRY.—The affairs of the poultry yard have, as usual, had a share of my attention the present season, and I am more and more impressed with the importance of this branch of rural economy. Wishing to raise as many Poland and Dorking chickens this year as I could, I purchased two dozen common hens to do the hatching, and let all of every breed set that would. Out of 21 that have set, there has been but one Poland hen; and this has been about the proportion that I have observed in former years. By selecting a few of the best of each kind to breed from, and keeping each lot by themselves, I think I can observe an improvement every year, both as to size and beauty of form; and if this plan were followed up for a series of years, it would result, I doubt not, in producing a finer stock of fowls than any we have at present in the country.

I have at various times tried experiments in crossing the different breeds of fowls, and the following are some of the results. The most beautiful *white top knots* are produced by a cross between a Poland cock, and a common white hen. The sub-variety known as the *Golden Poland*—having the body of a bright or reddish yellow, with a small black spot on each feather, and a crest of *red* or mixed colors—is the result of a cross between a Poland hen and a common red cock. Many of the chickens produced by these crosses will be parti-colored and of various plumage, but some will be of the character above described. I have a number of *five toed* or *Dorking top knots*, produced by a cross between a Dorking cock and a white top knot hen. Another variety described in some of the poultry books, viz: the perfectly white body with a black top knot, I have never seen, though I have made various unsuccessful experiments to produce it.

To obtain a cross of any particular description, it is necessary that the cock and hen should run together from 4 to 5 weeks, before the eggs are saved to be hatched; for all the eggs the hen lays in four weeks after being changed to a new cock, will partake of the character of the former cock.

The following treatment has resulted in keeping my fowls in a remarkably healthy state, and causing them to produce an abundance of eggs. Being under the necessity of keeping them shut up through the summer, I have each room supplied with a large box of dirt, sand and ashes, for them to roll in; a box of old lime mortar or plaster; a box of fine gravel from the lake shore, of which 20 fowls will eat a peck in four weeks; a feeding hopper containing always a supply of food, and fresh water supplied twice a day. For food, I prefer wheat when I can get it; and there being generally a supply here to be had for 20 to 25 cents per bushel—such as through various causes becomes wet in vessels and unfit to be ground—I use that through most of the year. Wheat contains so much lime, that it assists materially in the formation of shells, and causes fowls to lay better both winter and summer, than any other food with which I am acquainted.

Guinea hens, though very unprofitable, give variety to the music of the poultry yard, and I have kept them for some years. They make what Shakspeare calls a "musical discord," which is not disagreeable to my ear. They do not begin to lay till about June, and finish in August or September, producing an egg generally every other day. Their flesh when well fatted is most delicious, and I am determined to have mine all served up for the table before another winter. H. A. PARSONS.

Buffalo, Aug., 1844.

SEEDLESS APPLES.

Humbuggery and marvel are afloat again, with the story about "apples without seeds and cores," "half sour and half sweet," &c. These stories make a periodical advent about every five years. I well remember when a boy, (but I don't say how many scores of years ago that was,) a man came to our house to bottom chairs; and while he was busy with the split ash, he amused himself and his young listeners with all sorts of stories. Among others, he told us of an apple tree that he knew of "in York State, out west, in the Holland Purchase," that bore apples, one side of which was sweet as a Tallman Sweeting, the other as sour as a Rhode Island Greening; and that he could produce trees like it by a particular kind of grafting. After a good deal of coaxing, he consented to tell *me* all about it. It was simply to take a slip from a Tallman Sweeting tree and graft it, top end downwards, upon a Greening stock;" "and," says he, "*when it bears*, the apples will be half sour and half sweet." I was young *then*, (I did not say I am *old* now!) and therefore I lost no time in trying the experiment; not only did I try it once, but several times. None of the grafts grew, of course they did not bear fruit, and of course it was not "half sweet and half sour." I well remember the curious quizzical look my father gave me when he reminded me, that the chair-bottomer had said, "*when* it bears, the apples will be," &c. Now, I have only to say, in relation to the present story about bending down the top of a young tree and covering it with earth, and "*when* it takes root, cut the tree asunder, and thus stop the connexion with the natural roots of the tree," that WHEN "the young sprouts which spring from the top portion of the tree" "form a regular top," it WILL produce "fine fruit of a beautiful red," "good size," and "very pleasant apple," "without core or seed." It is of course unnecessary for us to ask those who believe such things, *how* the apple can be formed without the core! As well might we expect it to grow without the *stem*. A few years ago a man brought to our horticultural room a branch of a grape vine in a pot, with fruit on it, that he said he had made to grow in a flower pot, by burying the outer top end in the pot a few weeks, and then cut off the branch from the main vine. He wanted to *sell them*. Before the show was over, the vine *withered*, of course! S.

Pay great attention to the seeds you use.

PROFITS OF RAISING FINE FRUIT.

The great deficiency of excellent fruit in most parts of the northern States, is evident to every one who is acquainted with the finer varieties. It is believed if many of our farmers and others who own land, knew the actual profits which might be derived from orchards of the very best kinds, they would no longer hesitate in planting immediately, a large portion of their ground. Calculation on paper, I am aware, is not actual experience; but correct calculation from admitted facts, cannot be far wrong. Let us take a few examples.

Apples for domestic animals.—Suppose one acre of land can be had for $50, which is high for the average of good land in this country; that 40 apple trees, which would place them two rods apart on the acre, may be had for 25 cents each, or $10 for the forty; and that $5 be paid for transplanting them, which would do the work well, placing them in holes six feet in diameter and well filled with mellow rich mold, and staking them well to prevent loosening by the wind. The crops obtained from the ground until they would arrive at a full bearing state would amply pay the interest on the whole cost, and cultivation and manuring. If well taken care of, and the soil kept mellow by hoed crops, they would bear abundantly in one-half the time usually required, and yield an average of at least five bushels to the tree—many would bear fifteen or twenty when the trees become large, if kept cultivated. Fed to hogs, the pork they would produce might be safely estimated at 12½ cents per bushel—a neighbor obtained about 500 lbs. of pork from 120 bushels. The estimate will then stand as follows:

1 acre of land,		$50
40 apple trees,		10
Transplanting,		5
Contingencies,		5
Whole cost of one acre of orchard,		$70
Five bushels per tree, 40 trees, 200 bushels; at 12½ cents,		$25
Deduct interest on $70,	$4.90	
And for gathering,	2.10	
		7
Clear annual profit per acre,		$18

Winter apples for market.—The average price of good winter apples for several years past in most parts of the State, has not been less than 25 cents per bushel; some late keepers are sold early in summer for triple that sum. An acre of trees, if well cultivated, would yield as already shown, not less than 200 bushels; allowing 5 cents per bushel for hand picking, which would be very liberal, if convenient ladders were at hand, and the estimate would stand thus:

200 bushels apples at 25 cents,	$50
Deduct 5 cents per bushel, picking,	10
Clear profit per acre,	$40

This estimate, it will be at once seen, is quite low, instances being frequent where more than double the amount is obtained. But four hundred dollars nett profit, as a yearly average from a ten acre field, is not to be despised.

Early Peaches, if of the very finest of the early kinds, will bring in all our cities and larger villages, generally not less than two dollars per bushel; they have often brought four dollars. In most parts of this State adapted to their culture, the trees continue to bear under good care for many years, and will *average* at least one bushel to the tree. One hundred and fifty trees may stand on an acre; gathering and marketing would cost perhaps from ten to twenty-five cents per bushel; thus an acre would be worth as follows:

Cost of land and 150 trees at 20 cents each,	$80
Transplanting, &c. say,	20
	$100
150 bushels peaches at $2 per bushel,	$300
Deduct for interest, gathering and marketing, 25 cents per bushel,	82
Clear profit per acre,	$218

Apricots, which ripen from one to two months before such early peaches as are profitable for market, and are nearly as fine and delicious, bring still higher prices. An experienced fruit seller gives it as his opinion, that good apricots would bring any year, as fast as they could be sold, not less than $1 a peck, or $4 per bushel. An acre would easily contain 150 trees, and each tree would yield on an average one bushel of fruit, if well attended to. Such attention would consist in keeping the ground cultivated, and guarding against destruction by the curculio. The latter is to be either accomplished by yearly confining a sufficient number of pigs to eat all the fallen fruit, in which case crops would be precluded; or by daily jarring the insects on white sheets and destroying them. The following is an estimate of the expenses and profits:

Cost of land,		$50
150 trees at 37½ cents,		56
Transplanting, &c. say,		20
Cost of one acre,		$126
150 bushels, at $4 per bushel,		$600
Deduct interest on $126,	$8.82	
care from curculio,	10.00	
gathering and marketing,	75.00	
		$94
Clear profit per acre,		$506

A selection of the *best* and *most suitable* varieties of cherries and plums would give as profitable a crop, probably, as the apricot. These estimates may seem large, but they are much less than I have known on a smaller scale in case of cherries, plums and apricots, and also much less than I have known on a much larger scale in case of apples and peaches.

But every one who undertakes this business must remember that there is no "royal road" to the cultivation of fruit trees. Crowding the roots into a small hole in hard soil, suffering them, unstaked, to whip about by the wind, tearing them with the plow and scratching them with the harrow, and more than all else put together, allowing them to be overrun by grass and weeds, or smothered and stunted by crops of wheat, barley or corn; such treatment does not deserve success.

The best crops for the ground occupied by a young orchard, should be such as require a frequent use of the hoe, plow, or cultivator, and which are in no danger by a tall growth of shading the trees. Such are beans, carrots, potatoes, ruta bagas, beets, onions and pumpkins, but not sown crops.*

A selection of suitable varieties is also of the greatest consequence. Apples for stock should be of those varieties which are great and constant bearers. For market, they should be good bearers, handsome in appearance, of good flavor, and part of them long keepers. Peaches, cherries, &c. should be abundant bearers, of good quality, and as early as is practicable with those requisites.

J. J. T.

Importation of Manures into Great Britain.—It was stated at a late meeting of the Agricultural Chemistry Association, that the following sums were paid for manures imported into England and Scotland, during the last year. For bone-dust, £91,755; rape cake and rape seed, £169,331; guano, (being the amount imported, not for the country at large, but to Liverpool alone, in one year,) £59,240; being a total of upwards of £320,000. It is also stated that there were 300 vessels engaged in the importation of guano.

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* A neighbor has a fine young orchard of peach trees, one-hal of which is planted with potatoes, and the other half with pea —which are perhaps the most harmless of all sown crops; those standing among the potatoes, have made the present season more than double the growth of those on the pea ground.

REMARKS ON PEAT.

To Prof. James Hall, *late Geologist of the Fourth District of the State of New-York:*

Dear Sir—You were so kind as to answer my inquiries in the June number of the Cultivator, respecting phosphate of lime, that I am induced to reply to your communication in the August number of the same work, (p. 258.) My first was addressed to the geologists generally; but this I offer to you individually, hoping you will not take offence with an anonymous correspondent. You have satisfied me, and must others who read your letter in the Cultivator, that although there are several places in this State where the phosphates are found, yet they are not in sufficient quantity for agricultural purposes.

There is another article however, which yourself and associates in the late geological survey, have shown to exist in vast quantities, in all parts of the State, and easily accessible, forming reservoirs of a material, well adapted to promote fertility in such parts of the country, where cultivation has exhausted the soil, and rendered manures necessary. This article is *peat or muck*, the black sediment of ponds and swamps, and hollows in the woods, where the water is evaporated in summer. This material has been gradually coming into use, but of late it is attracting much attention by the husbandmen of Staten Island, as I intend to show.

In your letter to the Editors of the Cultivator, you remark that I spoke "*in a very complimentary manner of the labors of the geologists.*" It was not intended for flattery, but was the genuine sentiment of approval, of the geological survey, by a farmer who is not alone in appreciating what you and your associates have done. The immense resources of the State have been pointed out, and it remains for others to develop them for the benefit of the community.

Peat has been much used in Massachusetts, and its employment has slowly traveled into the adjoining State of Connecticut, where manure is much wanted. The "Muck Manual" of S. L. Dana has been the means of spreading information on the subject, and the reports of the Geologists of the State of New-York, have added to the information, showing clearly that there are mines of wealth for our farmers, lying on or near the surface, unexplored and unused in almost every part of the commonwealth. This is but one of the many benefits arising from the geological survey, and the reports of the scientific men who made the exploration in so short a time and with such credit to themselves and advantage to the State.

This small but productive island, has annually appropriated a large quantity of the street dirt from the city of New-York, as manure, but for several years past, produce of all kinds has been so low, that many are endeavoring to dispense with its use, and save the cash which has to be paid for it. But the farmers of Richmond county cannot raise crops without manure, and a liberal supply of it. Hence they have turned their attention to manufacture it from their own resources. Muck and sea-weed and fish and weeds and soil, composted with barn-yard and stable manure, and mud and sand and lime and potash, with other ingredients, form the basis, and enable the industrious man to furnish aliment to his crops from his own land, which is to produce food for his family, provender for his cattle, and a surplus for sale.

There is scarcely a farm in the county, that has not a pond, a swamp, a hollow or muck hole from which peat may be obtained by ditching and draining. The dry weather in August and September is the season for carting it out. If distant from the barn-yard or compost heap, it may be deposited in the immediate vicinity to be used as occasion requires, the farmer thus having it at his command, when the vernal and autumnal rains would prevent his digging it in its original place of deposit. It varies in its composition and consistency, from its relative situation, but all its varieties are good and capable of being converted into rich manure by proper management. In ponds liable to become dry in warm weather, the vegetable matter, by the alternate action of heat and moisture, is often decomposed and forms at the bottom a black mud, which on drying or exposure to frost, crumbles into a fine mold. When we find a pond in the woods which is dry in summer, the mud contains undecayed roots, leaves and twigs of trees from the annual supply of these materials from the surrounding trees. To reduce them to humus or mold, or in other words to a more perfect state of decomposition, it is necessary that they should undergo fermentation in combination with other vegetable and animal substances. In permanent ponds or such as are seldom or never dry, the muck is a mixture of the earthy wash of the uplands and parts of vegetables, wholly or partially decayed. Wet swamps covered with bog-grass and bushes also contain undecayed roots, leaves and twigs. When such ponds or swamps are drained, the vegetable matter undergoes a gradual change, and forms a deep and rich bed of black muck. In cleared land we sometimes find a repository of such material in low places, that have been drained and under cultivation for years. We would naturally suppose that under such circumstances the vegetable fibres of leaves, roots and stems of trees would be entirely decomposed, but it is not the case, except at a small distance beneath the surface, within the influence of summer heat and winter frost. Such spots of land are like the Genesee flats, or the alluvial soil of other streams, rich and inexhaustible, provided we can reach enough of the subsoil to mix with the surface, as it loses its power by cultivation. Though some such spots are found on this island they are not extensive, and they can only serve to enrich the surrounding fields by digging pits, and raising the muck to make compost.

Dr. Dana says that peat or muck, (I use the words synonymously,) consists of soluble and insoluble humus, the latter predominating. But soluble or insoluble, it may all be converted into a fertilizing ingredient for vegetation. (I don't like Dana's term *Geine*, because it is too technical, too learned, or too difficult to pronounce. Farmers who have been in the habit of reading the Cultivator, know what is meant by humus, and let us stick to that.) I will state some of the methods in which muck has been employed on this island.

Mr. William A. Seely has a large reservoir of muck from a pond or swamp which he has drained, and he has set us the example of the best methods of converting it into a fertilizer. He has a farm of more than two hundred acres, at the mouth of the Great Kills on the south side of the island. He has manured heavily, and made former waste fields productive, by means of peat; and they may now be seen smiling with heavy crops. For seven or eight years past he has purchased no manure, but has made all that his crops required, from the resources of his own farm. From his water front on Raritan bay, he collects large quantities of sea-weed, and in the autumn, after clearing his barn-yards of manure for his fall crops, he begins anew to manufacture this indispensible article, for the coming year, in the following manner.

The yard is first littered with a coat of sea-weed, and over that a layer of peat, then the accumulation of horse dung from the stable is spread over the peat. The contents of the hog pens are also occasionally strown over the yard, which in the course of the fall and winter receives several layers of peat. These, together with the hay, the straw and corn-stalk fodder dropped during the winter, are trodden and poached by the cattle, and mixed with their droppings, making a compound mass containing the elements of all our cultivated crops.

In the spring, when the frost is out of the ground, the coarse manure is accumulated in the yard, and saturated with its liquid contents, is carted out and piled into heaps three to five feet high, where it undergoes fermentation and in the course of four to six weeks, is converted into a finer mass, and fitted for the spring crops.

Mr. Seely has also made what are here called "*fish pies.*" In May and June when moosbonkers (Clupea menhaden) abound, they are caught in great numbers. Alternate layers of peat and fish are made into a compost heap, and so left until the ensuing spring. I examined such a heap of his several years ago, after the fish were completely decomposed. The mass was inodorous, the peat having absorbed all the gaseous substances, and had become very fine and crumbly, and almost as light as a heap of ashes. This method of making manure with peat and fish, is infinitely better than the nauseous one of spreading them broadcast when first taken. Mr. Seely used peat in making compost heaps, a number of years before others would follow suit. He even offered to give the farmers some of his peat manure, to try and test its virtues, but the offer was not accepted. Now, however, a change of opinion has taken place, and we are all (or at least a number of us,) trying to manufacture, that we may cease to buy manure.

I employ peat freely, spreading it over the barn-yard, throwing it into the hog pens, and mixing it with lime and potash and soil, and unleached ashes, green weeds, potatoe tops, sea-weed, &c. I have said that sand is an ingredient to manufacture manure. We who are on the sea-shore where sand is plenty, and where our soil is a stiff clay, find that sand alone aids in making it friable. In such soils a small portion in compost heaps is not amiss. Lime, or potash, or ashes, I believe if mixed with fresh dug peat, would absorb its acid, render it soluble and fit for use as a manure in a few weeks.

Mr. Cornelius McLean, a gentleman from New-York, has purchased the farm adjoining Mr. Seely, and is doing great things with muck, having found an abundant supply from a swamp which he has drained. He makes manure accordingly, and his crops show that they feel its effects, while his farm is rising from a state of neglect and exhaustion, to beauty and fertility. Mr. Chas. E. Leveridge, his neighbor, is also exploring his low grounds, ditching and carting muck to the “mixen.”

About Princes Bay we find Mr. Joseph H. Seguine and others, digging out the muck from ponds and hollows, and even the mud and peat of the salt meadows to make compost heaps. Mr. Seaman, Mr. Chadwick, Mr. John Seguine, and Dr. Taylor, all in that vicinity, are using more or less of it. The latter gentleman has such an abundance that he neglects sea-weed, which his shore furnishes plentifully. Mr. Frost, Mr. Flood and others on the Fresh Kills, have also dug out muck and are using it. It has even been employed by some on the island, without any preparation or mixture, except exposing it to the winter frosts in small heaps, which cause it to crumble into a fine mold.

Thus we find that muck or peat is gradually coming into use, and the farming interest will be greatly promoted by the recommendation of the State Geologists, who have indicated many vast repositories of it in different places, but the small deposits must first be excavated, and in process of time, the larger ones be resorted to.

Again, I repeat that the Geologists in exploring the State, have shown its immense resources, and the incalculable benefits to be derived to the arts from their labors. If these are not appreciated by party men, by mere politicians, they are, and will be, by all considerate persons, and by those who love our country and its republican institutions. Yours, with esteem,

A Practical Farmer.

Staten Island, Sept. 11, 1844.

TO EXTRACT CHEAT FROM WHEAT.

Messrs. Editors—As much difficulty is frequently experienced in cleaning wheat from cheat, I offer the following plan: Instead of having a riddle, as ordinarily used, in the fan, place a board in the riddle's place; it may be an inch or two narrower than the riddle in width. By this means, the cheat is carried nearly off the screen board, and with the aid of a strong wind, is driven pretty effectually out at the second run of the grain.

The present year I undertook to clean some Mediterranean wheat, which had a pretty large share of cheat in it. By the aid of the above plan, at the second run, it was pronounced by an old and experienced farmer to be clean enough. I believe I might have run it five or six times the ordinary way, without having it as clean. Thus I saved much labor, as well as some time; though it must be let through slowly and regularly, to prevent the falling sheet of wheat from obstructing the passage of the cheat while blowing out, and falling through the fan sieve. This I accomplished by resting the half bushel on my shoulder, and letting the grain fall gently and gradually into the fan hopper, which was aided by the jar of the fan in motion. This last precaution may not be necessary, where hoppers are new and properly constructed; but ours was old, and worn loose at the connecting points.

Chester co., Pa., Aug. 1844. John M. Harlan.

“NEVER LOSE ANY THING—NEVER FORGET ANY THING.”

A distinguished financier and citizen of this State, lately related an anecdote which occurred in early life, which he said afterwards proved of the greatest utility to him, and which may teach a valuable lesson to others. When just commencing in life, he was deputed by an eminent man of business on an errand of considerable importance, and after receiving instructions at length, the business man handed him a paper or instrument, which he was to use in case of a certain contingency not likely to occur. “Here,” said he to the young man, “take this paper and hand it to ——— if you should see him, but you must not lose it.”

“Very well, I will try not to lose it.”

“But you *musn't* lose it.”

“Well, I'll *try*, but as I may not need the paper, perhaps I had better not take it, for fear I *might* lose it.”

“No!—take the paper, but you MUST NOT LOSE IT!”

He took the paper—and set out on his journey—but the idea that a fixed determination to accomplish the object, would certainly accomplish it, was new to him; the last emphatic words, “*you* MUST NOT *lose it*,” continually re-echoed in his ears, and made such an indelible impression on his mind, that throughout a long subsequent life, he proved most effectually the practicability and eminent utility of the injunction, as well as of its counterpart and almost its necessary consequence, “never forget any thing,”—that is, in the transaction of active business.

These two maxims, if thoroughly adopted and carried out by all our farmers, would work a revolution indeed in the appearance of many premises. Instead of tools lost in one place, and forgotten, neglected and spoiled from a year's exposure in another, with the consequent loss of time in hunting, and loss of temper by delay and disappointment,—instead of these disasters, there would be “a place for every thing and every thing in its place;” and confusion no longer usurp the throne of order, neatness and regularity. Whenever an implement is taken from its place for use, the words must be vividly impressed on the mind, “you *must not* lose it—you *must not* forget it!”

And who doubts the possibility of attaining this? Some persons forget, *habitually*, and lose, habitually; but if habit has brought these evils upon them, then it may also remove them; or at least it might have prevented them, if an early determination to the contrary had been adopted. Habit “begins in cobwebs and ends in chains,”—let it then have a right direction at the outset. Be *determined* to do a thing, and you need not fear of success,—ultimately, if not now. The most perfect penman I ever knew, had a distorted and crippled hand—and the most accomplished Grecian orator, when young, was humpbacked, lop-shouldered, and had to talk with pebbles in his mouth to correct his mumbling voice. Sir Isaac Newton said that whatever he had attained was by perseverance and close application, and not by any eminent powers of mind which he possessed. Who then need despair?

A Hearer.

Blasting Rock.—Some time since it was stated in some newspaper that the electric battery was applied in igniting the powder in blasting rock, and this was much more safe and expeditious than the old plan. What is the *modus operandi* ? for instance the size of the battery and the wire used for a conductor, &c.

Morus Multicaulis.—It has been stated by some, that the morus multicaulis is not adapted to the successful cultivation of the silk worm; that worms fed on it, are not so healthy as those fed on other varieties of the mulberry. Is it so ? What variety (from experience,) is now considered best ?

Answers to the above inquiries, will confer a favor on one, and no doubt be interesting to many of your subscribers. *Lexington, N. C., Sept*. 2, 1844. C. Mock.

LIST OF PREMIUMS AWARDED

BY THE N. Y. STATE AG. SOCIETY AT POUGHKEEPSIE.

CATTLE—CLASS I—*Best of any breed.*

Bulls—Best 3 years old, to George Vail, Troy, "Meteor," $20—Best 2 years old, to C. F. Crosby, Watervliet, "Osceola," $15—Best yearling, to Thomas Oliver, Westchester county, "Marius," $10—Best bull calf, to Corning & Sotham, Albany, "Pomaria," $6.

Cows—Best 3 years old, to James Lennox, Poughkeepsie, "Red Lady," $20—Best 2 years old, to E. P. Prentice, Albany. $15—Best yearling, to Duncan Robinson, Fishkill, $10—Best calf, to R. L. Pell, Pelham Farm, $6.

CLASS II—*Durham Cattle.*

Bulls—1st, to George Vail's "Meteor," $15—2d, to D. D. Campbell's "Rotterdam," Schenectady, $10—3d, to R. Donaldson's "Prince Albert," Red Hook, Diploma.

Two years old—1st, to C. F. Crosby's "Osceola," $10—2d, to George Vail's "Symmetry," $5—3d, to Wm. Salisbury's "Sir Peter," Catskill, Diploma.

Yearlings—1st, to Thomas Oliver, Sing-Sing, $10—2d, to J. F. Sheaf, High Cliff, $5—3d, to James Lennox, Diploma.

Bull Calves—1st, to C. N. Bement, Albany, $5—2d, to George Vail, Diploma.

Cows—1st, to J. F. Sheaf, $15—2d, to George Vail's "Victoria," $10—3d, to J. F. Sheaf, Diploma.

Two year old Heifers—1st, to E. P. Prentice's "Nell," $10—2d, to E. P. Prentice's "Esterville," $5—3d, to D. B. Fuller's "Victoria," Hyde Park, Diploma.

Yearlings—1st, to George Dakin, Dutchess county, $10—2d, to D. D. Campbell, $5—3d, to Wm. Kelly, Rhinebeck, Diploma.

Heifer Calves—1st, to George Vail, $5—2d to C. N. Bement, Diploma.

CLASS III—*Hereford Cattle.*

All the premiums in this class were awarded to Messrs Corning & Sotham, Albany, to wit: For 2 years old bull, Edwin, $10—for bull calf, Pomaria, $5—for cows, 1st, to Aston Beauty, $15; 2d, to Victoria, $10; 3d, to Perfection, Diploma—for 2 years old heifer, Mary, $10; for yearling heifers, 1st, to Lilly, $6; to Maggie, vol. Transactions.

CLASS IV—*Devon Cattle.*

To L. F. Allen, Black Rock, for best bull calf, $5.

For best cow, 1st, to D. B. Lent, Poughkeepsie, $15—2d, to L F. Allen, $10.

CLASS V—*Ayrshire Cattle.*

For best bull, 1st, to Joel Rathbone, Albany, $15—2d, to C. N. Bement, $10.

The Committee also awarded a premium of $15 to Mr. Archibald of Montreal, for his Ayrshire bull, Sir Walter Scott.

For best cow, 1st, to Thomas Ellison, New Windsor, $15—2d, to Joel Rathbone, $10—3d, to Cornelius Dubois, Poughkeepsie, vol. Transactions.

CLASS VI—*Grade Cattle.*

For best 2 years old heifer, to Duncan Robinson, Fishkill, $5—2d and 3d, to J. F. Sheaf. Poughkeepsie, $3 and Diploma.

CLASS VII—*Native Cattle.*

For best cow, 1st, to R. Donaldson, $12—2d, to R. L. Pell, $8—3d, to Z. Pratt, Greene county, vol. Transactions. A vol. of Transactions was awarded to Hezekiah Smith, Greene county, for his Native bull; and a premium of $3 to John G. Parker, Poughkeepsie, for his Native calf

WORKING OXEN AND STEERS.

For best pair, 1st, to Luther Comstock, Oneida, $15—2d, to Isaac Doty, Clinton Hollow, $10—3d, to H. D. Grant, Amenia, vol. Transactions—4th, to F. W. Akin, Greenbush, Dip.

Best 3 yoke oxen, 1st, to James S. and Wm. Wadsworth, Genesee, $15—2d, to D. B. Fuller, Hyde Park, $10.

Best 10 yoke oxen from one town, 1st, to D. B. Fuller, J. W. Wheeler, Elias Butler, Thomas Allen and John Traver, Hyde Park, $20.

Best 3 years old steers, 1st, to Charles Wescott, Fishkill, $15—2d, to J. W. Wheeler, Hyde Park, $10.

Best yearling steers, to Dr. Vandeburgh, Rhinebeck, $10.

FAT CATTLE.

Best pair, 1st, to George Mills, Livingston county, $20—2d, to Thomas Swift, Amenia, $15—3d, to A. M. Underhill, Clinton Hollow, $10—4th, to Duguid & Candee, Onondaga, Diploma.

Best fat ox, 1st, to D. D Campbell, $15—2d, to Duncan Robinson, $10—3d, to Duguid & Candee, vol. Transactions.

Best fat heifer, 1st, to Martinus Calkins, Chenango county, $15—2d, to Walter Wakeman, North East, $10—3d, to Dr. Vandeburgh, vol. Transactions.

HORSES.

Best Stallion over 4 years old, 1st, to Wm. Salisbury, $20—2d, to John Greenfield, Newburgh, $10—3d, to Silas Belding, Amenia, $6 and vol. Transactions—4th, to A J. Skidmore Fishkill, $4 and Diploma.

Best 3 years old Stallion, 1st, to Calvert Canfield, Pleasant Valley, $15—2d, to Jacob Duncan, Union Vale, $10—3d, to Job Sisson, Washington, $6.

The Committee on Stallions made the following special awards: to David B. Haight, Dutchess county, $10; Aaron Bailey, Cherry Valley, $6 and Diploma; Edward Long, Cambridge, $6; to David Long, as groom, $5; and Diplomas to Epenetus How, North Salem; Wm. H. Ludlow, Claverack; C. F. Crosby, John Cooper, Poughkeepsie; Bastion Moore, Columbia county; S. V. R. Ableman and Corning & Sotham, Albany; Benj: Pettit, Oneida county; L. W. Ten Broeck, Columbio co.; Samuel Verplank, Fishkill.

Best Breeding Mare and Colt, 1st, to Josiah Williams, Poughkeepsie, $20—2d, to Isaac T. Frost, $10—3d, to Thomas Dearin, Poughkeepsie, Diploma. The Committee also awarded $10 to S. C. Roe, and Diplomas to P. Lyon, Washington, and Moses Clark.

Best pair Matched Farm Horses, 1st, to Allen B. Stockholm, Fishkill, $10—2d, to Philip Vanderbelt, Fishkill, vol. Trans.

Best pair Matched Horses, 1st, to Wm. Landon, Albany, $10—2d, to Wm. A. Davis, Poughkeepsie, vol Transactions—3d, to J. P. Beekman, Kinderhook, Diploma.

Best Single Horse, 1st, to De Witt Hasbrouck, Orange county, $10—2d, to Duguid & Candee, vol. Transactions. Volumes of Transactions were also awarded to Anthony Van Bergen, Coxsackie; Samuel Townsend, Orange county, and Benjamin Van Voast.

MULES.

Second best pair, to Nathan Colman, Poughkeepsie, $10.

SHEEP—CLASS I—*Long Wooled.*

Best Buck, 1st, to L. D. Clift, Carmel, $10—2d, to Thomas Dunn, Albany, $5—3d, to Nathaniel Halleck, Milton, Diploma.

Best pen of 3 ewes, 1st, to L. D. Clift, $10—2d, to Edward Halleck, Milton, $5—3d, to Henry Mesier, Fishkill, Diploma.

Best pen of 5 lambs, to Willet Colver, Hyde Park, $5.

CLASS II—*Middle Wooled.*

Best buck, 1st, to Isaac Foster, Hillsdale, $10—2d, to J. McD. McIntyre, Albany, $5—3d, to S. & J. Wait, Orange co., Dip.

Best pen of 3 ewes, 1st, to S. & J. Wait, $10—2d, to J. McD. McIntyre, $5—3d, to Edward Halleck, Diploma.

Best pen of 5 lambs, to D. B. Haight, $5.

CLASS III—*Fine Wooled.*

Saxons—Best bucks, 1st, to C. W. Hull, New Lebanon, $10—2d, to Abner Brown, North East, $5—3d, to Samuel H. Church, Vernon, Diploma.

Best pen of 3 ewes, 1st, to Walter Wakeman, North East, $10—2d, to Samuel H. Church, $5—3d, to S. B. Crocker, Vernon, Diploma.

Merinoes—Best buck, 1st, to H. S. Randall, Cortland Village, $10—2d, to H. & J. Carpenter, Poughkeepsie, $5.

Best 3 ewes, 1st and 2d, to H. S. Randall, $10 and $5—3d, to H. & I. Carpenter, Poughkeepsie, vol. Transactions.

Best 5 lambs, to Rawson Harmon, Jr. Wheatland, $5.

FAT SHEEP.

Best, to J. McD. McIntyre, $10—2d, to D. W. Elting, New Paltz, $5—3d, to J. C. Haviland, Dutchess co., vol. Trans.

SHEEP FROM OTHER STATES.

Best fine wooled buck, 1st, to Jacob N. Blakeslee, Litchfield county, Conn , Silver Medal—2d, to Stephen Atwood, Litchfield county, Conn., 2 vols. Transactions.

Best 3 fine wooled ewes, to Jacob N. Blakeslee, Conn., Silver Medal.

SWINE.

Best boar, 1st, to Benj. H. Hart, Lagrange, $10—2d, to James Lenox, $5—3d, to C. F. Crosby, Diploma.

Best sow, 1st, to W. A. S. North, Duanesburgh, $10—2d, to W. T. Hulse, Blooming Grove, $5—3d, to Thos. T. Doty, Beekman, Diploma

Best lot of pigs, 1st, to D. B. Lent, $5—2d, to Thos. T. Doty, Diploma.

The Committee commend a boar and sow of Neapolitan breed, offered by C N. Bement, and a Leicester boar of John Wilkinson.

FARM IMPLEMENTS, &c.

Best Plow, 1st, to Howard Delano, Mottville, Onon. co., $15—2d, to Thomas D. Burrall, Geneva, Shell Wheeled Plow, Silver Medal—3d, to W. U. Chase, Amsterdam, $5—4th, to M. D & T. H. Codding, Rochester, Diploma.

For Gang Plow, to Thomas Wiard, East Avon, $15.

For best Dynamometer, to W. U. Chase, $15—2d, to T. D. Burrall, Geneva, $7—3d, Mr. Seymour, Hartford, Connecticut, Diploma.

Best Farm Wagon, 2d premium to Wm. Cox, Stamford, vol. Transactions.

Best Horse Cart, to John Wilkinson, Union Vale, $5.

Best Horse Rake, 1st, to Gustavus White, Middlefield, $5—2d, to Wm. B. Stoddard, Moravia, vol. Transactions.

Best Grain Cradle, to David Flanders, St. Lawrence co., $3.

Best half doz. Hay Forks, to Taylor, Buttolph & Co., West Stockholm, Diploma.

Best Dung Forks, to Taylor, Buttolph & Co., vol. Trans.

Best Harrow, to John Wilkinson, vol. Transactions.

Best Fanning Mill, 1st, to Isaac T. Grant, Schaghticoke, Silver Medal—2d, to David Bryan, North East, vol. Trans.—3d, to E. Dodge, Watertown, Diploma.

Best Threshing Machine, 1st, to J. A. Taplin, Montpelier, Vt., $15—2d, to S. S. Allen, Poughkeepsie, vol. Transactions—3d, to A. Wheeler & Brothers, Chatham, Diploma.

Best Straw Cutter, 1st, to Wm. Hovey, Worcester, Mass., Silver Medal—2d, to Stephen Armstrong, Poughkeepsie, vol. Transactions—3d, to Thos. P. Thorn, Fishkill, Diploma.

Best Cheese Press, to Egbert Dodge, Watertown, $3.

Best Field Roller, to T. D. Burrall, Diploma.

Best Corn Sheller, to Francis N Smith, Kinderhook, Dip.

Best Bee Palace, to M. O. Remmington, Cayuga co., Dip.

Best Bee Hive, to E. Townley, New York, $5.

Best Harvesting Machine, to George Easterly, Heart Prairie, Wiskonsan, Diploma.

Best Model of Hay Press, 1st, to Dedrick & Brothers, Claverack, vol. Transactions—2d, to J. H. P. G. Yelverton, Poughkeepsie, Diploma.

Best Rut Shears, to B. Benedict, Genesee, Diploma.

Best Washing Machine, to Joseph C. Rich, Penfield, Dip.

Best Clover Machine, to Wheeler & Brothers, Columbia co., vol. Transactions.

Best Clover Gatherer, to Benj. N. Hart, Diploma.

Best Apple Drier, to Gustavus White, Diploma.

Best Churn, to David Dakin, Pine Plains, Diploma.

Best Cultivator Plow, to B. Langdon, Troy, $5.

Best Stump Machine, to R. H. Hall, Owego, Silver Medal.

DAIRY.

Best Butter, 1st, to I. Martin, Ulster co., $15—2d, to Hester Ann Travers, Troy, Silver Medal—3d, to Theodore Allen, Hyde Park, Silver Medal—4th, to Nathan Colman, Dutch. co., Silver Medal—5th, to Caroline S. Cheeseman, Dutch. co., Silver Medal—6th, to John Lester, Lagrange, Silver Medal.

Best Cheese, 1st, to H. P. & G. Allen, Duanesburgh, $15—2d, to A. L. Fish, Litchfield, Silver Medal.

MAPLE SUGAR.

Best, to Joel Woodworth, Watertown, $15—2d, to Wm. E. White, Walton, $10—3d, to Alfred Fitch, Riga, Diploma.

SILK.

Best Manufactured Silk, 1st, to George Gents, agent for Murry & Co., Paterson, N J. $20—2d, to Clark Avery, Madison co., 2 lbs. sewing, $10—3d, to Miss Margaretta Hutchinson, Long Island, $5—4th. to Wm. Thomas, Col. co., Diploma.

Best Reeled Silk, 1st, to Ruth S. Carey, Saratoga co., $10—2d, to Ira Howland, Pleasant Valley, $5—3d, to C. R. Cable, Constantia, Diploma.

Best Cocoons, 1st, to Ira Howland, $10—2d, to Palmer Cook, Red Hook, $5—3d, to J. C. Church, Poughkeepsie, Diploma.

DOMESTIC MANUFACTURES.

Best Woolen Carpets, 1st, 2d and 3d, to C. M. Pelton, Poughkeepsie, $5, $4 and $3.

Best Rag Carpets, 1st, to Mrs. C. W. Tower, Amenia, $3—2d, to Mrs. James Ryan, New Paltz, $2—3d, to J. Palmer, Poughkeepsie, $1.

Best Woolen Cloth, 1st, to Scofield, Capron & Co., Walden, $5—2d, to J. Bowen, Pleasant Valley, $4—3d, to Titus, Sweet & Co. Dutch. co. $3.

Best Carpet Coverlet, 1st, to Philip P. Knapp, Beekman, $4—2d, to Philip Dubois, New Paltz, $3—3d, to Israel Hall, Fishkill, $2.

Best Woolen Blanket, to Norman Culver, Arcadia, $5.

Best Linen Sewing Thread, 1st, to Peter Crispel, Jr. Ulster co., $2—2d, to Norman Culver, $1.

Best Linen Diaper, 1st and 2d to Mrs. Russell, Lebanon Springs. $5 and $4—3d to Peter Crispel, Jr. $3.

Best Linen, 1st to Mrs. Russell, $5—2d to Peter Crispel, Jr. $4—3d to D. W. Elting, Ulster co $3.

Best Linen Knit Stockings, 1st to Mrs. Freelove Arnold, Quaker Hill, $2—2d to Peter Crispel, Jr. $1—3d to Mrs. Vincent M. Townsend, Diploma.

Best Cotton Knit Stockings, 1st 2d and 3d to Mrs. Charles Thompson, Poughkeepsie, $2, $1 and Diploma.

Best Woolen Knit Stockings, 1st to S. Bassett, North East, $2—2d and 3d to Mrs. Daniel Washburn, Union Vale, $1 and Diploma.

Best Tow Cloth. 1st to Peter Crispel. $1.

Best Hearth Rugs, 1st to Chas. M. Pelton, Poughkeepsie, $5—2d to Nancy Hull, Lexington Heights, $4—3d to Lydia Peck, Lexington Heights, $3.

Best Flannel, 1st to Mrs. G. W. Henry, Lowville, $5.

VEGETABLES.

Best Celery, to Robert Kelly, Rhinebeck, $2.

Best Cauliflower, to Samuel Curry, Poughkeepsie, $2.

Best Turneps, to Michael Kane, gardener of John A. De Groff, Hyde Park, $1.

Best Carrots, to John B. James, Rhinebeck, $1.

Best Beets, to R. L. Pell, $1.

Best Parsneps, to W. Harrocks, Hyde Park, $1.

Best Cabbage, to R. L. Pell, $1.

Best Tomatoes, to R. L. Pell, $1.

Best Egg Plants, to John B. James, $1.

Best Onions, to Joseph T. Adriance, Poughkeepsie, $1.

Best Lima Beans, to Joseph T. Adriance, $1.

Best Double Parsley, to Michael Kane, $1.

Best Squashes, to R. L. Pell, $1.

Largest Pumpkin, to John Townsend, Hyde Park, $1.

Best Seed Corn, to J. F. Osborn, Port Byron, $1.

Best Table Potatoes, 1st to W. Horrocks, $2—2d to Samuel Curry, $1.

Diplomas were awarded for Celery to Samuel Mitchell, Poughkeepsie—to W. Harrock for Turneps and for fine specimen of Green Peas—to Michael Kane, for Orange Carrots—to J. F. Adriance, Poughkeepsie, for White Carrots and for best collection of various kinds of beets—to Nathan Colman, for beautiful specimens of White Onions—to N. Shephard, for Lima Beans—to D. B. Fuller, for 8 varieties of Squashes—to A. J. Downing, for Seedling Rhubarb—to Robert Kelly, for Vegetable Oyster.

Volumes of Transactions were awarded to Joseph F. Adriance for Cuba Pumpkins, 19 from one seed, weighing 776½ lbs.—to Hamilton Morrison, Montgomery, for 19 varieties of Potatoes—to Mrs. Verplanck, Fishkill Landing, for several fine heads of Lettuce—to Thomas Addis Emmet, New-York, for Okra and Cucumbers.

FRUIT.

For greatest variety of Table Apples, 1st to A. J. Downing & Co. Newburgh, $5—2d to John R. Comstock, Washington, $3—3d to J. F. Osborn, Port Byron, vol. Transactions.

For 12 best Table Apples, to R. L. Pell, Pelham, $3.

For greatest variety of Table Pears, 1st to A. J. Downing & Co. $3—2d to Wm. Reid, Murray Hill, vol. Transactions.

Volumes of Transactions were awarded to A. J. Downing & Co. for greatest variety of Winter Pears—to Alex. H. Smith, Hyde Park, for best 12 Quinces—to Mrs. A. Thorpe, Schodack, for best 12 Peaches—to A. J. Downing & Co. for best 24 Plums—to W. North, Poughkeepsie, for best 6 bunches Native Grapes—to Robert Donaldson, Blythebood, for best 6 bunches Foreign Grapes.

A Diploma and $1 was awarded to Moses Humphrey, Poughkeepsie, a colored man, 90 years old, for fine specimens of Grapes.

FLOWERS.

For greatest variety, 1st to Miss Verplanck, Fishkill, $5—2d to W. Harrock, $3.

For Floral Ornaments, 1st to Wm. Prince & Co Flushing, $5—2d to Miss Garretson, Rhinebeck, $3.

For Dahlias, 1st to J. M. Thorburn & Co. New-York, $5—2d to J. B. James, Rhinebeck, $3—3d to Messrs Piner, Flushing, vol. Transactions—4th to Mr. Swift, Poughkeepsie, Diploma. Discretionary—$3 to Mr. Van Waggoner, Poughkeepsie, and $1 to Samuel Mitchell, Poughkeepsie.

For Green House Plants, 1st to John N. Stuveysant, Hyde Park, vol. Transactions—2d to J. Charran, Poughkeepsie, Dip

PLOWING MATCH.

First premium to Wm. H. Warrall, Poughkeepsie, $15—2d to Peter F. Procius, Kinderhook, $12—3d to Valentine Halleck, $10—4th to E. B. Smith, Poughkeepsie, $6—5th to Elias Westervelt, Poughkeepsie, Diploma.

The Committee awarded prizes of $3 each, to John Day, of Lithgow, and James East of Poughkeepsie as the best plowmen.

IMPROVED AGRICULTURAL IMPLEMENTS.

Silver Medals were awarded to George Geddes, Onondaga co. for an improved Harrow—to Roswell H. Hall, Owego, for a Stump Extractor—to Wm. Hovey, Worcester, Mass. for his Straw Cutter—to I. T. Grant, Schaghticoke, for a Fanning Mill.

DISCRETIONARY PREMIUMS.

Needle Work—To Mrs. Tuckerman, 70 years old, for a Counterpane, $2—to De Witt C. Thomas for superior woolen Mittens, $2—to J. G. Wood, Gloverville, for a specimen of buckskin Mittens and ladies' Moccasins, $2—to Mrs. Polly B. Wescott, Greenfield, for Counterpane, $2—to Miss Johanna Hurley, Poughkeepsie, for a specimen of embroidery needle work, $2—and Diplomas to Mrs. J. Reynolds for an embroidered Table Cover; to Miss Eliza R. Davies for raised Worsted Work; to Miss Frances M. Kirby, Watertown, for a beautiful Work Bag; to Miss Akin, Dutchess co. for an elegant specimen of needle work.

Flour—To E. S. Beach & Co. Akron Mills, Ohio, for a *good* barrel of flour, Diploma—to Philip Garbutt, Wheatland, N. Y. for a *better* barrel of flour $3—to John Willliams, Rochester for the *best* barrel of flour $5.

Diplomas were awarded to Miss McDonald, Poughkeepsie for a beautiful specimen of Wax Imitation of Fruit; to Comstock and Johnson of Rome, for a splendid assortment of Garden Tools; to Lewis Wetham, Poughkeepsie, for two elegant Piano Fortes; to Maurice Cunningham, gardener of R. L. Pell, Esq.; to Charles Roome, New-York, for a specimen of the application of Coal Tar as a paint; to James Vail, Poughkeepsie, for an Artificial Grotto; to Miss Mary Sherwood, Fishkill, for one Divan and three Gilt Frames; to John M. Ketchum, for 3 slabs of fine white and clouded Marble from the quarries of Dover, Dut. co.; to Gifford and Sherman, Poughkeepsie, for a specimen of ground Dye-wood in jars; to Jared Gray, Poughkeepsie, for beautiful specimens of Hair Work; to Elisha M. Haley, Poughkeepsie, for a handsome specimen of fancy Brick; to Peter Crispell jr., for a specimen of Flax; to Augustus Thayer, Malden Bridge, for a Columbian Pump; Peter Van Vliet, Newburgh, for a specimen of Cooperage; to Hiram Pierce, Cooperstown, for a beautiful specimen of Penmanship; to Gen. R. Harmon, Jr., Wheatland, for 35 varieties of Wheat in the ear; to John R. Stuyvesant, Hyde Park, for 3 Top Knot Fowls, remarkable for laying eggs the whole year without intermission; to B. J. Hayes, Hastings, for a specimen of Egyptian Wheat in the ear; to Russell Comstock, Washington, for Seedling Apples and Pears; to Noah Gridley, Amenia, for two pairs Sad Irons; to Abram Fonda, Poughkeepsie, for samples of Tooth Wash, Tooth Powder, and Tooth Paste; to Anson Barhydt, Col. co. for 3 models of Bee Hives and Bee House.

Manufactures—Diplomas were awarded to the Middlesex Co Lowell, Mass. for a splendid assortment of Broadcloths, Cassimeres and fancy Woolens, J. Gleason, agent; to Archibald Winter, Roundout, for a specimen of Shoes made by a machin from one piece of leather without a seam; to Z. Pratt & Co Prattsville, for 4 sides of Spanish leather, sweated and tanne in 6 months in hemlock, in the common mode; to Watson an Dwight, Windham, for 4 sides of slaughtered Sole Leather, tanned in hemlock in 4½ months, in the usual mode; to Wm. Wilson, Poughkeepsie, for a Ledger in elegant Russia binding; t Joseph Laubach, Middletown, Penn. for an Iron Revolvin Hearth; to John C. Chambers, Poughkeepsie, for a beautifu Row Boat; to G. M. Velle, Poughkeepsie, for a Hat; to Henry D. Myers, Poughkeepsie, for a Pump and Block; to Wm. Shiel Poughkeepsie, for a fine specimen of Mahogany Grained Doors, to R. G. Holmes, Poughkeepsie, for a beautiful set of Artificial Teeth; to Bernard Skinner, Poughkeepsie, for a beautiful specimen of Buck skin; to Granger and Todd, Oneida co. for a spe imen of Glass Ware; to Thomas Prosser, New-York, for a beautiful variety of Porcelain Buttons; to Mosely, Howard & Co. Poughkeepsie, for specimens of Solid Head Pins; to Fairchild, Pelton & Co. Poughkeepsie, for specimens of the same; to M. Morse, Rochester, for an elegantly bound Blank Ledger; to John Eisel, Poughkeepsie, for a beautiful specimen of Boots; to Alex. Wright, Poughkeepsie, for a Rifle; to Alex. Ross for American manufactured Brussels Carpeting.

Carriages and Sleighs—Diplomas, to John H. Wood, Poughkeepsie, for Carriages and Sleigh; to John W. Whitney, Poughkeepsie, for a single horse Carriage; to Harvey Palmer, Poughkeepsie, for a single horse Pleasure Wagon.

Stoves—To Wager & Dater, Troy, for 4 Air Tight Stoves, $3; to Smith, Lockwood & Co. Troy, for 4 family and 1 hotel Stove for coal or wood, $5, and Diplomas were awarded to J. T. McCarty & Co. Rhinebeck, for one stove; to Barnard & Heermance, Poughkeepsie, for 2 cooking stoves; to Low & Bradley, Poughkeepsie, for 2 stoves; to George Smithson, Poughkeepsie, for a Cooking Closet; to W. O. Jenks, Albany, for a Parlor Coal Stove; to James Robb, Peekskill, for a cooking stove; to R. D. C. Stoughtenburgh, Poughkeepsie, for a Parlor Wood Stove and a Parlor Coal Radiator; to Atwood and Cole, Troy, for 4 cooking stoves; J. C. Heermance, Schenectady, for 2 cooking stoves.

Smut Machines—To Wm. Delaney, Canterbury, $5; to W. G. Borland, Little Falls, $3; to E. F. Cushman, Troy, $3.

A premium of $2 was awarded to John Wilkinson, Union Vale, for a specimen of Chrystalized Maple Sugar; to Andrew Meneely, West Troy, for two Church Bells, weighing 650 and 1525 lbs., with improved cast iron yokes, and 1 gilded Steamboat Bell weighing 172 lbs., of beautiful tone and finish; to John Dalley, Troy, for a fine specimen of cut Tobacco, $2; to Thomas N. Smith, New Paltz, for a fine specimen of Harness and Top Leather, $3; to Wm. H. Sleight, Hyde Park, for a Stove Drum, and beautiful specimens of tin Coffee Urns and Tea Pots, $2; to G. W. I. Brownson, Amsterdam, 3 kinds of Brooms and Brushes, $2; to Dedrick and Brothers, Claverack, for a Fire Escape, $3; to Wm. Roze, Philadelphia, for a hoof splitting machine, very ingenious, $5; to 6 pupils of the Institution for the Blind, New-York, for 8 specimens of Willow Work from American willows, presented by J. R. Horn, $6; to John C. Hall, Fallsburgh, for a sample of beautiful Timothy Seed, $3.

There was a most beautiful *carpet* sent by Mrs. E. Minor, of Canton, St. Lawrence county, which from a misdirection, did not arrive in time for the Fair. This is a matter of regret, not less so to others than to the lady to whom it belongs. It was retained for a few days and exhibited at the hall of the State Agricultural Society in this city, and was, by all who saw it, pronounced a most *superb article*. It was wrought by Mrs. Minor during her hours of leisure from household duties, through a period of *eight years*. The border consists of twenty-four groups of flowers, wrought with most exquisite taste and precision, yet all different in their character. The center consists of groups of cattle, sheep, with their shepherds, and other rural scenes—representations of buffalo and moose-hunting—animals and plants of tropical countries, where are shown the camel-leopard, lion, lioness and whelps, &c.—in another part were groups of birds, domestic and wild pigeons, pheasants, &c. Altogether it may be considered a splendid specimen of the ingenuity, industry and fine taste of the manufacturer.

CULTIVATION OF FRUIT—No. X.

THE APRICOT.

It is remarkable that a fruit of such excellence as the apricot, and ripening as it does from one to two months before the best early peaches, should be so little known. A year or two since, being in company with three persons from different parts of the country, one of whom was a distinguished bookseller, another a well known public lecturer, and a third an eminent clergyman, I handed them a few specimens of ripe apricots;—the first exclaimed, "This is a truly excellent fruit, and the first of the kind I ever tasted." The two others made the same remark—they had never seen the fruit before, although traveling yearly thousands of miles, and visiting all parts of the country. Similar remarks have often been made by others.

The apricot, in its natural character, is more nearly allied to the plum than the peach, resembling the former in its leaf, and in the stone of the fruit, but downy like the latter, and the finer varieties partaking largely of its flavor and excellence.

The apricot is budded on seedling apricots, and on peach and plum stocks. The plum stocks are preferred; but the great superiority they possess over peach stocks, so often ascribed to them by writers, we have not found by experience. They have not afforded protection from the worm, as that insect, not to be thwarted, will penetrate the bark above the point of junction between the bud and stock. In one case, an apricot, grafted three feet from the ground, into a plum tree, was destroyed, the worm entering at that distance from the ground. Examination proved it to be the same insect that attacks the bark at the roots.

The *soil* should be deep and dry. Last winter the writer lost a large number from their standing on a wet subsoil, though the surface was dry. Their growth is about the same as that of the more vigorous varieties of the plum, so that when fully grown they need about twenty feet square of ground for each tree.

This fruit appears to be about equal in hardiness to the earlier varieties of the peach, and escapes destruction by cold when the latter is not killed. It is however, pre-eminently liable to the attacks of the Curculio, and the usual destruction of the young crop by this insect often leads to the erroneous opinion that it is not adapted to our climate. The means for destroying the Curculio, mentioned in former numbers, when vigorously and thoroughly applied, have insured abundant and regular crops.

Among the varieties, the *Peach* and *Moorpark* (considered by many as identical) stand first on the list. The *Musk* is also very fine. The *Breda*, though inferior in quality, is hardy, vigorous, and a great and constant bearer. The *Black* apricot, a different species, is perfectly hardy in our severest winters, and though second-rate in quality, is an abundant bearer, and well worthy of cultivation.

J. J. T.

IMPROVED STOCK.

THE subscriber has now on hand and will sell, at fair and reasonable rates, several Durham cattle, consisting of cows, heifers and calves; also two bulls, a cross of the Durham and Ayrshire stock.

SOUTH DOWN SHEEP.—Two yearling bucks, several buck lambs and 16 ewes from 3 to 4 years old.

All letters, (post paid,) will be punctually attended to. Address
C. N. BEMENT,
September 1, 1844. *American Hotel, Albany.*

FINE FARMS FOR SALE.

THOSE very superior Farms situated near Galway Corners, in the county of Saratoga, collectively known as the Ear Stimson Farm, will be sold cheap and on terms most accommodating to the purchasers as to credit. The property consists o about 340 acres, is so situated as to be conveniently divided into three or four farms, all having the necessary buildings, and wil be sold together or in parcels, to suit purchasers. Each farm is properly divided into pasture, tilled and wood land, and is in the highest state of cultivation, fenced in the best manner and with the most durable materials. The property comprises among other buildings, a large and convenient hotel, which is favorite resort of families in the summer on account of the superior healthiness and beauty of the country. The farming buildings of all kinds are most extensive and convenient for al the purposes of agriculture and the raising of stock. The premises also include a country store, a most eligible location fo a country merchant, having been occupied as such for abou forty years. It is within two hours drive of Ballston, Saratoga and Schenectady. The farm is well known among leading agriculturists, and in the agricultural periodicals, as the Pattern Farm. For terms, &c., apply to J. OAKLEY,
Oct. 1.—tf. No. 76 Nassau street, New-York.

FIELD SEED STORE.

THE subscriber continues to keep constantly on hand at his long established Seed Store, a supply of the best quality and kinds of Field Seeds, viz:
Red Clover, of the large and small growth,
Timothy, Red Top, or *Herd's Grass, Orchard Grass,*
Lucerne, or *French Clover, White Clover,*
Trefoil, Kentucky Blue Grass, &c. &c.

Also, the different varieties of Wheat, as White Flint, Red Chaff, Mediterranean, and English—for sale in lots to suit purchasers at moderate prices, by ISRAEL RUSSELL,
Feb. 1, 1844.—mar. oct. 96 Front-street, New-York

FOR SALE.

15 SAXONY BUCKS, raised upon the farm of the late Elam Tilden, can be had at reasonable prices, by applying to Col. Tanner, on the premises. M. Y. TILDEN, P. M.
New Lebanon, Columbia Co. N. Y. Sept. 7, 1844—1t.*

IMPORTED AYRSHIRE CATTLE.

THE subscriber offers for sale the imported Ayrshire *Cow and Bull*, lately exhibited at the State Fair, both of which received a premium. Also, a bull calf 7 weeks old, and a yearling bull, both out of the above. Also, a very superior Durham bull calf, 6 months old.
Albany, Sept. 26, 1844. JOEL RATHBONE.

FRUIT TREES.

THE subscribers would respectfully call the attention of the public to their assortment of FRUIT TREES. They are enabled this fall to offer a choice collection of many of the most esteemed varieties of Apples, Pears, Cherries, Peaches, Plums, &c. The assortment of trees having been considerably increased, persons desirous of obtaining articles in the nursery line, will find it worth while to examine the collection previous to purchasing elsewhere. All of which will be offered at very reasonable prices for CASH.

N. B. All articles intended for distant transportation will be carefully packed at the expense of the purchaser, and delivered free of cartage to any part of the city.

WILSON, THORBURN & TELLER.

☞ Orders sent to William Thorburn, Seedsman, Albany, will receive prompt attention.
Albany, Oct. 1, 1844—2t.

BUFFALO NURSERY AND HORTICULTURAL GARDEN.

THIS establishment is now somewhat extensive; from 25,000 to 45,000 trees are engrafted or inoculated each year, and these too, mostly from bearing trees, embracing nearly all of the most choice and leading varieties of the Apple, Pear, Peach, Plum, Cherry, Quince, Nectarine, Apricot, Grape, Gooseberry, Raspberry, Strawberry, &c. Also, a large stock of ornamental trees, flowering shrubs, and green-house plants.

The new descriptive Catalogue, recently published, will be forwarded to every post-paid applicant. This Catalogue gives in detail, the name, color, form, size, &c. of the various kinds of fruits cultivated at the establishment, together with ample descriptions of ornamental trees, shrubs, plants, roses, &c.

Trees thrifty and fine; prices moderate. Orders promptly attended to. Trees packed in superior order. B. HODGE.
Buffalo, Sept. 20, 1844—2t.*

NORMAN HORSES FOR SALE.

THE undersigned, having relinquished farming, offers for sale his entire stock of Norman horses, twelve in number: imported, and their descendants. As he proposes to exhibit his stallion 'Diligence,' and two of his colts, broken to harness, at the Fair of the American Institute in the city of New-York, on Wednesday, the 16th of October next, and offer them for sale on Friday, the 18th, he deems it unnesary to enter into particulars, as he will be present to answer enquiries. He will merely refer to pages 172 and 193 of the Cultivator for 1842, the American Agriculturist, page 209, for 1844, the New-York Central Farmer for March, 1844, and the Farmer's Cabinet of Philadelphia, vol. VI, No. 9, for information in regard to his importations of these horses, their uses, &c. The balance of the stock, consisting of 1 stallion and 2 mares, imported, and 3 stud-colts and 3 mare-colts, their progeny, will be held at private sale at Moorestown, in the county of Burlington, New Jersey, 9 miles from Philadelphia, by
October 1—1t. EDWARD HARRIS.

TO FARMERS.

THE undersigned, having succeeded L. Bostwick & Co., in their business, will continue to manufacture and vend the "Warren's Improved Horse Power and Threshing Machines," to order.

Being now so completely perfected, they prove from experience, wherever correctly known, as now made, to be preferred before all others at any thing like *their low price*, which brings them within the ability of every farmer. And if "time is money," and "economy is wealth," no prudent farmer who raises even a small quantity of grain, will do without them.

Every satisfaction in regard to them, can be given at the office of the subscriber.

Prices of the Machines, as follows—viz: a sett of one horse machines, for only $50 and $60—two horse, $75—four horse, $110.

H. BARTLETT,
Successor to L. Bostwick & Co., 146, Front-st., New-York.

N. B. The subscribers take this opportunity with pleasure, to recommend Wm. Bartlett to the full confidence of all who may favor him with their orders. L. BOSTWICK & Co.
October 1—1t.

LINNÆAN BOTANIC GARDEN AND NURSERY,

LATE PRINCE'S.

Flushing, L. I., near New-York.

THE NEW DESCRIPTIVE and UNRIVALLED CATALOGUE, not only of FRUIT, but also of ORNAMENTAL TREES, SHRUBS and PLANTS, cultivated and for sale, *at reduced prices*, at this ancient and celebrated Nursery, (*the* IDENTICAL *premises known as* PRINCE'S, *and by the above title for nearly fifty years.*)

☞ WITH DIRECTIONS FOR THEIR CULTURE, may be had *gratis* on application by mail, *post paid*, to the New Proprietors, who will endeavor to merit the confidence and patronage of the public, by integrity and liberality in dealing, and moderation in charges. WINTER & Co., Proprietors.
Flushing, August 31, 1844—2t.*

STRAWBERRIES, &c.

WM. R. PRINCE & Co., Flushing, offer for sale, all the forty-eight varieties described and priced very low, in their Catalogue of 1843-4, 33d edition, among which are Swainstone, Garestone, British Queen, Victoria, Black Roseberry, Hovey's Seedling, Prince Albert, Ross Phoenix, Bishop's Orange, Myatt's Pine & Eliza, Melon, Keen's Seedling, Elton, Southborough, Downton, Warren's Seedling, Black and Prolific and Green Hautbois, Old Scarlet, Large Early Scarlet, Red and White Wood, and Red and White running and Bush Alpine, &c. Also, these additional new varieties, Crimson Cone, Bishop's Wick, Coul, late Scarlet, Turner's Pine, at $2 per dozen.

Orders not less than $5, enclosing cash, will meet prompt attention. 500 Fastolf Raspberries, very large fruit, and very strong growth, and all other choice varieties. From now till November, the strawberries can be planted.
Prince's Lin. Garden and Nurseries, Flushing, Aug. 9, 1844—2t.

MOUNT HOPE GARDEN AND NURSERIES,

ROCHESTER, N. Y.

THE proprietors of this establishment, respectfully announce to the public, that their present stock of *Fruit and Ornamental Trees, Shrubs, Plants*, &c. which they offer for sale the coming fall, is very large and fine. The collection of the various fruits, for the garden and orchard, comprises the most popular and esteemed varieties known in Europe or America. The trees are handsome, thrifty and of the most suitable size and age for transplanting, and being propagated by the proprietors themselves with the most scrupulous care, either from bearing trees in their own grounds, or from others of undoubted genuineness, and being in every other respect, until they are sent from the nursery, under their *immediate personal supervision*, they can be confidently recommended to the most exact and scrutinizing cultivators.

The collection of fruits includes 1,000 Pear trees of the best varieties, selected in one of the best fruit nursery's in France, last spring, by one of the proprietors. They are grown on Quince stocks for dwarf pyramids, &c. and are now in a bearing state.

Also, 3,000 trees of the valuable native Apple, the "Northern Spy," one of the best keeping varieties cultivated.

The stock of Ornamental Trees, Shrubs, Roses, &c. is very large, and will be furnished at very moderate prices; where quantities are wanted for ornamenting public grounds, a liberal discount will be made. The collection of Roses includes 1,000 standards, 4 to 6 feet high, of the finest varieties of Province, Moss, Chinese and Noisette Monthly, Tea scented, &c. A large assortment of Dutch bulbous roots will be received from Holland in September, and furnished to amateurs, gardeners and agents on very liberal terms.

It is expected that all orders coming from persons unknown to the proprietors, will be accompanied by a remittance, or that some responsible reference will be given Priced Catalogues will be furnished gratis to all who apply *post paid.* Address
Rochester, N. Y. Sept. 1844—2t. ELLWANGER & BARRY.

P. S. 50,000 seedling apple stocks 2 years old, will be sold at $6 to $10 per 1,000, if application be made immediately. E. & B.

GREAT SALE OF ELECTORAL SAXON SHEEP.

THE undersigned will sell at vendue the two flocks of *Pure Electoral Saxon Sheep*, belonging to the estate of the late Henry D. Grove, as follows:

1. That at Grainger, Medina co., Ohio, consisting of about 400 sheep, on the farm now occupied by them, on the 30th of *September next.*

2. The home flock, at his late residence in Hoosick, Rensselaer county, N. Y., consisting of about 350 sheep, on the 15th of *October next.*

A rare opportunity is offered to those who may be anxious to improve the quality of their flocks. The following is the opinion of the distinguished manufacturer who has usually purchased Mr. Grove's wool, of the character of these flocks:

"The purest blood in this country was introduced by the late Mr. Grove in his own flocks, the wool from which I have been familiar with since their importation in 1827. In point of fineness and admirable felting qualities, this wool is unsurpassed by any flock in this country, and the fleeces average about half a pound each more than any other I am acquainted with of equal fineness. SAM'L LAWRENCE.
Lowel, April 9, 1844."

Terms of sale, cash.—Reference, Sam'l Lawrence, or either of the subscribers.
Buskirk's Bridge, April 20, 1844.

ELIZA W. GROVE,
W. JOSLIN,
my1.—5t. S. A. COOK.

SUPERIOR FARMS FOR SALE.

TWO superior productive farms in Rensselaer county, 2 miles from Hoosic Falls. The farms are about one hundred acres each, and so situated as to be conveniently worked as two or one farm: each having the necessary buildings, and being judiciously divided into pasture and tilled land, all recently fenced with entire new materials in the most durable manner. The land is all of the first quality, and its present state of cultivation would bear a good comparison with any land in the county. These Farms will be sold together or separate, on terms most accommodating as to price and credit. Apply to
Lansingburgh, July 16, 1844. ALEXANDER WALSH

DEVON CATTLE.

HAVING had frequent enquiries last season for Devonshire Cattle, I now have the satisfaction to state, that I can accommodate those who wish, with some good Calves, Yearlings or Two-year-olds, Bulls or Heifers. E. P. BECK.
Sheldon, Wyoming Co., July 1844.—3t.

THE CULTIVATOR.

NEW SERIES
"TO IMPROVE THE SOIL AND THE MIND."

VOL. I. ALBANY, NOVEMBER, 1844 No. 11.

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

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THE CULTIVATOR.

MONTHLY NOTICES.

COMMUNICATIONS received the past month, from J. P. Norton, J. M. Tower, S. Weller, C. D., A Subscriber, H. S. Randall, T. H. Hyatt, M. D. Codding, B. Woodcock & Son, J. Deveraux, T., L. Durand, H. Sanford, J. H. McDewell, J. J. T., Geo. J. Pumpelly, H., J. D. F., L——, Wm. Jennison.

We are indebted to Messrs. APPLETON & Co., booksellers, New-York, for a copy of Fresenius' "Elementary Instruction in Chemical Analysis," reviewed by our correspondent "A Practical Farmer," p. 160—To M. H. NEWMAN, bookseller, New-York, for "The Housekeeper's Annual for 1845," and the "Kitchen Directory and American Housewife," both valuable works for the ladies. —To J. S. SKINNER, Esq. for a pamphlet on Guano, detailing a variety of experiments with this manure, made in this country and in Europe. To THOMAS HANCOCK, Nurseryman, Burlington, N. J., for a copy of his new Descriptive Catalogue of Fruit and Ornamental Trees, Green-House Plants, &c.—To P. L. SIMMONDS, Editor Colonial Magazine, London, for a number of his Magazine, and for the Journal of the Ag. and Hort. Society of Western Australia for 1842.

☞ Our esteemed fellow citizen, Professor E. N. HORSFORD, recently sailed for Europe with the intention of spending several years in the investigation of chemistry, and the natural sciences, under the direction of Professor LIEBIG, and other distinguished men, in different parts of that continent. Professor H. is a young gentleman who is already favorably known in this country for his scientific investigations, and we doubt not that through his characteristic energy and industry, a fund of useful knowledge will be accumulated, which will not only be highly gratifying to himself, but will, should his life be spared, render his future labors highly valuable to his countrymen. It affords us great pleasure to inform our readers that occasional letters from Professor Horsford, during his residence abroad, will be given through the columns of the Cultivator.

IMPORTED DURHAM COW.—GEORGE VAIL, Esq. of Troy, informs us that he has received by ship ROSCIUS, Capt. COLLINS, from THOMAS BATES, Esq., Kirkleavington, Yorkshire, England, a young cow, four years old, called *Lady Barrington* 3d. Her pedigree will be found in the second part of vol. 5th of the Herd-book. She was by Mr. Bate's bull *Cleveland Lad*, (3,407) which took the highest premium at the show of the Royal Agricultural Society at Liverpool, in 1841. Mr. Bates obtained the first of the Lady Barrington family, in 1831. They are said to have been the favorite tribe of cows of the late Lord Barrington, from 1794. It will be seen by an advertisement in this number, that Mr. Vail offers a few of his Durhams for sale.

IMPORTATION OF DORKING FOWLS.—We were shown a short time ago, by L. F. ALLEN, Esq. of Buffalo, several very fine Dorkings, just arrived from England. Mr. Allen intends these for making a fresh cross on the fine stock he has for several years had. They are an excellent breed of fowls. Mr. H. T. Chapman, of New-York, also received some Dorkings by the same vessel which brought Mr. Allen's.

WILD TURKIES.—A friend has left in our charge two pair of wild turkies, brought from Illinois. They were hatched from eggs of the wild turkey, obtained in the woods, but being brought up in a state of domestication, are perfectly tame and contented. They are yet young, being chicks of the past summer. Great advantage is known to result from crossing the common domestic turkey with the wild one. The progeny are much more hardy, make larger birds, and grow up with less difficulty. The flesh is also thought to be improved. Those left in our care, are for sale at $10 per pair.

CHOICE POTATOES.—In the October number, we spoke of a superior kind of early potatoes, grown on Professor Hall's place, near this city. We acknowledge the receipt of a sample of these potatoes, which may be seen at this office. They are white, of good size and excellent quality—are very early, and yield well. They produced the past season, on soil of medium quality, near three hundred bushels per acre, and were wholly ripe before the *blast*, which generally struck the potatoes in this region, came on—being fit for market by the fourth of July.

THE CULTIVATOR ALMANAC FOR 1845.—Such has been the demand for this Almanac, that we have already disposed of over sixty thousand copies. Orders for any section of the country can be supplied—price $15 per 1000—$2 per 100. For the information of our friends, we would state that the "Cultivator Almanac," can be obtained of M. H. Newman, bookseller, 199 Broadway, New-York—Carey & Hart, booksellers, Philadelphia—Armstrong & Berry, booksellers, Baltimore—W. H. Moore & Co. booksellers, Cincinnati—A. D. Phelps, 124 Washington-st., Boston—Henry Vail, Montpelier, Vt.—David Kirkaldie, Rutland, Vt.—J. C. Derby & Co., Auburn—Wm. Alling, Rochester—T. Morehead, Erie, Pa. Wm. S. Maynard, Ann Arbour, Mich.—Graves, Wood & Co. Macon, Ga.

THE BITTER ROT IN APPLES.—Mr. J. H. McDewell, of Cumberland county, Pa., informs us that a neighbor of his had two apple trees, the fruit of which was much affected with the *bitter rot*. Noticing that the ground under the trees was covered with White Plantain, which he thought indicative of a poor soil, he manured the ground heavily with stable manure, and the result is that the trees bear annually fine crops of fruit, not in the least subject to the rot.

Lucerne.—If J. W. J. of Westbrook, N. C., will re-peruse the article on the culture of Lucerne, Sept. No. p. 173, he will find the information he asks for. It is to be sown in *drills* (not hills) or rows—the *rows* to be ten inches apart. Sown in this way, ten pounds of seed will be sufficient for an acre.

The American Farmer.—The publisher of this well known paper, Mr. S. Sands, being about to engage in the publication of a daily journal, offers the Farmer establishment for sale. It affords a favorable opportunity for a gentleman who has a taste for agricultural pursuits, to engage in their promotion, with profit to himself and advantage to the public. Address Mr. S. Sands, Baltimore.

The Crops in Alabama.—Extract of a letter from Dr. N. B. Cloud, dated La Place, Macon county, Sept. 30:—" The crops in this county the present season may be considered upon the whole as good—both cotton and corn. We experienced a most injurious drouth in the early part of summer, which we supposed for a while had cut the crop short at least one half, but in this we shall be mistaken, as the crop is gathering well. In the prairie lands, the wet since the drouth, and the worm and rust consequent thereupon, have produced considerable damage, which has not been the case upon the sand lands to but a very limited extent. The new crop is selling in Montgomery at from 6 to 6¼ cents per lb. No new corn selling—50 cents per bushel is being asked."

At page 88, vol. 10, of the Cultivator, Dr. C. will find the recipe for making stucco whitewash, which he inquires for.

Encouragement to Silk Growers.—M. Van Schaack, Esq., of New-York, has proposed to give $1,000 to the American Institute, to be awarded as premiums, in sums of $100 annually, to encourage the growth of silk.

Good Cotton.—The Macon (Ala.) Republican of Oct. 10, says—" We have in our office a single *limb* of a cotton stalk, which has on it *sixteen* bolls! It was sent us from the plantation of Col. Whiting Oliver, of this county. We have never seen its match."

DISEASE IN POTATOES.

We have numerous accounts of the "*rot*" in potatoes. It is, however, much more prevalent in some districts than in others. In a late visit to the easterly part of Massachusetts, we found very little complaint of this malady. In some cases the vines have blasted, but the tubers, excepting on very wet and heavy land, or where planted late, have not much rotted. As to the original cause, we are still about as much in the dark as ever. Mr. Teschmacher, of Boston, and some others, think the decay is occasioned by a fungus, but what produces the fungus, is not yet ascertained. Some peculiar atmospheric influence has undoubtedly been the remote cause of the defect. The necessary agency of electricity in animal and vegetable life, is well known; but what particular combinations, states or conditions of this element, are essential to the development or continuance of this life, we know not. It is evident, however, that any unusual variation of so important a principle, would sensibly affect vegetation.

Our accounts from Europe, state that the disease has been more or less prevalent in many parts of that continent for four or five years. There is an elaborate article on the subject in the last number of the Quarterly Journal of Agriculture, but nothing particularly new or important is brought out. The rot is said to assume a varied character, and its different forms are designated as the " Wet and Dry rot."

We have received from a correspondent at West-Schuyler, Herkimer county, who signs " J. D. F." an article from which we condense the following.

The disease first made its appearance in that neighborhood last year, about the beginning of October, but did not much affect the potatoes until after they were dug. This season, the decay commenced much earlier, and prevails more extensively. In many instances the crop will be lost—whole fields are abandoned as not worth gathering. Our correspondent states that on his farm, " the potatoes are large and abundant, but when dry, three-fourths of them are more or less decayed, emitting a fetid odor, truly sickening." " I find," he observes, " on most of them, a small fungus, in appearance like a bluish mould, and those that are close to each other in the hill, unite and become one mass of fetid matter." From considerable inquiry, he has come to the conclusion that all sorts, and all varieties of potatoes, are equally effected, " though some fields much more than others." He thinks " those planted in the richest soils, have perhaps suffered a little worse than those on poorer lands." Between early and late planting, he can not perceive much difference.

" J. D. F." suggests that the cause of this defect " may be found in our seed having been planted too long without change." He continues, " if this is the case, the remedy must be in procuring seed potatoes from a distance. Should I live, I intend to procure some both from Ireland and North Scotia. Perhaps potatoes raised from the seed of the potatoe-ball would do better. Will some of your correspondents give through the Cultivator the process of saving the seed and planting?"

We shall not be in haste to advance *theories* on this subject, but shall collect all the facts in our power, and lay them before our readers. In relation to the communication of " J. D. F." we would remark that the idea of the disease having originated in the degeneracy of varieties from age, has been before advanced by others; but for our own part we cannot think *facts* support such a conclusion. Numerous instances might be cited, where those kinds which have suffered most, have been those which were produced from the ball within a few years, and many of the kinds which have been least affected, are the oldest known in the country. The disease may be called an *epidemic*, and in reference to it we feel warranted in laying down the following as facts.

First—that certain localities or neighborhoods have been more subject to it than others. *Second*—that although the *blast of the tops* (in the same variety) seems quite general on all descriptions of soil where the disease prevails, yet the *decay of the tubers* more frequently occurs on wet and heavy, than on light or loamy soils. *Third*, that certain *kinds* of potatoes, which have been generally known as less *hardy* than others, are the first to be affected, and that other and more hardy kinds are more exempt from attack; but in the most infected districts, the malady may affect all—corresponding in this respect to epidemics among animals. Some are more predisposed to the disease than others, yet where it assumes the most malignant form, all may be swept off.

In relation to raising potatoes from the ball, we have several times produced them in this way. We have generally obtained several varieties from the same planting of balls—some of which were worthy of cultivation, and some nearly worthless. The same rule prevails here as in raising apples from seed—among many worthless kinds, we get, occasionally, a superior one.

The balls should be gathered in the fall, from which the seeds may be washed and dried, or the balls may be kept in the cellar all winter, and planted in good mellow soil in the spring. When fairly up, they may be carefully transplanted in rows two feet apart, and eight inches in the row, well hoed and kept clean from weeds. Some of them, if the season is good, and they are well managed, will grow to the size of hen's eggs the first season. At the time of digging, sort out the varieties, and plant them separately the next spring. The respective qualities of the different kinds, can be told pretty accurately the second season, when such as it is advisable to preserve, may be adopted, and the others rejected.

In Mr. Norton's letter from Europe, in this number, will be found some interesting remarks on the subject of the disease in potatoes.

Mr. T. R. Stackhouse, of Jefferson county, informs us that where his potatoe-vines were struck with rust, he found the potatoes much more likely to be affected with rot, and those tubers were most affected that came nearest in contact with the stalk.

CROPS IN MISSISSIPPI.

By a letter from M. W. Philips, Esq., of Miss., we learn that the cotton crop of that neighborhood was being gathered in good order; but an opinion could not yet be formed in regard to the yield of this season. Dr. Philips says, "there is no crop so uncertain as the cotton crop. As to saying what it will be, even if to all appearances half done, yet there is uncertainty—a late fall will increase it vastly. This year, I have 9 acres to the hand in cotton, and excepting two of them, I should make an average of 1,600 lbs. per acre—crop planted early, cultivated well, often and late—but I shall not make over my last year's crop, (which was 6½ bales from 9 acres,) *if I do that.*"

Dr. Philips thinks that the cotton resources are greater than many suppose. He says, "we can grow in a favorable season, such as 1830 or 1839, full 3 millions of bales, *which will be done*, (not this year, I mean,) and when done, look out for land and negroes going down. I cannot stir my fellow citizens up on this important matter—they plant too much cotton, and too little of other things. By and by, when starvation stares them in the *meat-pot*, they will want fields of grass, and orchards and gardens."

Dr. Philips observes that a great interest is beginning to be taken in his region of country in the production of fine fruits. For peaches, plums, nectarines, figs, &c. he thinks the climate and soil of Mississippi admirably adapted.

Samples of Wool.—We have shown the samples of wool sent by Dr. Philips, to one of the most extensive wool-dealers in this city. He informs us that the samples of lambs' wool, marked 1 and 2, are worth at this time, the following prices, viz: No. 1, 33 cts., and No. 2, 35 cts. per pound. That the sample marked No. 3, "Saxon Ram ('*Father Abraham*,') would be worth, if well washed, 40 cents per pound.

It is proper to remark that all wool has lately fallen in price in the eastern markets. It seems to us that the sample marked No. 3, is nice wool, and if properly cleansed would be highly valued by the manufacturers of fine *cloths*. The lambs' wool cannot be so well judged of. The samples seem to have come from a variety of sheep, in which the lambs are born covered more or less with hair. In some of the Spanish varieties, the lambs are always hairy at birth, but the hair afterwards comes off, and is succeeded by fine wool. In many cases where the lambs are hairy at first, the fleece improves much in fineness after the first shearing.

NEW PUBLICATIONS.

Dictionary of the Farm, by Rev. W. L. Rham.—This work, the publication of which has been sometime delayed in consequence of the sudden death of the author in 1843, has just made its appearance. The work is arranged in alphabetical order, neatly printed, and numbering 576 pages. We have looked over the book with some attention, and can say that we have seen no publication in which the researches of science and study are more happily united with the dictates of experience and sound judgment; and we have no hesitation in recommending the "Dictionary of the Farm," to the attention of the agriculturists of this country. Published by Chas. Knight & Co., London, and for sale by Wiley & Putnam, and D. Appleton & Co. New-York—price $2,50.

Farming for Ladies, or a Guide to the *Poultry-yard, the Dairy, and Piggery*, by the "Author of British Husbandry."—The character of this work will perhaps better appear by the following extract from its preface, than from any description of our own:

"'Our business in life is to be happy,' and the true way of making it so is to be contented with a moderate income; but, in acquiring this, it is not perhaps so much the art of *gaining it*, as that of judiciously *spending it*, that we have to learn, and it is only in well regulated families, conducted by a careful housewife, that it is to be known. She it is on whom rest the enjoyments of home. It is on her management that domestic comfort depends; it is by her cares that she draws around her family circle those social pleasures which endear it to the heart of every inmate of good feeling; and the man who does not duly appreciate her efforts for that purpose, assuredly does not merit the smiles with which she cheers him on his return from the anxieties of the day."

This little treatise is neither intended for the mere cottager, nor for persons of large fortune, but for those ladies in middle life who study healthful domestic economy, either for pleasure or the profit it affords; though, in saying this, we may justly add—that a cottage housewife might gather useful hints from its contents, and that a duchess would lose nothing by its perusal.

The work is got up in fine style, accompanied with beautiful illustrations, and combines, in an attractive manner, the ornamental with the useful in domestic economy. For sale as above, price $2,75.

VERMONT CATTLE SHOWS.

During the past year, several Ag. Societies have been organized in Vermont, and their fairs are exciting the attention of the farmers as they have done in other places? The first Fair of the *Windham County* Society was held at Newfane on the 25th and 26th Sept. The meeting is said to have been the largest ever held in the county, with the exception of a political meeting in 1840. There were over 1200 wagons present. Among the cattle, was a team of sixty yoke of oxen from West Newfane, and there were many fine animals of all kinds present. The show of domestic manufactures, butter, cheese, maple sugar, fruits, vegetables, &c. was very fine. An address was delivered by Hon. Charles Hudson of Massachusetts. The premium for the best crop of *wheat*, was given to D. Dexter, Jr. Dover—42½ bushels per acre; and that for the best corn, 82 bushels per acre, to Martin Gates, Dummerston—for the 2d best, 70 bushels, to W. H. Williams, Newfane.

The *Addison County Fair* was held at Middlebury on the 1st Oct.—3000 were estimated to be present. The exhibition of stock, implements, household manufactures, &c. was highly gratifying, and an address "admirably adapted to the occasion, was delivered by Farmer Jennison, former governor of the state." We give the premiums on sheep at the request of a subscriber—for fine wool buck, 1st, to D. & G. Cutting, Shoreham—2d, to P. Ellithorp, Bridport—3d, to Mr. Northrop, Shoreham—4th, to T. Stickney, Shoreham. For best fine ewes—1st and 3d, to T. Stickney—2d, to D. & G. Cutting. For best five lambs—1st and 3d, to D. & G. Cutting—2d, to T. Stickney. Mr. Hinds of Brandon, presented for exhibition only, a Rambouillet ram, from the flock of Mr. Collins of Hartford, Ct., which, says the Northern Galaxy, was "a strongly constituted and beautiful specimen of the animal, and for fineness, combined with those qualities which render a fleece valuable, would well compare with any buck present."

Caledonia Ag. Society.—Mr. J. P. Fairbanks will please accept our thanks for a report of the exhibition of the Caledonia County Agricultural Society. The exhibition took place on the third of October. There was a good show of live stock in general, (with the exception of sheep,) and fine specimens of implements, dairy products, fruits, vegetables, and household fabrics.

FEEDING FOWLS

"A Subscriber" inquires "which is the best grain for feeding fowls, eggs being the object?"

Fowls require a variety of food. Grain of all kinds is good. *Wheat-screenings*, which can be had at all mills where wheat is ground, constitute a cheap and good feed for fowls. Buckwheat, barley, oats and Indian corn, should also be given occasionally. They should also have animal food. This may be supplied from the offals of slaughter-houses. If they are kept confined, they should have occasionally some cabbages cut up and given them. Potatoes and turneps will also be found useful.

"Two or three spoonsful of strong ley, made of oak ashes, and mixed with molasses, are recommended as a positive cure for croup."

TAKE CARE OF YOUR WOODLANDS.

There are very few things in which farmers in general exhibit such gross waste and want of forethought, as in their treatment of their woodlands. Dependent as the great majority must always be on these for fuel; diminishing rapidly as they must be in our climate annually; a large proportion timbered with trees that do not readily shoot up, and will not grow again without some protection; we still see the noble trees of our original forests as carelessly and as uselessly felled as though they were not the growth of centuries, and like Jonah's gourd would spring up again in a night. In the management of our woodlands some things are deserving of notice, that are too generally entirely overlooked.

The first thing, and it is an indispensable one, is, that the woodlands should be well fenced. We can never have a growth of young timber, particularly on lands originally covered with beech and maple and their kindred trees, unless this is done. It is true thousands of young trees will germinate, but so fond are cattle and sheep of their young foliage, that none to which these animals can have access will be permitted to grow. It is only after a thick growth of underwood, sufficiently tall to be beyond the reach of cattle, has been secured, that any animal should be admitted to the wood lots. We have seen a beautiful wood lot on which many thousands of thrifty young trees from three to five feet in height were growing, reduced in a year or two to the condition of an open wood, and the young growth entirely destroyed, by being carelessly thrown into a cattle range; and there is scarcely any wood lot, however destitute of young trees it may now be, that will not be covered with them in a short time if kept safe from the intrusions of animals.

The second thing to be remembered is, never to cut a tree needlessly. There are many who when they want a piece of timber, no matter how small it may be, instead of first seeing whether the want cannot be supplied from some already fallen, or timber already on hand, take their axe and improvidently prostrate any tree they can make subserve their present purpose, without reference to future value or use. Never fell a tree until you have ascertained its value for general purposes, for fuel, and not till you have found it is absolutely necessary.

Another thing not to be forgotten in the treatment of woodlands is, always to select those trees which have arrived at maturity, are the slowest in their growth, or have begun to decay. In a thrifty woodland, the greatest amount of growth, is usually with the younger timber; for though there will be some large trees that will increase as fast as smaller ones (and consequently give a much greater annual increase of wood from their greater diameter) yet there will also be many with no perceptible growth, or on which the process of decay has actually commenced. Such are the trees that should be selected for timber or fuel; and a double advantage will result from this course, thrifty timber will be saved, and the younger growth benefitted by more ample exposure to the sun and air.

It will be found of essential service in the preservation of woodlands, and in increasing their value, to keep all vacancies that may occur, either naturally, or by the falling of trees, filled by transplanting. We know of some farmers who keep a nursery of locust for the express purpose of increasing the value of their wood lots by transplanting this excellent timber tree wherever an opening offers. Others use those kinds of young trees which are readiest at command, or to which the soil seems most congenial. The kind of tree transplanted is of comparatively little consequence, provided it is of sure and quick growth, and is fit when grown for either timber or for fuel. By attention to the points we have here indicated, the value of our wood lots might not only be greatly increased, but the scarcity of wood with which so many of our farmers are already severely threatened, be averted.

HORTICULTURAL AND FLORAL EXHIBITION.—The exhibition of the Horticultural and Floricultural Society of Columbia county, N. Y., took place at Hudson on the 20th September. A beautiful, interesting, and instructive address was delivered on the occasion by Mr. J. S. GOULD, of Stockport. This Society, we are glad to learn, is in a prosperous condition, and will, it is hoped, be the means of extending a correct taste, and judicious management in the culture of fruits and flowers.

AGRICULTURAL EXHIBITIONS.

The various Agricultural Societies of the country, have generally held their exhibitions during the two last months. We have received accounts from the following county societies in this state, viz: Erie, Ontario, Onondaga, Chautauque, Monroe, Madison, Oswego, Cayuga, Herkimer, Saratoga, Rensselaer, Columbia, and Dutchess, and also accounts from many societies in other states, but our limits only permit us to give a general notice. In most instances, the shows have been much more spiritedly attended this season, than for several previous seasons. In the New England states, so far as we have learned, this has been particularly the case. Nearly all the accounts from that quarter, inform us of the improvement in the character of their exhibitions. We regard this as good evidence of the advancement of agricultural improvement. We believe the agricultural societies and agricultural papers, have already been the means of greatly improving the husbandry of the country, and of largely augmenting the products of the field and garden. An intelligent gentleman, the Rev. MERRILL ALLEN, of the county of Plymouth, Mass., observed to us in conversation, the other day, that he felt confident the agriculture of that county, though the soil was generally not of the best quality naturally, and had been considered by many as worn out years ago, had been, within the last fifteen years, improved from twenty to fifty per cent. To the interest created by the well-managed agricultural society of that county, we think is to be mainly attributed this improvement, and we doubt not that similar beneficial effects have followed and will continue to follow the organization and proper management of such societies everywhere.

PLANTING TREES.

Reader, have you not some vacant spot in your orchard, some nook in your garden, some unplanted road side, some unoccupied place in your yard where some trees might be planted to advantage? Look around and see if there is not room for some, or perhaps many, of the kinds useful for timber, or their fruit, or ornamental purposes. It is possible you attended to this matter fully last spring, but the chances are, that you will on examination, find room for more trees. If so, now is a very good time to supply the deficiency; not so good, perhaps, as the spring would have been, but too good to be allowed to pass without improvement. Trees may be transplanted at any time after the growth of the season is over, with perfect safety, and they may be removed at any time, if the fine roots are undisturbed, and during removal retain their hold on the earth. When trees are transplanted in the fall, it is necessary to guard against two dangers to which spring planted ones are not so much exposed. The first of these is, they are apt to become loose in the ground from the action of the winds, as the roots do not take hold of the soil as quickly in the fall as in the spring; and the second is, water is apt to settle in the holes dug, and expose the roots to the injurious action of stagnant water. To prevent the first, if the tree is small, a stake well set in the ground, to which the tree, wound with bass matting, cloth, or something to prevent rubbing, may be securely fastened. If large, and the roots spreading, three sticks placed in a triangular form around the stem, and well fastened down at each angle by wooden hooks driven into the ground, will usually keep the tree in its place. If the soil is tenacious, and there is danger of the holes, when the tree is put in them, becoming pits of stagnant water, drains must be made to them which will prevent the evil at once. Where a number of trees are to be set on such a soil, it will be much benefited by a thorough deep plowing, which will render the soil generally more pervious to water, and prevent its ready accumulation.

CONNECTICUT CATTLE.

Connecticut people have reason to congratulate themselves in many respects. They have done more to people the vast west, and we may add, to christianize and civilize it, than any other State in the Union; and wherever they go, they are apt to carry their industry, morality, and love of knowledge, things they acquire in their youth, with them. In other respects, too, Connecticut furnishes examples well worthy of imitation. She has some poor land, and some poor farmers, but she too has much excellent land, and many first rate farmers to till it; and these men have made the land of steady habits almost a model so far as regards agricultural pursuits. A person familiar with the condition of things there forty years since, and particularly with the agriculture of that period, can hardly realize the changes that have taken place for the better within that time. But we took up our pen to speak of Connecticut cattle, working cattle, for in no part of the United States can so many good working cattle be found in proportion to the population as in Connecticut. The other New-England States, to their honor be it spoken, are not far behind in this respect; would that we could say the same of New-York. These working cattle too, are not the refuse of their yards, worked because they are good for nothing else, but the major part of them will be found of a rich red, the Devons or their crosses, fine formed, lively animals, walking off like horses, and making the heart of the farmer glad to look at them. To show that we are not exaggerating matters, or allowing our fondness for fine cattle to bias our opinion, we give a few examples selected from the reports of the various Agricultural Societies of that State, for the year 1843, which are now before us.

New-Haven County Fair,.........	513	yokes.
Hartford County Fair,............	100	"
Union Ag. Society, 4 towns,.......	244	"
Bridgport, County Fair, ...	530	"
Danbury Fair,....................	350	"
Canton, 1 town,...................	130	"

Bridgport and Danbury are both in Fairfield county, so that at the fall exhibition of 1843, this county produced no less than 880 pairs of working cattle of the best kind. New-Haven, too, had on the ground 513 pairs; and there were other exhibitions that were not far behind in respect to numbers. Of one thing we may be certain, a population cannot be poor, which can produce as many cattle fit for tilling the soil, or for the butcher, as can Connecticut. Would not many of the other States, so far as the labor of animals is concerned, do well to take a lesson from that State in this respect? Would it not be well,if, in a large portion of New-York, certainly in all parts where wheat growing is not the principal business, cattle, such as may be counted by thousands in Connecticut, were substituted for the lean, worthless horses found on so many farms? For all common farm work, cattle are as good as horses; and after they are unfit for the cart or the plow, they may be converted into beef; while the horse, disabled by accident or by age, is given to the crows or the dung-hill.

DR. BEEKMAN'S ADDRESS.

Dr. Beekman will accept our thanks for a copy of his Address before the Dutchess County Agricultural Society, which we have read with much satisfaction, and did space allow, we should be pleased to transfer a larger portion of it to our columns. We give the following paragraph, as particularly worthy of attention, showing, at a glance, the great defect in our husbandry, and the means for its improvement:

"Depend upon it, the great defect of our farming is the scanty return which we make to the soil that we crop so closely; and when you complain of poor returns for your labor, at least in the quantity gathered, it is upon the principle that you are willing to work your horse but not to feed him. Until, therefore, we feed with a more liberal hand, we shall not be more liberally rewarded. If I compare our farming, however, with what it was twenty years ago, I see a decided improvement; better houses, better barns, better fences, better, that is cleaner fields, better crops, and stock essentially improved. With all these man improves. But there is a vast deal yet to be done, and we must not talk of good farming until we can in all things double, and in many treble our present product; for let me tell you the productive powers of the earth are almost illimitable."

THE AMERICAN INSTITUTE.

The Annual Fair of the Institute was opened at Niblo's Garden, New-York, on the 8th Oct. The exhibition of samples of our manufactures and arts, was extensive and creditable to the skill and ingenuity of our country. The Agricultural and Horticultural Departments, we thought were not quite equal to some former years. At the show of animals on the 16th and 17th, there were some good stock, though the number was small. Among the horses was the splendid imported Norman "Diligence," and two of his colts, from Mr. E. Harris of New-Jersey, and some fine horses from Mr. Long of Washington county. Among the cattle, we particularly noticed the fine bull "Marius," belonging to Mr. Oliver of Sing-Sing, imported from the herd of Earl Spencer, which attracted so much attention at Poughkeepsie, for his superior symmetry and excellence—a pair of beautiful Devons, and a superior Ayrshire cow, whose owners we could not ascertain. There were also some good Durhams exhibited. The number of sheep and swine was small, but included some fine animals of both kinds.

In the horticultural rooms were some fine specimens of fruits and vegetables. Among them were handsome and extensive collections of pears from Mr. Wilder of Boston, and Mr. Walker of Roxbury, and extra large grapes from Mr. Cushing's grapery at Watertown.

The Silk Convention, at which about 50 delegates attended, was held during the exhibition of the Institute. The Rev. J. R. Barbour delivered an address on the culture of silk. Mr. B. showed that the culture and manufacture of silk is perfectly practicable, in this country. That its production is rapidly increasing, and that there is no obstacle to prevent our supplying ourselves with this article from our own hands and labor, thus saving to the country $20,000,000, annually.

MADISON COUNTY FAIR.

The Fair of this County was held in Cazenovia on the 1st of October, was well attended, and accompanied with some very pleasant incidents. The party liberty poles were stripped of their partizan banners, and others more appropriate to the occasion, took their place—the whig pole bearing a plow with the motto, "Speed the Plow—it feeds all"—that of the liberty party, a gigantic arm, with an anvil and plane, intended as a welcome to the mechanics—and that of the hickory tree, a banner with a churn, sheaf of wheat, &c. The ladies of Cazenovia presented the Society with a beautiful banner of rich blue silk, seven feet by five, painted by W. H. Burr of Syracuse. "On one side it bears," says the Madison Co. Eagle, "the picture of a stout mower who has just paused in the middle of a swarth to whet his scythe, while on the back ground appears a wagon loading with hay, and the house and barns of the farmer. At the foot of a tree close by, lie his coat and jug of *cold water* which are watched by his dog. On the other side is a winter scene, in-doors. In a comfortable kitchen, the farmer's daughter is at work at her spinning-wheel, while another female is busy in the 'buttery,' at the other side of the room. The fire burns briskly in the chimney, and the mantlepiece above is graced with the almanac, watch, and candle-sticks which are usually to be found in that position."

To make good pickled Pork, simply pack the side-pieces in a barrel or cask, with plenty of salt on all sides of each piece, and when full, roll it to the pump, and pump in water till you see it cease to sink or to moisten the pork on the top of the barrel, then lay a flat stone as large as the vessel, to keep the pork always under the pickle: cover the cask, to exclude flies.—*West. Farmer.*

Foreign Correspondence.

MR. NORTON'S LETTERS—No. IV.

[The following letter did not reach us till after our last number had gone to press.—Ed.]

Lab. of Ag. Chemistry Association,
Edinburgh, Aug. 22, 1844.

Mr. L. Tucker—You have probably received papers containing accounts of the great annual show of the Highland Society, held this year in Glasgow; I will therefore not attempt any description of the exhibition itself, but will merely say that the show of animals and implements, was on a magnificent and immense scale, and the number was perfectly bewildering. A week at least would have been necessary in order deliberately to view every thing.

There were, however, some meetings incidental to the occasion, which were specially interesting to me, and of which I will endeavor to give a brief report.

First, I would notice an Education meeting. Arrangements had been made by which five boys, from the Lanne Agricultural School near Belfast, in Ireland, were present, with their teacher, Dr. Fitzpatrick, from Lanne, Mr. Skilling, from Dublin, Sir Robert Bateson from Templemoyle, and other gentlemen interested in the cause of Agricultural instruction, were also present. The boys were from 14 to 16 years old, and had been in the agricultural class two years. Prof. Johnston stated that by this meeting it was hoped that light might be thrown upon two points. 1. Is it possible to give boys instruction in agriculture, practical and scientific, that will be of use to them in after life. 2. Can this be done without interfering with other studies. These questions were both most distinctly answered in the affirmative by numerous gentlemen present, connected with agricultural schools in Ireland and England. The boys before mentioned were finally placed upon the platform, and with a view to answering the second inquiry were questioned in geography, grammar and arithmetic, by Mr. Gibson, inspector of schools. The examination was a somewhat severe one, especially upon grammar and geography, yet notwithstanding the embarrassments and novelty of their situation they, appeared admirably. I think that some one of them answered every question. They were then examined upon various points in chemistry connected with agriculture, by Prof. Johnston, and lastly, upon practical farming, by various other gentlemen. Their answers showed not only that they had learned by memory, but that they had also reflected. Frequent and irrepressible bursts of applause interrupted the examination, and the most sceptical were convinced. These boys devote one hour each day to scientific and practical agriculture, and once in the week they are questioned upon the studies of the preceding five days. An enthusiasm was aroused by this exhibition which will hardly expend itself in mere words. A resolution was passed "that it was the opinion of the meeting that agricultural instruction should be introduced into the schools of Scotland." A large committee of influential and distinguished gentlemen was appointed to deliberately consider the subject. I may here mention that Mr. Skilling, superintendent and teacher in the Normal farm school near Dublin, gave most ample testimony in favor of Prof. Johnston's works. They are introduced into all the Irish schools, and their importance impressed upon every teacher. The Catechism was written expressly for schools, and has been found of signal benefit.

A most excellent feature of this Show was the introduction of public breakfasts, at which certain questions of interest to the farmer were discussed. The subjects were fixed and made public before the meeting, so that gentlemen came prepared with facts and arguments. I was exceedingly interested at the last one. The subject was "the disease of potatoes." The discussion was most animated, and lasted more than two hours after the active business of the meal was over. A large number of gentlemen spoke, and almost every one brought out new facts and new views. All agreed that the evil was wide spread and increasing. Each person supposed to know any thing of the subject, was in turn called upon to give particular statements both as to his own experience and that of his district, his views of the cause and the remedy. Mr. Alexander of Southbar, a very distinguished farmer, attributed much of the disease to improper stowage of the potatoes during the winter; to placing them in large masses so that they heated and lost much of their vitality. He had never known a failure except from improper treatment. Mr. Fleming of Barochan, an equally eminent authority, said that the less ripe the potatoe when dug, the less likely to fail. After raising several thousand varieties from *seed*, he has *never* produced a healthy kind. For several years he has dressed his potatoes with certain saline substances, such as sulphate of magnesia, nitrate of soda, &c. &c.; all those so treated, have succeeded admirably. Mr. Anderson, a manager of large estates in Ireland, laid much stress upon the thorough draining, subsoiling and pulverization of the soil. He digs his potatoes before they are ripe, selects the most perfect tubers and buries them in shallow, narrow pits, from two feet to thirty inches wide, heaping the earth as high as possible. There they remain until the planting season arrives; the drills are then opened, the manure placed, the potatoes taken out, planted and covered within half an hour; by following this course, he has no disease. Several speakers mentioned the fact that potatoes which had lain exposed to the sun until they became green, make the best seed. This sketch will give an idea of the way in which these breakfasts are conducted. They ought to be accompaniments of every agricultural meeting. In the present instance, practical men from all parts of the country came prepared to give their views upon a certain subject, and the result was such an amount of information and of facts as could have been in no other way so easily collected. Each farmer went home with a large stock of suggestions and increase of knowledge, whereby to conduct new and more intelligent experiments. After a few such conversations, they will undoubtedly be able to devise certain means for the arrest of this formidable disease. As with this subject, so with every other, much light would be accumulated, were practical men freely to exchange their facts and theories. If those interested in agriculture could be induced to enlist with spirit in one such conversation, they would be most amply repaid; and judging from my own experience, look forward with pleasure to future opportunities of a like nature. I am, very truly yours,

John P. Norton.

FOREIGN INTELLIGENCE.

By the last steamer at Boston, we have received our regular files of foreign periodicals, including the new Part of the Journal of the Royal Ag. Society—the Journal of the Highland Society for Oct.—the Farmer's Magazine, New Farmer's Journal, Mark Lane Express, Gardener's Chronicle and Ag. Gazette, &c. &c.

The Crops.—The English papers inform us that favorable weather has enabled the farmers to secure their grain-crops in good order. The yield of wheat is pronounced a good one. The Mark Lane Express says,—"Taking this year's produce of the grain crops, from one end of the country to the other, we maintain, and we think upon the best authority, that it has never been exceeded, though it might have been equalled in quality in any previous year." * * * "It is admitted on all hands, though of course partial deficiencies are to be met with, that the yield of wheat this year, for England, is a very large one; considerably above an average of years." Oats and barley are not so abundant, and some importations will be required to supply the deficiency. From Quebec and Montreal 370,000 barrels of flour have been sent to England this season. Last year there were sent 180,000. With American provisions the markets are well supplied. The quality being good, a fair demand has sprung up, and prices have slightly improved.

A cargo of American hay has been received at Liverpool. It was not very well liked—being pronounced coarse, and not well cured.

Hops. Owing to the generally light crop in most districts the present year, and the small quantity of old hops on hand, the prices of hops are expected to be higher this year than for some time past. Prices are given as (according to quality) ranging from 6*l*. 8*s*. to 10*l*. 10*s*. per cwt.

Show of the Highland Society at Glasgow.—This exhibition took place in August. The entries of stock were larger than on any previous occasion. The number of lots were 1,404, amongst which were 222 Ayrshire cattle, 55 West Highland cattle, 160 horses, 117 sheep, 184 lots of butter, 83 lots of cheese, and 176 implements.

Bakewell Cow.—It is sometimes stated that the *Dishley* or Bakewell variety of Long-Horn cattle are extinct. It seems it is not so. A late English paper states His Royal Highness Prince Albert, received a prize of ten sovereigns and a silver medal, at the last exhibition of the Royal Agricultural Society of Ireland, "for a cow of the breed of the late Robert Bakewell, of Warwickshire."

Sales of Stock in England and Scotland.—A sale of Angus polled, or hornless cattle, lately took place in Scotland. Cows brought from $100 to $125. Two-year old heifers nearly $100 each; yearling heifers $80, and calves $50 to $60. They belonged to Mr. Fullerton, of Angus-shire.

Several sales of Short Horns have lately taken place. The sale of Mr. Jonas Whitaker, of Burley, was well attended, and good prices were obtained. The bull Buchan Hero, which obtained the first prize at the Highland Agricultural Show two years ago, was knocked down for 350 guineas to Sir Charles Tempest. The Earl of Buchan, a yearling bull by Buchan Hero, fetched 200*l*. He was bought for the King of the French. The cows and heifers varied in price from 150*l* to 25*l*. The stock, consisting of 79 bulls, cows, heifers, &c., were shown in excellent condition; and the prices they realized afford sufficient proof of the estimation they held in public opinion. The first 33 lots (cows) made 1,452*l*: the heifers and heifer calves, 1,531*l* 19*s*; and the bulls, 1,114*l*; in all, 4,098*l* 3*s*—or an average of 51*l* 17*s* each.

At Mr. Yorke's sale at Thrapstone, the whole herd of cows, heifers, and heifer-calves, averaged nearly 35*l* each, and the young bulls 27*l* each.

Sheep.—At a late sale of Cheviot rams belonging to the Messrs. Aitchison, animals brought from 4*l* to 14*l* per head.

At two sales of Leicesters, Mr. Bentley's and Mr. Watkins', the average prices obtained were 11*l* to 12*l* each.

Mr. Bryant's South Downs, 2,000 sheep and 400 lambs brought, at auction, 3,600*l*.

At the sale of Mr. J. Elman's South Downs, the prices obtained for ewes were from 30*s* to 5*l*.

A ram exhibited at the ram-show of Jno. Kirkham, Esq., of Hagnaby, measured in girth 6 feet 8½ inches, and in length 5 feet 4 inches. Some of the yearlings weighed 40 lbs. per quarter.

Her Majesty's Aviary at Windsor.—Interesting Fact to Naturalists.—The following singular and rare (if not unique) occurrence has just taken place at the Royal aviary in the Home Park, at Windsor. It having been deemed advisable by Mr. Walters, the superintendent of her Majesty's aviaary, in order to improve the breed of the genuine Dorking fowl, that it should be crossed with that of the Cochin China fowl, the necessary arrangements were made for that purpose. A Dorking hen, which had roosted for some time past with the fowls from China, has recently been in the habit of laying twice, and sometimes thrice a week, eggs containing double or two distinct yolks. Mr. Walters, determining to try the experiment of attempting to hatch one of these double yolked eggs, placed it, with several other eggs, under the hen. The result was that two chickens were produced from this single egg; one is a cock bird of the pure Cochin China breed, and the other is a hen chick of the Dorking species, both of which are now five days old and in good health. This is a circumstance, as we are informed, unprecedented in the annals of natural history.

Urine.—It is calculated that a cow produces 15,000 lbs. of urine per year, which by putrefaction in the tanks without mixing with water, loses 162 lbs. of ammonia; this might be converted into sulphate of ammonia, by adding 373 lbs. of sulphuric acid at 12*s*. per cwt., and would produce 4¼ cwt. of sulphate of ammonia worth 25*s*. per cwt., equal to 5*l*. 12*s*. per annum.

Preservation of Iron.—As iron enters so extensively into the constuction of nearly all the implements of agriculture, as well as almost every tool used in the arts, the preservation of the metal from the injurious effects of rust, or corrosion in water, has for a long time received the attention of scientific and practical men. It was found by experience, that the ordinary paints and varnishes, gave only a temporary preservation, and when once the paint began to decay, it assisted rather than retarded the progress of decay. In the 10th volume of the Reports of the British Association, it is stated that by the direction of the Association, Dr. Mallett of Dublin, has superintended a series of experiments, in which every kind of paint, oil, and varnish, was applied to every kind of iron, immersed in various kinds of running water, for two years, the results of which prove that coal tar boiled, and laid on the iron while hot, has a very decided advantage over all other preparations. This discovery is of much consequence, as iron vessels are so rapidly and extensively coming into use.

Disease in Cattle.—There is at present a deadly disorder raging among the cattle, which carries them off in a very short time; nor is this confined to a particular district—it appears to be spreading in every direction. We can state, from good authority, that a farmer in the vicinity of Glammis lately sold two cattle to a dealer, who paid for them, and was to remove them within a given time. By the time he came to lift them, they were both dead. Three of the same farmer's cattle, and two of his calves, died also. We have heard of a farmer in another quarter, who, in the course of nine nights, lost nine of his cattle; and, within the town, some of the cow-feeders have sustained heavy losses.—*Perthshire Constitutional.*

STATE FAIR—SUPPLEMENTARY NOTICES.

In our last, we spoke of a horse-rake with iron teeth, and having lost the card were unable to give correctly the name of the manufacturer. We were under the impression that it was made by Wm. B. Stoddard, Cayuga county. We find we were mistaken. This rake was patented by **David Dewey**, and is now manufactured by **Z. Dewey**, East Poultney, Vermont. It is called the "*Patent Spring-tooth Horse Rake*"—has been in use five or six years, and is well recommended by those who have used it.

Clover Machine.—A machine for getting out clover seed, exhibited by **H. Baldwin**, of Washington, Litchfield county, Connecticut; appears to be excellent, is well recommended by those who have tried it, and received the first premium of the American Institute, in 1840.

Coal Tar.—Some bricks coated with this substance, were exhibited. It is said to be the cheapest and best black paint that can be used for out buildings, fences, &c. Bricks soaked in it are said to be impervious to water. It is for sale at $2.50 per barrel, by **Chester Childs**, 139 Maiden-lane, New-York.

Imperial and Potatoe Oats—the former weighing 42 pounds, and the latter 40 pounds to the bushel, were presented by **George Nesbitt**, Stamford, Delaware co.

Ayrshire Cow.—Mr. **Ellison**, of Newburgh, exhibited, a superior Ayrshire Cow, which took the first premium. We had not the pleasure of seeing her, or she would have been noticed before.

Egyptian Corn, Wheat, &c.—Mr. L. Durand, of Derby, Ct., exhibited specimens of Egyptian corn, Egyptian wheat, and Durand corn.

Social Meetings.—For several evenings during the exhibition, social parties were held at the residence of Gen. **Davies**, whose elegant mansion was most cordially opened for that purpose, and an opportunity thus furnished for forming acquaintances, and enjoying the most agreeable social intercourse.

CONDENSED COMMUNICATIONS.

Vineyard and Nursery at Brinkleyville, N. C.—We have a long communication from the esteemed **Sidney Weller**, P. M., at Brinkleyville, detailing his experience in the growth of fruit trees and vines, at the South in which he states that he has for fourteen years, as an incidental business, cultivated the vine—at first, with but poor success, from want of experience and adopting foreign vines and foreign modes of culture—but latterly, having adopted native vines and an "American system" of culture, he has succeeded to his entire satisfaction. He has found the following varieties of the grape to succeed well. The Scuppernong, (ranks first south of lat. 37½ deg. but of no superior excellence north of that,) Norton's Virginia Seedling, good every where so far as he has heard, Weller's Halifax, Vine Arbor, &c. The Catawba, Isabella, Herbemont's Madeira, &c., have not done as well with him. The Elsinburgh proves to be a delicious fruit, much admired on account of its fine flavor and freedom from pulp. He has not tested it for wine. From several of his Scuppernong vines, he has made from half a barrel to a barrel each of wine. One of Norton's Seedlings, five years in culture, produced 2¾ bushels of grapes and 8 gallons juice. He says 800 gallons wine per acre is considered a capital yield in Europe, but from his experience, he thinks 2,000 gallons per acre, by good culture, can be realized in North Carolina. His culture consists in keeping the ground clear of grass and weeds, the year round, so that all the leaves and litter from the vines can be incorporated with the soil by scarifying it when needful with a harrow or cultivator. In some instances however, instead of adopting this course, he covers the ground several inches deep with pine leaves or other litter, which, renewed once in two years, keeps down all extraneous growth, and saves the labor of annually working the ground. After a vineyard is well under way, no other manure is necessary. He has made this season, 15 barrels of wine, and is just commencing on his Scuppernong vines, which constitute his principal crop, and from which he expects to increase the amount to forty barrels.

Fruit Trees.—Mr. Weller says that he finds some varieties of superior excellence at the north, of no profit with him. The Newtown pippin, (and other northern winter fruit,) is subject to rotting on the tree, and ripens too early for winter keeping. The celebrated winter Bellflower is a fall apple with him. The Sine-qua-non apple, the Bergamot pear, the red Magdalene peach, and the Bolmar or Washington plum, have proved as good with him as at the north. For winter apples, those peculiar to the south only will keep well, such as the Salmon, Gully, and Haul, Barrow, and other seedlings. As a summer fruit with him, he says there is none superior to the common southern horse apple. He thinks November the best season for transplanting fruit trees at the south.

Improved Farming in Virginia.—Mr. H. R. Robey, near Fredericksburg, Va., gives us the following favorable account of the effect of agricultural papers in improving the husbandry of his neighborhood: "When I commenced farming, I determined to try the new system of husbandry, because I saw the old plan would not do; the farmers were all going backwards, or getting poorer every year; my new neighbors laughed at me, when they saw me occupying so much of my time in hauling mud and sods from the swamps to put in my manure pile, and asked where I got that notion from. My reply was, from the Cultivator. They laughed still more, and called me the book farmer—said I would soon find out my folly, and go back to the good old custom, as they call it. Many of those men have acknowledged since, that I have been pursuing the right plan. I have now eight barrels of corn growing, where six years ago one barrel could not be grown; and all my information has been derived from agricultural papers. Some of my neighbors, for two or three years past, have been taking the Cultivator, and you can perceive an improvement upon their farms already. They are now not content to put up with the bare necessaries of life. A spirit of improvement seems to have taken hold of them; they begin to cultivate improved varieties of fruit for market and for their families; thus adding profit and pleasure, where neither could be found before they began to read agricultural papers."

Black Sea Wheat.—In our March number, page 75, we published a communication from **Clark Rich**, Esq. on the subject of Black-sea wheat. We lately received another article from the same gentleman, in which he informs us that this kind of wheat continues to maintain its superiority over other kinds, for that section of country. It is a spring-wheat. Its distinguishing excellencies are, hardiness, freedom from rust and other diseases, and generally producing a better yield, especially on unfavorable soils and in unfavorable seasons, than other varieties. There is a white, and a red-chaff kind. The white-chaff is said to yield as well, but the millers prefer the red-chaff, as giving better flour. It is said not to make as nice looking flour as good Tea-wheat, or as some good kinds of winter-wheat; but since the millers have found how to grind it, the flour is well liked. This wheat has been much disseminated for a few years past, and wherever spring-wheat is cultivated, has been much esteemed. Mr. Rich says, "it is believed that this wheat will yield better than rye, even where rye has heretofore been considered the safest crop." Mr. Rich informs us that prime Black-sea wheat can be delivered at the landing, Shoreham, Vt., at $1.12 per bushel—and procured of the farmers for $1.00 per bushel.

Disease in the Stomach of Cattle.—Mr. J. Devereux, of Raleigh, North Carolina, wishes some information in regard to a disease by which he lately lost a valuable Devon bull. A *post mortem* examination showed the third stomach or manifolds, "crowded with food until it was as hard as a pressed cotton-bale." In relation to diseases of this organ, Mr. Youatt says—"it will always be proper to bleed, in order to diminish any existing fever, or to prevent the occurrence of that which continued disease of this important stomach would be likely to produce. To this should follow a dose of physic, in order to evacuate the intestines beyond the place of obstruction, and by its action on them, possibly to recall this viscus also to the discharge of its healthy function. The Epsom salts, with half the usual quantity of ginger, will form the best purgative; and it should be administered either by means of a small horn, or the pipe of the stomach-pump introduced half way down the gullet, and the liquid very slowly pumped in. By this cautious method of proceeding, the pillars of the œsophagean canal will probably not be forced open, and the liquid will flow on through the passage still partially open at the bottom of the manyplus, and thence into the abomasum."

It may not be improper to remark that the manifold, as it is called, is the *third* stomach, and not, as our correspondent supposes, the *first* stomach. We are unable to inform Mr. Devereux the probable price of a Devon bull-calf. In answer to the inquiry for the names of breeders of Devon cattle, we would mention Messrs. George Patterson, and John P. E. Stanley, of Maryland, Mr. Wm. Garbutt, of Wheatland, and Mr. L. F. Allen, of Buffalo, N. Y., and Mr. Hurlburt of Connecticut.

Glandrrs.—Mr. C. B. **Clark**, of Monroe, Conn., wishes some more particular information in relation to the cure of glanders by tobacco, as mentioned by Mr. J. B. Cook, in our July number. Mr. Clark says, "if your correspondent would state how much of the decoction of tobacco was given at a dose, the manner of giving it, and the subsequent treatment, a subscriber would be amply repaid for the expense of the Cultivator, especially if a cure was effected."

Larches.—In relation to our inquiry whether larch, or tamarack trees will flourish on dry soils, "A Constant Reader," at Burlington, Vt., informs us that he has often seen them "in fine condition on high and dry localities, the soil of which was pure sand."

Bone Mills.—A correspondent wishes to obtain a machine for grinding or crushing bones. We shall be greatly obliged if any of our friends can inform us where one can be procured—its price, and the power necessary to drive it.

LAMENESS OF A HORSE—SPLINTS.

Mr. James M. Tower of Waterville, asks for information relative to what are called splints in horses. We handed his letter to Dr. Wright, veterinary surgeon of this city, who has favored us with the following:

Mr. Tucker—In answer to your correspondent, Mr. Mr. Tower, I would request him to examine the bones of the fore leg of a horse. He will there find, placed immediately behind the large metacarpal or shank bone, two smaller ones, which adhere to the shank bone by a cartilago-ligamentus substance. These two bones form a part of the knee joint, and give firmness, support and elasticity to the limb. This adhesive substance is liable to take inflammation from concussion or straining the part; it then becomes absorbed, and bony matter is thrown out between the bones, which will sometimes grow to the size of half a hen's egg. These osseous tumors are called splints. In slight cases the treatment is simple—slight blisters, repeated, or the iodine ointment, mixed equal parts with Ung. Hydr.; or the Ung. Hydrarge, 2 oz. with one drachm Hiodrate of Potass, rubbed on the part. The last operation for this disease is called subcutaneous periostiotomy, but is seldom necessary.

Geo. Wright, M. R. V. C.

We add the following from Youatt's Treatise on the Horse:

"When the splint is forming, the horse is frequently lame. The periosteum or membrane covering the bone is painfully stretched; but when this membrane has accommodated itself to the tumor that extended it, the lameness subsides and altogether disappears, unless the splint be in a situation in which it interferes with the action of some tendon or ligament, or in the immediate neighborhood of a joint. Pressing upon a ligament or tendon, it may cause inflammation of those substances; or, being close to a joint, it may interfere with its action. Splints, then, do not necessarily cause unsoundness, and may not lessen in the slightest degree the action or value of the horse. All depends on their situation.

"The treatment of splints, if it be worth while to meddle with them, is exceedingly simple. The hair should be closely shaved off round the tumor; a little strong mercurial ointment rubbed in for two days; and this should be followed by an active blister. If the splint be of recent formation, it will usually yield to this, or to a second blister. Should it resist these applications, it can rarely be advisable to cauterize the part, unless the tumor interferes materially with the action of the suspensory ligament; for it not unfrequently happens, that, although the splint may have apparently resisted this treatment, it will afterwards, and at no great distance of time, begin rapidly to lessen, and quite disappear."

RENSSELAER INSTITUTE.

We would call attention to the advertisement of the Rensselaer Institute, which will be found in this number. Perhaps no school in the country has enjoyed a more extensive or deserved reputation than this, for imparting a truly valuable course of instruction. Among those eminent citizens of this and other states, who have, within a few years, by the practical application of the principles of science, rendered important benefits to the country, none have been more distinguished than several of the graduates of this institution.

The following extract from an article written by a former graduate of this school, and now well known and esteemed as a member of the geological corps of the state of New-York, shows the estimation in which this school is held by those who are competent to judge of its merits. Speaking of the advantages of the course of instruction here pursued, he says—

"In regard to the success of the mode of instruction practiced in the Rensselaer school, the writer can speak from the experience of five years in that institution as pupil and teacher—believing it to be the most successful method of imparting instruction yet devised, and were the plan so extended as to bring within its scope all the subjects usually taught in our colleges and academies as well as the natural sciences and practical mathematics, I am confident that a student would acquire at least twice the amount of knowledge in the same time that he now usually devotes. The acquirement is not alone the object attained, for when he has obtained knowledge, he can make use of it, for he learns to impart knowledge at the same time that he is acquiring.

"The student is made at once a teacher; his recitation is never conducted by question and answer, but it consists of an extemporaneous dissertation or lecture, to the teacher present and his associate pupils. He has previously studied the subject, with experiments, specimens, books, and the aid of his teacher; he has made it his own as it were, so far as time and means will permit, and in his lecture, he gives his own language to express his ideas and the amount of knowledge he has acquired. The pupil is thus led to feel an interest in the subject, and it at once acquires an importance in his view, which mere study and recitation can never give it. He feels his deficiencies when he is to instruct others, and he is ambitious to supply them."

Through the liberality of the Corporation and citizens of Troy in furnishing them with buildings and grounds, and of the family of the late Hon. Stephen Van Rensselaer in endowing the Institute, the Trustees have been enabled, notwithstanding the practical, and for that reason more expensive, nature of the pursued studies, to reduce the fees for tuition very considerably, thus rendering the advantages of the Institute more easily available to all.

RENSSELAER COUNTY FAIR.

The exhibition of this society took place at Troy on the 2d and 3d days of October. The display of live stock was not, we think, considered equal to that of some former years. There were some good animals shown—particularly the *Cattle* of Mr. Vail—several of which, viz. "Meteor," "Symmetry," and "Victoria," received premiums at the State Fair at Poughkeepsie. There was also an imported Durham cow called "Splendor," said to be owned by Mrs. Sampson, of Brunswick. Though low in flesh, her form is generally good, and she is represented as a superior milker. Isaac Welch, Brunswick, offered a good *grade* heifer two years old, and there was a pair of very pretty native heifers (though they might be taken for half Devons) shown by Abm. Nash, Troy. Of oxen, several pairs were noticed, belonging to Pliny Griswold, East Nassau, Roswell G. Pierce, and Joshua B. Mason, Stephentown. Of *Sheep*, there were some good-bodied, medium wooled Merinoes, shown by Nathan Brownell—the ewes having yielded, as was stated by the owner, from 5 to 6 lbs. washed wool per head last season. Two bucks by B. Ketchum, Pittstown, sheared last season, the one five, the other eight pounds. The buck "Consul," purchased of Mr. Sanford, of Orwell, Vermont, by Mr. Martin Springer, was on the ground. A superior Saxon buck from the Grove stock, one year old, was shown by Myron Rogers, of Hoosick—also a very superior Merino buck lamb, 5 months old, purchased of Mr. Blakeslee of Connecticut, by R. H. Streeter, of Berlin. Mr. Streeter had also a good Cotswold buck, which had 12 lbs. wool at last shearing, and a Lincolnshire buck, the latter purchased of Mr. Clift of Putnam county. There were five good ewes, apparently a cross of the Cotswold and South Down, presented by Wynant Younghans, Sand-Lake. Mr. Kip and Mr. Greene, of Pittstown, showed good Bakewell bucks. Of *Swine*, there were a few good Berkshire, and a white boar belonging to Edward Pearl, Troy. The show of *manufactured articles* was good, and highly creditable to the county. We noticed many good Agricultural and Horticultural *Implements*, from Messrs. Mowry & Vail, Troy; and among them several sizes of Langdon's plow cultivators. Of *Household* manufactures, there was a very good display. Of *Fruits*, there were fine specimens of apples, pears, and grapes, from Geo. Vail, Troy, and John Filkins, Lansingburgh. Very superior samples of White Sweet-water, and Winne grapes, were presented by Miss Sally Gale, Troy. The Address was by Hon. R. D. Davis of Poughkeepsie.

FULL BLOOD MERINO SHEEP.

In our October number, we spoke of some sheep exhibited at Poughkeepsie, by Mr. Jacob N. Blakeslee, of Watertown, Litchfield county, Conn., and by Mr. Stephen Atwood of Woodbury, in the same county. We stated that these sheep were represented as being entirely of the blood imported by Col. Humphrey in 1802. This statement which was made without reference to some papers given us by Mr. Blakeslee, and which were then mislaid, was not quite correct, It is not claimed that the sheep are *entirely* descended from the Humphrey importation, as will be seen by the account furnished us by Mr. Blakeslee, which we give below.

In the April number of the Cultivator, we published a communication from the Hon. Wm. Jarvis, of Weathersfield, Vt., in which he expresses doubts whether there are any full blood Merinos in the country, excepting some which have been derived from his flock. That in this particular Mr. Jarvis was mistaken, will appear from the statements of Mr. Sanford in the September number. In reference to the communication of Mr. Jarvis, Mr. Blakeslee says—"He seems to doubt that there is any pure blooded Merino sheep in the country at the present time, but what are in his possession. The duty which I owe myself and my neighbors, requires me to give a description of some pure bloods, that are the offspring of some of the first that ever came into the United States, brought into the country by David Humphrey in 1802, which were a present to his wife by her father, as she was a Spanish lady. After a few years, two pairs of them were purchased by Daniel Bacon, of Woodbury, Litchfield county. They were kept in their pure state till 1811. There was then an importation of the Guadaloupe sheep by a company formed in Litchfield county; John De Forest, supercargo. They arrived at New-Haven, and were sold at auction, Jan. 17, 1811. There was one full blooded Escurial buck, which was purchased by Daniel Bacon at $275, and was crossed upon those sheep that came by the way of Mrs. Humphrey. He continued this cross till 1816 or 1817, when he sold his Escurial buck to William K. Lampson for $1,130. He kept his sheep pure till the introduction of Saxony sheep. He then sold the remainder of his flock to Daniel Martin. I began a flock of sheep in 1815, that were imported by Peck & Atwater, New-Haven. A part of them were the Negretti and a part Montarco. I let them run together till 1823. I then procured the use of a buck for three seasons, bred by Daniel Bacon from his Escurial buck. The average weight of the fleeces of the stock from this buck, was four pounds, and the wool brought me ten cents in a pound more than the original stock. In 1828 I purchased a buck that was raised by Daniel Bacon. From that time down to the present, I have kept that blood pure; this flock is now a cross of three sorts of Spanish sheep, and perfectly clear from native or Saxony blood. My farm is not a healthy farm for sheep, and of course they are a little under size. They are a full, round, handsome bodied sheep, with shortish legs and a very round neck. They have very heavy fleeces for their size. Their wool is a long staple, a great deal of crimp, and very compact at the outer end. They have generally wool about their face and on their legs down to their feet. After taking great pains to wash them, the average weight of their fleeces this season was three pounds and a half, and there are very few flocks of Saxony sheep any finer. Mr. Samuel Lawrence of Lowell, who has had this wool for four seasons past, has given his opinion that there is no Merino wool that compares with it. This improvement has been made by a cross of the different breeds. I am decidedly of the opinion that there is no full blood animal equal to a cross; the reason I give is that there is no perfect animal on the face of this earth: where an animal is imperfect, you can never remedy the defect by the use of an animal that has the same defect. The Saxony sheep are defective in the quantity of wool; in our cold climate the outer end becomes dead and destitute of felting properties. The Spanish breeds spoken of are free from both these defects, and wherever those bucks have been crossed upon high blood Saxons, there has been an addition of 8 to 24 ounces to each fleece, and whenever it has been through the process of stapling, it has brought at least 5 cents more on a pound. I have often heard the question asked, why new wool would not felt like wool that had lain a year. I believe if the wool growers had taken as much pains to improve upon the Merino as they have upon the Saxony, that question never would have been asked. Almost the whole of the fine goods that are now made are made from Saxony wool that has a dead end, very tender when new, and destitute of felting properties; after lying in the native oil one year it becomes so rotten that it wastes in the machinery before it comes to the felting process. As there is more native oil in the fine Merino wool, it has been the cause of some complaint by our manufacturers, that it wastes too much in cleansing. If they would weigh both kinds of wool in the fleece, and then weigh the goods when finished, they would find the Saxony wool would waste as much as the Merino."

Mr. Blakeslee's sheep are compact and symmetrical, answering the description given of the Gaudaloupe, which are said to have the most perfect form of any of the Merino varieties. (Library of Useful Knowledge—"SHEEP," p. 156.)

THE ARTICHOKE.

Several trials which we have known made with this root, indicate that it is one of the most valuable for stock, which can be cultivated. A few years ago, a gentleman of our acquaintance planted a small patch of rich ground with them. The produce was at the rate of 1,200 bushels per acre. They were principally harvested by hogs, which were turned in and allowed to root them up as their appetite prompted. They gained well, with no other food, while the artichokes lasted. A great advantage of this root is, that it will lie in the ground without injury all winter.

Mr. Thomas Noble, of Massillon, gave us a brief account of a trial with artichokes, made by him the past season. In April, 1843, he planted two acres with this vegetable. The ground was of medium quality. The artichokes were planted in rows 2½ to 3 feet apart—using a little more seed than is commonly used in planting potatoes. As soon as the frost was out of the ground last spring, (1844,) the digging of them was begun and continued as the stock required. The produce of the two acres was 1500 bushels. They were fed principally to sheep, though some were given to cattle, horses and hogs. All animals ate them well, seeming to prefer them to turneps. While the sheep were being fed with them, they were pastured on growing wheat and clover. The shepherd thought the wheat and clover was sufficient for them, as there was a full "bite," and he accordingly discontinued the artichokes. The ewes "fell off" in their milk, and the lambs soon showed that they were not doing so well. The artichokes were again given, and they soon did as well as ever.

Mr. Noble also used the *tops* for fodder. He cut them in October, just before frost came, dried and housed them. They were fed to the stock in winter, and were evidently preferred to corn fodder.

Mr. N. is so well pleased with artichokes, that he is raising them this year on a larger scale. They require but little cultivation; it being only necessary to keep the ground clear of weeds till the artichokes get a good start.

Mr. T. M. Johnson of Greensboro', Alabama, lately informed us, that he is this year growing 30 acres of artichokes. He considers them the most profitable vegetable he can raise. In that climate they can be dug any time in the winter.

There are several varieties of artichokes, but that called the Jerusalem artichoke (Helianthus tuberosus) is considered best. From the fibres of the tops or stems, a cordage is sometimes manufactured in some parts of Europe.

Two tea-spoons full of finely powdered charcoal, (says the N. Y. Herald,) drank in a half tumbler of water, will, in less than fifteen minutes, give relief to the sick headache, when caused, as in most cases it is, by superabundance of acid on the stomach.

CATTLE SHOW AT WORCESTER.

We had the pleasure of attending the Cattle Show of the Massachusetts State Society for the Promotion of Agriculture, held at Worcester on the 9th and 10th of last month. The Fair of the Worcester County Ag. Society was held on the preceding day, and was, we were told, in every respect superior to that of the State Society. The premiums of the State Society being restricted to animals which had previously taken prizes at the County Shows, the competition was confined to a limited number, and no inducements were offered to the owners of other animals to bring them to the exhibition. It seemed to be the general opinion, so far as we could judge, that the restriction of prizes to premium cattle, ought to be abolished for the future.

There were some good bulls. The best were principally Durhams. Elias Ayres, of Barre, showed two, both bred by C. H. Hall, of Harlem, N. Y. One of them was purchased of Mr. Mabbett, at our late show at Poughkeepsie. He is lame, and in rather bad condition. The other is a good five year old bull, weighing upwards of 2,500 pounds. The Messrs. Lathrop of South Hadley, had a three year old bull on the ground, got by Yorkshireman belonging to Joseph Cope, of Chester Co., Pa., and bred by Mr. Bates, Kirkleavington, England. The dam of the Messrs. Lathrop's bull, was from Mr. F. Rotch's stock. The bull has some very good points, and he took the first premium. There was also a large bodied, well made Durham bull, which we understood was bred by Henry Watson, of Connecticut. John B. Burt, of Sheffield, Berkshire county, had a pretty four year old bull on the ground, "three-quarters Durham, and *one-quarter Holderness*." In symmetry and handling, he was equal to any bull on the ground. He was got by a bull imported by Mr. Hickock, of Harlem. We did not see a single good bull calf on the ground, and but one good heifer calf, and that was a cross of Col. Jaques' Cream-pot breed and the Ayrshire. She belonged to Henry Dodge, Sutton.

There was a fine cow presented for exhibition only, by Charles Allen, Worcester. She was half Durnam—a beautiful roan, and her appearance, both in respect to shape, thrift, and dairy properties, was very much superior to any other cow at the show.

Moses Ayres, New Braintree, showed a cow, which, on grass-feed only, gave from the 10th to the 20th of June, ten days, *twenty-five* pounds of butter, or 2½ pounds per day. She was also half Durham.

George Randall, of New Bedford, showed a bull and several cows and heifers of the Ayrshire breed, and one cow, a cross of the Ayrshire and Alderney. The cows have generally the appearance of good milkers—among them was a young cow, which we understood had been lately imported from Scotland, whose appearance was *very* fine. In the *forehand*, she was unexceptionably beautiful. Her head and eye were fine, her horns thin, waxy, and almost transparent; and her skin yellow and rich. Taking her altogether, she might be pronounced a very superior cow. There was a five year old Ayrshire bull on the ground, which Mr. J. P. Cushing, of Watertown, presented to the Worcester County Ag. Society. But we do not think either of the Ayrshire bulls here, were equal to the one sent from Canada to the Poughkeepsie Fair, by Mr. Archibald.

The sheep were few in number, and with the exception of two or three, of no particular excellence. There were several called *native*. They were large framed, raw-boned animals, not at all calculated to afford profit, either as fattening or wool bearing sheep.

A buck and ewe imported from Africa by Mr. Lowell, of Waltham, attracted attention as a curiosity. Their color is brown, or snuff color, and their wool long and very coarse and harsh. We do not see that they are recommended by any valuable qualities.

The show of *swine* was good—indeed, we think it was the best show of the kind we ever witnessed. We saw but one full blood Berkshire in the pens, and the cross-bred Berkshires were not numerous. The hogs of all ages from the State Asylum for the Insane, were superior. They are commonly called the "Hospital breed." They have often taken premiums here. The basis of this stock is the Bedford breed, brought to this State many years ago by the late Hon. Timothy Pickering. Their origin in this country was some pigs sent by the Duke of Bedford as a present to Gen. Washington. Dr. Oliver Fiske, late of Worcester, had them in great perfection for several years. We have bred this stock, and found them very profitable. Those which Dr. Woodward now has at the Hospital, seem to have been crossed with Mackay, which has given them more size, though they still retain the symmetry and principal characteristics of the original Bedfords. The hospital hogs weigh at 8 months old, about 250 lbs.—at 12 months old, 300 lbs—and at 18 months old, 400 to 500 lbs. Two breeding sows exhibited by Dr. Woodward, were the most perfect animals of their kind we ever saw. Martin R. Wheeler, Westborough, showed a sow and several fine young boars of this stock.

Mr. Stickney, of Boston, showed a boar and several sows of the Suffolk breed, just imported from England. They appear to be a very thrifty, thin-skinned breed. Their heads are not quite so good as those of some hogs, though Mr. Stickney informed us that some of this breed which he before imported, are quite perfect in this respect. They have very broad chests and wide backs.

There were some good specimens of fat cattle. A pair half Durham, 6 years old, weighing 5,210 lbs., belonging to John Marland, Andover, received the first premium. There were several fine medium sized red oxen exhibited. The fat cattle here, in point of symmetry and fineness of quality, were, we should say, generally superior to those at Poughkeepsie.

The *working* cattle were good, as a matter of *course*, though the number was less than might have been expected. The restrictive rule before mentioned, undoubtedly operated in this case. The discipline shown by nearly all the cattle in managing a loaded cart at a hill, was truly admirable. The oxen were less in size than we have before seen at the Mass. State Society's Shows at Brighton, and at the County Show in this place. The load, 40 cwt., was heavy enough for the weight of the cattle, they weighing from 2,300 to 2,900 lbs. the yoke. They took this load up a hill steadily and easily, carried it down again to the foot, and then backed it straight up the steepest part, a good distance. Their faculty of backing is remarkable. They put their bodies close to the tongue, to which they keep as closely as if they were tied there; hold up their heads, and throw their whole weight and strength backwards. The best teamsters make but little use of the whip, and speak to them only in a moderate tone of voice. The discipline of the cattle is commenced at a very early age—almost as soon as the calves are able to walk with a miniature yoke on their necks. The *ox-mind* at this early age, is peculiarly susceptible of *impressions*, and the animals consequently acquire a degree of knowledge perfectly astonishing to those who have only seen them *mauled* about with a club, or *strapped down* with a bean-pole, having seven or eight feet of green hide fastened to one end of it. Some of the cattle which are facetiously said to have *graduated* at the *ox-university* of Sutton, show a degree of intelligence which really seems greater than that possessed by some of the *drivers* of oxen in some sections of the country. Even the steers, from three years old down to six months old calves, showed as perfect discipline, and yielded as ready and prompt obedience to the word of their *commanders*, as most of our military companies. There was a pair of yearling steers exhibited here by Nathaniel Dodge, Sutton, which were superior to any we have ever before seen. Their weight was 2,290 pounds. Their form was almost unexceptionable, and they were so completely matched in color and other respects, even to the bend of the horns, that it was almost impossible to tell them apart; and the excellence of their discipline was as remarkable as their appearance in other respects. A little boy, *only eight years old*, whose name was Elijah R. Carpenter, (son of Simon Carpenter, of Charlton,) exhibited a pair of steer calves 6 months old. Mr. Carpenter assured the committee that this little boy had had the entire management of these steers. He drove them up and down the street, and made them perform the customary evolutions of oxen, with almost as much exactness as was shown by any other cattle.

In regard to the *trial of plows*, which we had expected would be one of the most interesting parts of the exhibition, there was much disappointment. Only two competitors appeared. Neither Messrs. Ruggles, Nourse & Mason, or Messrs. Prouty & Mears entered the lists at all. Consequently we had not the satisfaction which we had hoped to have, of seeing the celebrated *Eagle* and *Centre-draught* plows, tried in competition with each other.

A subsoil plow with a double flange, was offered by Charles Howard, Hingham, which was much admired. Working in the furrow, behind another plow, it pulverized the ground finely to the depth of ten inches.

The show of *implements* was really splendid. To witness this single department of the exhibition was worth a journey of hundreds of miles. Among the implements particularly worthy of notice, was a *butter-worker*, presented by Amherst Hawes, from the farm of Col. J. W. Lincoln, Worcester. It was a kind of brake. A marble slab placed on a table, with a slight declivity to let the buttermilk run off, formed the place for working the butter. A fluted roller, to which was attached a handle three or four feet long, fastened at the lower end to a swivel, constituted the power for working the butter, which was done by passing the roller backwards and forwards over it, applying as much pressure by means of the hand, as is required. In connection with this, was shown a *butter-stamp*, by C. E. Miles, Shrewsbury. A round hole, say 3 inches in diameter, was cut into a block of marble six or seven inches thick. The butter is put into this hole in any desired thickness, and the stamp then pressed on it. On withdrawing the stamp, the butter adheres to it, and is taken off, and the stamp used as before. There was an improved churn shown by E. F. Dixie, Worcester, and a vegetable cutter of superior construction by Thomas Wheeler, Leominster. Messrs. Ruggles, Nourse & Mason, showed *twenty-six* different patterns of plows, besides a multitude of other implements, none of which, however, were entered for premium.

The specimens of agricultural and horticultural products, were numerous and excellent. Among them a *seven years* pumpkin, which beat Mrs. Vassar's shown at Poughkeepsie, by six pounds—the one at Worcester weighing 132 pounds. The horticultural exhibition, considering the lateness of the season, was very fine. The apples were excellent, and there was a very respectable show of the finest pears of the season, as well as grapes.

On Wednesday evening, a meeting was held at the Town-Hall in Worcester, at which the Hon. Josiah Quincy, Jr. presided. The company was much interested by remarks from Ex-Governor Lincoln, Gov. Briggs, Mr. Quincy, Mr. Johnson of the New-York delegation, and other gentlemen. At the close of the meeting, the members of the Mass. State Ag. Society, with the delegates from the county societies, and delegates from other States, accepted the invitation of Gov. Lincoln to attend an agricultural levee at his house, where a most splendid collation was provided.

On Thursday, the Society, with invited guests, had a public dinner, at which Ex-Governor Lincoln presided. Short speeches were made by various gentlemen, appropriate sentiments (drank only in *cold water*,) were given, and the awards of premiums announced by the chairmen of the several committees.

The agreeable social intercourse enjoyed among the people of Massachusetts during this exhibition, both at the public meetings, and at the dwellings of some of the most distinguished citizens, will be remembered with great satisfaction by those who had the pleasure of attending from other States.

COOKING FOOD FOR SWINE.—Dr. LEE, in an article on pork making in the last N. G. Farmer, says:—"From some experiments of my own, and considerable research into the published results of the experience of others, I am satisfied that ten bushels of boiled potatoes, thoroughly mixed with the pudding that can be made from three bushels of corn or peas, will make as much pork as twenty bushels of potatoes, and six bushels of corn or peas fed raw."

POWER OF SMELL IN INSECTS.

Every one is aware that in nearly every insect the sense of smell is remarkably acute. This seems to be necessary as a guide to their food; the more requisite as their range of vision, must, in most instances, from the nature of the case, be quite limited. Thus the bee discovers honey at a great distance, and makes her way to it with the greatest certainty. The bee-hunter avails himself of this acuteness of smell, and by exposing honey alone, or burning the comb to more rapidly extend the odor, discovers whether there are any bee-trees, or deposits of honey, in the vicinity. So the ant, that pest of the housewife, is almost sure to discover and lay under contribution the family stores of sweets, unless frequently looked to, or carefully guarded against. The flies, particularly the flesh fly, (*musca carnaria*,) furnish abundant proof of a liberal endowment of this sense, by the facility with which they discover any substances suitable for their food, or a place of deposit for their young. It is commonly said instinct is infallible; but that of the *musca carnaria* is proved to be at fault, when deceived by the carrion like smell of the mushroom, *phallus canis*, it deposits its egg upon it in the belief that it will provide suitable food for its young.

This power or acuteness of smell in insects may be used against them, or as a means of driving them from plants or places where they are numerous or troublesome; for it is well known that while they are attracted by some substances or odors, there are others extremely offensive to them, and which they will, if possible, avoid. Thus most of the essential oils of plants, or the materials that furnish them, are extremely disagreeable to most insects. Camphor, cammomile, tobacco, red cedar, black birch, sulphur, musk, &c., are among the materials offensive to many classes of insects, and may be used successfully against them. Thus the fumigation of plants, or the exposing them to the vapor of tobacco, will speedily expel the green fly or aphides, or destroy them; and the fumes of sulphur will operate as effectually on the red spider, an insect at times very troublesome to the gardener. Professors Henslow and Lindley, both affirm, that the vapor of oil of turpentine is a sudden and total destruction to the wasp which produces so much trouble and mischief in a green house, or conservatory. Bureaus, or book cases, should in part be made of red cedar, as the powerful odor of this wood is very offensive to moths, which attack furs or the binding of books. Russia leather, which derives its smell from a thorough impregnation with the oil and smoke of the black birch, is valuable for the same purpose, and a few shreds of it scattered among books, or in drawers, is one of the best preventives yet known, to the attacks of the paper or book moth. The Orangery of Sir Charles Monck had been for several years much injured by the brown-scale insect, (a variety of the same that attacks apple-trees,) when as an experiment, he suspended among the branches a quantity of cammomile, and syringed others with an infusion of this strong smelling herb. The result was, that his trees were almost entirely freed from the insect, the young scales turning dry and black and falling off. Tanzy we know is a strong repellant to many insects that infest our gardens; and it is very probable that most of the strong scented, or aromatic plants, would be found repulsive if not destructive to some of the insect tribes that harrass and injure the crops of the farmer, gardener, and fruit grower. Experiments on the smell of these depredators might easily be made, and if the result was not satisfactory, they could not be injurious or expensive.

DISAPPEARANCE OF THE CURCULIO.—The New England Farmer, encouraging the cultivation of plums and other fruits, says, the curculio has this year in a great measure disappeared, and asks, "to what cause may we attribute its sudden exit? Was it the severe cold winter which gave them the check?" The exemption of fruits from the attack of the curculio, has been noticed in this vicinity, and an abundant crop of plums has been obtained.

A writer in the Michigan Farmer, recommends buttermilk for the destruction of lice on cattle.

THE MASSACHUSETTS PREMIUM FARM.

In 1843, the Massachusetts State Agricultural Society, awarded a premium of $200 to Mr. Benj. Poore, of West-Newbury, for "the best cultivated farm" within the State. We condense the following from Mr. Poore's account of his farm, as published in the New-England Farmer. The farm is known as the "Indian Hill Farm."

Number of acres.—Exclusive of woodland, salt marsh, &c., there is 121¾ acres, three of which are enclosed as a garden and nursery, and between six and seven acres planted with forest trees. There are six acres of mowing land which have not been drained, because his neighbor, through whose land the drain would have to pass, prefers to keep his meadow in *natural grass*—leaving 86 acres which are about equally divided into upland and meadow; the latter all reclaimed in the most permanent manner, and divided into fields, numbered from 1 to 14, which is found very convenient for reference in the journal always kept on the farm.

Nature of the soil.—The highlands are gravelly loam, resting on a clay pan, and crops are seldom injured by wet or dry weather. Of the meadows, some portion is a strong clay that would make bricks—others rich, black, alluvial soil. These were of no value till drained. It was first fenced to keep off the cattle that they might not get mired in going on it to feed on the coarse wild grass which grew there. It is now so hard that a team may be driven over it without any difficulty. About sixteen years ago, Mr. P. employed a Scotch farmer, whose knowledge and experience in draining, proved of much advantage.

Depth of plowing.—The precise depth is not mentioned, and we are left a little to conjecture *how* deep Mr. Poore means when he says "we always plow deep, and are well satisfied deep plowing never injured *our* lands."

Kinds of crops cultivated.—About 10 acres of Indian corn and potatoes. Corn produces 72 bushels per acre. Mr. P. thinks rye should be sown early, say in August, or late, say in October. Two bushels of rye are sown to the acre. Corn and potatoes are cultivated entirely in drills. The arguments in favor of this mode are, that less manual labor will produce a crop. A double mold board plow is used in digging potatoes. Plowing in autumn is preferred—the earlier the better. The long barn-yard manure is used in a green state, put in the drills where the corn and potatoes are planted. When the crops are removed in autumn, the land is thrown into ridges by the double mold board plow. Spring crops are oats and barley. Wheat was formerly sown, but latter years has not produced well. The manure is chiefly used with the corn and potatoe crop, and not much on laying the land down with small grains and grass, as it tends to produce too rank a growth of straw. If *top-dressings* are used, compost is preferred. The fields are cultivated as near as possible in rotation. Made last year 363 loads, 30 cubic feet to the load, of compost manure.

Number of acres mowed for hay.—Mr. P. mows 86 acres, commencing early in the season, as the horses are kept up all the year, and the oxen at least three quarters of the year—therefore a portion of the grass is used for soiling. Estimating the hay on hand first of August at 500 cubic feet to the ton, at which rate it is often sold, there was on hand 157 tons.

Flooding grass lands.—Twenty acres of Timothy meadow was flowed in the winter of 1842-3. The result was an injury to the grass. The water it is supposed, laid on too long. The experiment will be repeated—letting the water remain on only two or three days at a time.

Oats and barley.—The Scotch two rowed barley, and the Scotch potatoe oat are preferred. Three bushels of oats and 3 to 3¼ of barley are sown per acre.

Laying down meadow lands to grass.—After the hay crop is taken off, the land is plowed, laying the furrows flat, and rye and grass seed sown, with a liberal top-dressing, and then rolled. A bushel, and in some cases, a bushel and a half of grass-seed (kind not mentioned) is sown per acre.

Saving and making manure.—Manure is saved in every way that it can be obtained. Compost is made from the parings of the ditches, leaves, meadow-muck, &c. In addition to the ordinary means of saving the manure of the stock, a cistern for saving the urine has been constructed, and is thus described. "It is 13 feet in diameter and 15 feet deep, constructed of stone and cement; into this runs the stale from the stable, ox house, cow house, and all the liquid from the cow yard, the suds and wash from the dwelling; over are the water closets of the dwelling, two in the basement, two on the ground floor, and two in the chamber; these are connected by covered passages to the dwelling; in the second story is a place for putting down loam or any material wished for compost, which we do weekly; back of the building and under the basement, is a convenient place to throw out the compost, which we do semi-annually. There is nothing offensive in the smell, and we think too high an estimate cannot be placed upon this appendage to the farm."

Live stock.—The stock kept on the farm, is six oxen, ten cows, and from four to six horses. The cattle are Durhams, "which," says Mr. P., "for *our* farm we think have no equal." The calves are shipped south and west when six months old, except such as are necessary to keep the stock good. The calves are generally put to drink as soon as dropped. Sometimes, when a very fine one is dropped out of season, it is allowed to run with the cow. Mr. P. considers this an expensive mode of rearing calves, but says the prices he has often obtained, fully justify it.

No cheese is made of late years—the milk being sold, except what is wanted for family butter at the house.

Swine.—From six to fifteen, at different seasons, are kept. They are mainly supported by wash from the house and unsaleable vegetables. The manure of the horses and cattle in summer, is thrown into their yards, and they are kept well supplied with turf-parings, sods, young weeds, &c., which are often removed to the compost-heap, and a fresh supply given in return.

Orchards, &c.—There are 347 apple-trees, from which there were formerly made 75 barrels of cider. Recently the trees have been headed down. Of pear, peach, plum, apricot, and cherry-trees, there are 1,200, planted out at different times within the last ten years.

Laborers.—There are three departments. The farmer and three assistants, and two boys—the gardener and one assistant, and the machinist's department, which is composed of one blacksmith, one stone mason and wall builder, one wheel-wright and carpenter. They all keep separate accounts, and when one exchanges time it is repaid the same as if with a neighbor. Since 1826, Mr. P. has had a Scotchman as foreman, and with the exception of one Dutchman and one Welchman, the laborers have all been Scotch, English, or Irish. Foreigners cannot do as much work in one day, as the Americans, but they do more work in one month, and infinitely more in a year. They are not afraid of wet or cold, and having been raised to labor, are content to labor. The foreman being a foreigner, can manage them better. They also prefer him, as they can work as they have been accustomed. Mr. P. says, "having made a rule that when they were deserving to provide better situations for them after they had become accustomed to the climate and manner of farming here, I can at any time, from the neighborhoods of those who have faithfully served me, supply myself, at sixty days notice, with any number of farmers or mechanics, at the old country wages, which do not exceed upon the average £12 per annum for farm servants, or £20 per annum for mechanics. In addition, board, washing, and lodging, if single—and use of cottage and garden, and one quart of milk per day and board themselves, if married. I wish no better men than I obtain at these prices."

Barns.—The main barn is 120 feet long and 42 wide. In the basement or cellar, (though mostly above ground) are horse-stables, ox-house, threshing mill, cider press, hay press and vegetable cellars, which are filled by rising hatches in the floor above. There are also two wings 80 feet each, one of which is a cow-house and a wood-house in the basement or cellar—the other a piggery, and over it a carriage-house, work-shop, henery, &c. The barn is devoted to hay and straw, and all the cattle are fed, by putting hay down in the racks. The cattle are tied by chains. The floor of the cow-house, ox-house and stables, is of paved stone, and gutters cut from stone, lead to the cistern. The entire barn, stables cistern, &c. were erected at an expense of $2,000. The basement is constructed entirely of stone. Split stone is used for door-posts, supports in cellar, &c. The roofs are covered with tin, which Mr. P. says costs in the first instance, one-third more than good shingles; but it has been on eleven years, and shows no signs of rust or decay.

The cow-yard (or barn-yard) is filled with mud, earth, leaves, &c., in the fall, which are put into heaps in spring, when the yard is again filled—the droppings of the cows and manure from the stables in summer, is daily put in with the hogs under cover, and removed to the compost heap every convenient opportunity, when properly worked.

SAVING MANURE.

The effluvium, or gas, which arises from decomposing animal or vegetable substances, though exceedingly disagreeable to our olfactory senses, is the congenial food of growing plants.

Arthur Young said, many years ago, "he who is within scent of a dung-hill, smells that which his crop would have eaten if he would have permitted it." Sir Humphrey Davy demonstrated this. He placed a quantity of fermenting manure in a retort, and ascertained that it gave off a liquid containing a large proportion of salts of ammonia. Seeing this result, he introduced the beak of another retort filled with similar dung, under the roots of some grass in the garden, and "in less than a fortnight, a very distinct effect was produced on the grass upon the spot exposed to the influence of the matter disengaged in fermentation; it grew with much more luxuriance than the grass in any other part of the garden." It is hence obvious that by permitting the escape of the gas evolved during fermentation, the valuable portions of the manure are dissipated in the atmosphere.

"The loss of *gaseous manure*," says Mr. Hannam, in in his excellent essay on the Economy of Waste Manures, "arises from the escape of the carbonic acid and the ammonia, of the vegetable and animal matters in the manure-heap, during the process of fermentation and putrefaction; both of which gases are essential in the nutrition of vegetables. * * * When this evolution of ammonia and carbonic acid takes place under the root of the plant, it is what we want; but when it takes place, as is generally the case, months before the compost is used, the manure is robbed of its most valuable constituents."

"It is worthy of remark," continues Mr. Hannam, "that the richer the manure is in nitrogen, the more serious the loss is; as the more nitrogen a substance contains, the more prone it is to ferment and throw off ammonia." The observation of every farmer will corroborate this; for all have noticed that the richer the manure, the stronger the odor arising from it.

The most effectual means, probably, of preventing this waste of the gaseous portion of manures, would be to apply them to the soil before fermentation takes place. In this case, the gases would be taken up by the growing crop. Stable, or barn-manure, is sometimes deposited in cellars, where, from the low temperature and seclusion from the air, it undergoes little or no change. Thus kept, it retains its original strength, and is much more powerful and enduring in its effects, than that which has undergone decomposition in the open air. But there is often so large a portion of undecayed vegetable fibre, (litter, &c.) in manures, that they cannot be conveniently applied in a green state. Besides, for some crops, the action of green manures is not quick enough; and for other crops, as wheat and other small grains, they tend to produce too great a growth of straw, and increase the liability to rust.

It becomes, then, necessary, under certain circumstances that manures should pass through a state of fermentation before they are applied to the soil, and the question is, how can this object be accomplished without loss?

Reason teaches, and experience proves, that substances may be mixed with manure, which will absorb the gaseous portions as they are generated. *Earth* is a good absorbent. If a dead animal be enveloped in earth before putrefaction commences, and allowed to remain so till the carcass is decomposed, the earth will have absorbed the nauseous fumes occasioned by the decomposing animal matter, and will be found rich in those principles which constitute the food and growth of vegetables. This example teaches that mixing soil with manure, or covering the manure-heap with a layer of soil while undergoing fermentation, will preserve much of its value which would otherwise be lost. There are other substances which are preferable to common soil—such as charcoal, (which it is said will absorb ninety times its own bulk of ammoniacal gas, and thirty-five times its volume of carbonic acid gas,) and peat, or swamp muck. The latter, in many parts of the country, can be had in the greatest abundance, and it is, beyond doubt, one of the best means of augmenting the farmer's stock of valuable manures. In its composition and absorbing power, it much resembles charcoal—being principally the carbonaceous matter of decomposed vegetables. Every farmer who can conveniently obtain peat or muck, would do well to place a layer of it under all his manure-heaps—to mix it with barn or stable manure in forming composts, covering the piles with a coating of it to prevent the waste of the gases, and throwing it liberally into the stalls of cattle and horses, to absorb the urine. Results will show that the labor thus bestowed in the use of swamp muck, will be rewarded a hundred fold.

Other substances are used as *fixers* of ammonia, &c., which act somewhat differently from those above mentioned—such as gypsum, and various kinds of acids. The theory of their action is, that the ammonia, being an alkaline gas, will by combination with any acid, form a neutral salt. Gypsum is a combination of lime and sulphuric acid. When this is applied to fermenting manure, the sulphuric acid of the gypsum leaves the lime and unites with the ammonia, the acid having a stronger affinity for the ammonia, than for the lime with which it was before combined. Mr. Hannam, in the essay before referred to, recommends that the manure-heap be covered with peat, or some absorbent, and "this coating kept well saturated with sulphuric-acid and water, say a weak mixture of ten gallons of water to one of acid." Mr. Hannam adds, that any other acid which may be obtained at a cheaper rate, will act as well, as the ammonia will combine with any acid. Either the application of gypsum, or the acid solutions mentioned, will soon effect such a *fixture* or combination, that little or no smell can be perceived.

In regard to the use of *salt*, which has been by some recommended as a fixer of ammonia, Mr. Hannam says—"My own observation teaches me to prefer acid to any salt, as it is equally cheap, more easily used, and is, therefore, likely to be more generally efficacious."

"Much increase is by the strength of the ox."—[Prov. xiv. 4.

The following in substance, is Dr. Adam Clarke's *just* commentary on this passage of Holy Writ. The ox deserves more consideration than he usually receives, for the reasons here so correctly given: "The ox is the most profitable of all the beasts used in husbandry. Except merely for speed, he is superior in almost every respect to the horse. 1. He is longer lived. 2. Scarcely liable to any disease. 3. He is steady, and always pulls fair in his gears. 4. He lives, fattens, and maintains his strength on what horses will not eat, and therefore is supported at much less cost. 5. His manure is more profitable. And, 6. When he is worn out in his labor, his flesh is good for the nourishment of man, his horns of great utility, and his hide almost invaluable. It might be added, he is almost no expense in shoeing; and his gears are much less expensive than those of the horse. In all large farms, oxen for the common purposes of labor, are greatly to be preferred to horses. Have but patience with this most patient animal, and you will soon find there is much increase by the strength and labor of the ox."

Pick carefully all winter apples for sale and for use, and save all other apples for pigs and other farm stock, for which they will be found very valuable in winter.

PLOWING IN CLOVER.

Among other questions which ought to be, (and may be) decided, is that of the relative advantage of plowing in or pasturing clover. It seems to be taken for granted by many, that plowing in the clover crop is more beneficial to the land, and a more profitable course, than feeding it off by animals. But we do not think this point by any means established. In a late conversation with Mr. Noble, of Massillon, Ohio, he observed that from his own experience, he had been led to the conclusion that a much greater profit could be derived from pasturing clover with sheep, than from plowing it in. He had found the wheat crop as good or better where the clover was pretty closely fed down by sheep, as where that crop had been plowed under; the land in both cases being similar. If this would be the general result, the additional profits of the sheep, would decide the case much in favor of pasturage.

In a late number of the New Genesee Farmer, we find Mr. Wm. Garbutt, (a very judicious farmer,) entertains similar ideas to those above expressed. Mr. G. considers pasturing clover two years with sheep, more profitable to the farmer, more enriching to the soil, and more beneficial to the wheat crop, than plowing it under.

We would suggest to agricultural societies the propriety of offering premiums for experiments to test this matter.

BREEDING RABBITS.

We have had some inquiries made as to the breeding and rearing of rabbits, some believing that it might be made a profitable business in particular localities. If any of the readers of the Cultivator have had experience in this business, we should be gratified to hear from them; in the mean time, we present from our foreign publications such hints as may be of service to those wishing to undertake the care of this animal.

There are several varieties of tame rabbits, but the broad chested and short legged are the most esteemed. In some rabbit warrens, or places of breeding, natural or artificial mounds of sand are provided, in which sleeping and breeding places are formed, as well as holes for retreat and security from their many enemies. In other warrens, they are bred in hutches or boxes placed in sheds, or places where they can be secure from vermin. The utensils for feeding rabbits should be made of some material they cannot destroy, such as pewter, earthen ware, or iron, as they are apt to gnaw all wood within their reach.

The female or doe will breed from the age of six months, and the period of gestation is about thirty days. The number produced is from five to ten, and the weak or sickly ones, should be destroyed at once. Immediately before parturition, the female makes her bed fine by biting down the materials, and lining it with fur taken from herself. The doe will admit the buck within a fortnight after parturition; and the young are weaned only a short time before the birth of another brood. During gestation, the female keeps secluded from the males, or should have the means of doing so, as otherwise she may lose her young. Rabbits may be bred throughout the whole year, if their beds are warm; but usually they will not average more than five or six litters in a season.

Rabbits require much the same food as sheep, and generally the treatment so far as food is concerned, that best agrees with the one will do so with the other. Mr. Mowbray, in his work on breeding rabbits, directs that they should be fed three times a day; and remarks that in feeding, the preference is always to be given to dry and substantial food. The test of health with rabbits is, that their dung be not too moist. The grain proper for feeding rabbits is oats, peas, wheat, pollard or shorts, and some use buckwheat. The greens and roots the same as for cattle and sheep. Carrots, Jerusalem artichokes, boiled or steamed potatoes, lucerne, clover, cabbage leaves, tares, &c. The best dried herbage is clover and meadow hay, and pea and bean straw.

Rabbits are eagerly sought in markets where they are to be found. Some of the larger varieties, if cooked in the same way, are equal in flavor to the turkey, and are highly prized. They are usually sold from the teat, but those that are older may be readily fattened upon corn and hay, with an allowance of good vegetables. The better the feed given to rabbits, the better the quality of the flesh, and the more the profit, as is usually the case in feeding animals. Rabbits are in their perfection for feeding at the fourth or sixth month; older, they become more dry in flesh and somewhat hard. Three months is the time usually allowed to make a rabbit fat and ripe. For the table or the invalid, the flesh of rabbits is equal to that of poultry.

Few kinds of live stock are less liable to disease than the rabbit. When diseases do occur, they may usually be traced to too much green food, and are remedied by a change to dry food and grain. If the difficulty is of a nature that does not readily yield to this treatment, they are generally knocked in the head, as the value of the animal will not allow much trouble in the cure.

THE LATE JUDGE BUEL.

One of our citizens, in looking over some French journals, found the following announcement of the death of our late distinguished fellow citizen Judge Buel, made to the Royal Agricultural Society of France in Nov. 1840, which he has translated and furnished for publication, in the persuasion that his many friends will be gratified to read this homage to the honorable character and important labors of one of our chief public benefactors, prepared for the records of the Society of France, hardly second in influence and reputation, to the celebrated Academy of Sciences:

To the President of the Royal Society of Agriculture:

Sir—It is my painful duty to announce the loss which the Society has lately met with, in the death of Mr. Buel, one of its corresponding members.

This estimable citizen, like the illustrious Franklin, began his career as a printer, and became the editor of several works.

After having honorably discharged the duties of a Judge in the County Courts of Ulster, in the State of New-York, he was appointed State Printer, and removed to Albany, where he established the Argus newspaper, which he continued to publish until 1820, when he gave up this occupation and devoted himself wholly, in the 43d year of his age, to agricultural pursuits.

Having purchased, near the city of Albany, a farm of 85 acres, which was considered little better than a desert of sand, he improved it to such an extent, and succeeded in obtaining such valuable crops, that he was called the "Providence of Albany." His lands, which had been bought for $30 per acre, were valued at his death at more than $200.

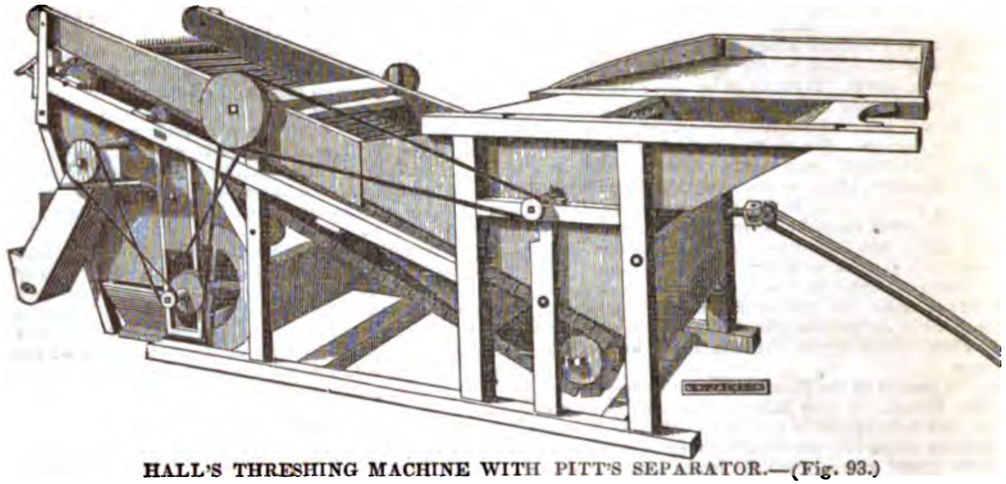
After his removal to Albany, he represented the city and county in the State Legislature, and was appointed a Regent of the University. The periodical called the Cultivator, which he established in 1834, under the auspices of the State Agricultural Society, enjoyed so great a reputation, that the number of its subscribers (exceeded) in 1838, fourteen thousand. I must not forget to mention a small but exceedingly important volume which he published, under the title of "Farmer's Companion," in which he gives an account of the most valuable of his observations and experiments in agriculture—a work prepared at the request of the Massachusetts Council, for the especial instruction of young farmers.

This useful and honorable agriculturist died of an attack of bilious fever in Connecticut, whither he had gone to deliver a discourse before the Agricultural and Horticultural Societies of that State. His loss will be long regretted by the many Societies that were proud to count him among their members.

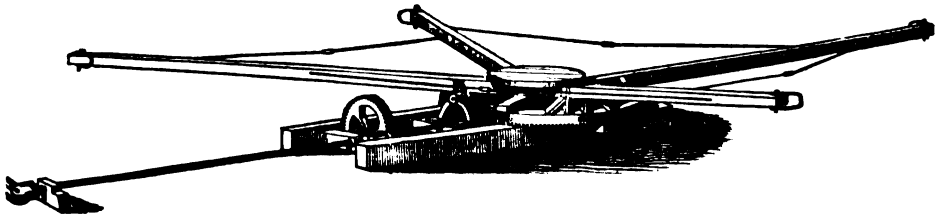
Accept sir, the assurance of my distinguished consideration. D. B. WARDEN.

Paris, Nov. 22, 1840.

Feed all fattening animals with perfect regularity—enough, but not too much. Save all your straw well for litter and winter feed.



HALL'S THRESHING MACHINE WITH PITT'S SEPARATOR.—(Fig. 93.)

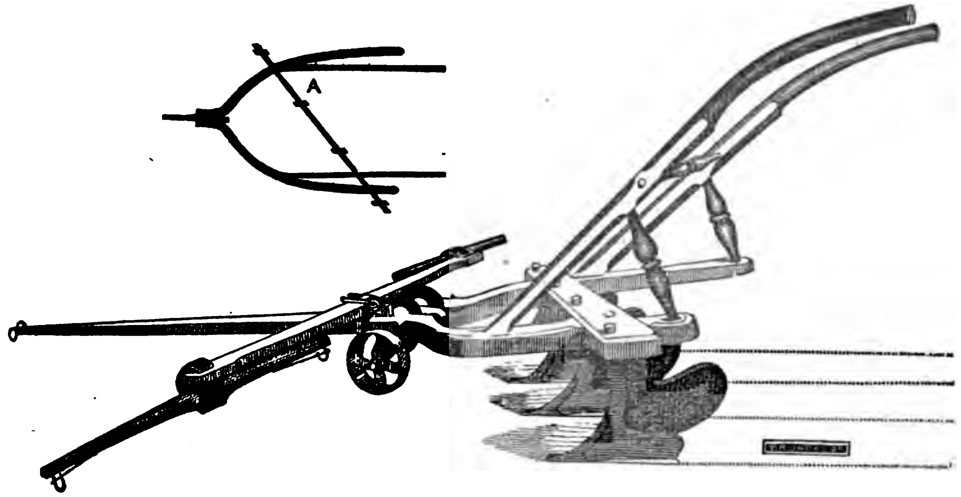


HALL'S HORSE POWER.—(Fig. 94.)

Above we give figures of the celebrated Horse Power and Threshing Machine, to which is attached Pitt's Grain Separator, manufactured by Joseph Hall, at Rochester, in this State. These machines are made of two sizes, and sufficiently strong for six or eight horses, though usually worked with four or six, threshing and clearing 200 bushels per day with ease. Of the cost of the machines, we are not informed. Any information respecting them, may be obtained by addressing the manufacturer at Rochester.

IMPROVEMENT OF LAND.

It is always very gratifying to hear of the improvement of old worn out or naturally poor lands; because it indicates the addition of solid wealth to the country, and sets a good example to others. It is a question well worthy of consideration, whether a good farm may not be made out of the poorest "old field" in the old States, at an expense much less than that involved in the emigration to, and purchase and preparation of, a rich one, in the western country; more especially, if the sacrifices incident thereto, be calculated in the account. Be that as it may, however, the improvement of poor land in all the old States, is an object of the first importance, both to individuals and States, to farmers and towns-people. Let any one look about the environs of the city of Baltimore, for example, or of Washington, or indeed any where in the middle and southern States, and see the large tracts of waste land that meet his view at every turn, and then ask himself whether individuals, cities, towns and States, would not all be benefitted by the improvement of these "old fields," and their conversion to profitable uses. But the thing is so self-evident, that no argument can be required to illustrate it. The *how*, not the *why*, it should be done, is the great point. *How* can this poor old field be made to produce thirty bushels of wheat, forty of corn, fifty of oats, or two tons of hay to the acre, at a cost that will enable the aforesaid crops to yield a fair interest on the investment and a fair compensation for the labor? That is the frequent question; and ten thousand echoes answer, "*aye, how!*" It is not intended *now* to answer this question, but to make a few remarks applicable to it, for the purpose of preparing the way for the answer at a future, but not distant day. We often hear of this and that case of improvement by this and that man, and of the wonders they have performed in the still more wonderfully short time of so and so many years. These announcements are always very gratifying to every body; they are eagerly sent forth to all the world in the newspapers, and are returned in grateful echoes upon the improver's delighted ears. And this is all right. It acts as a most powerful excitant upon others that had been more dilatory; it stimulates and encourages them to do likewise. But, unfortunately, they are always, or almost always, if not quite, accompanied by the well known fact, that the improvers were in possession of wealth, and that that enabled them to accomplish the wonders spoken of. They were not obliged to earn the bread they were eating, by the sweat of the brow, at the very time they were making the improvements. They were not obliged to raise the interest on the debt incurred in the purchase of that very piece of land, by hard work, at the very time they were ditching and draining and liming. They had the means wherewith to improve, and the time wherewithal to do it in. And is it wonderful, that with these attributes of ability in full possession, they made the improvements? Would it not have been wonderful if they had not? Still it is a good thing, no matter by what means it is accomplished; it is an act that deserves praise; just as does the proper appropriation of any and every other faculty or means any of us possess, and no more. Such improvers have simply performed an act of duty, which they owed to themselves, their families and their country—what else? But show to the world a farm once impoverished or naturally poor, that has been made fertile and productive, out of its own resources, by the judicious management and industry of the farmer, and that has in the meantime maintained that farmer and his family, besides paying some interest, and possibly principal of the purchase money, and all in the course of five or even ten years; then the world will have something to hold up to its rural inhabitants as an example that they ALL can follow. However commendable the former class of improvers may be, the latter is infinitely more so. The former has *purchased* a valuable property, the latter has *made* one. Farms may be found



WIARD'S PLOWING MACHINE—(Fig. 95.)

The above engraving represents, though not very correctly, a plowing machine invented by Mr. Thomas Wiard of East-Avon in this State. It is a combination of plows, arranged in such a manner as to operate precisely like a common plow, only that it is made so as to turn two, three or four furrows at once. It is designed to operate on all soils, after they are broken up, and is said to be used with great success on light or sandy soils even for the first plowing. The depth of furrow, from two to six inches, is regulated by a movable wheel. It has been thoroughly tested, and found to work well. The inventor has received the medals of the State Ag. Society and the American Institute, by whose committees it has been highly commended. All inquiries on the subject should be addressed to the patentee, Thomas Wiard, P. M., East-Avon, N. Y.

in many a part of the country that have cost their owners almost as much as it would to have paved their entire surface with silver dollars; and yet they are not a whit more productive than many others that never cost an extraneous cent. Many a farm may now be seen in any part of our country, that five years since, would scarcely pay for cultivation, but now yielding full, even heavy crops, that have never felt the influence of a particle of manure or other fertilizer, that it had not itself produced either directly or indirectly. This is the kind of improvement our farmers want; this is the only kind that can be generally adopted. The men that have money enough to improve land, are generally those that will make some other use of it; and the few that will appropriate it to that object are rather exceptions than constituents of the rule. Much more good, therefore, will result from the publication of instances of self-improved lands, and the processes of the improvements, even though but a moderate degree of excellence be obtained, than can possibly proceed from the dissemination of facts in relation to *paid for* improvements; because the one proceeds from the proper application of industry and intelligence, and can be universally followed as an example; the other from the concentration of extraneous means, and can be imitated by but very few. No one can object to the application of foreign means to this object; on the contrary, the more they are thus applied the better. It is good for the individual most concerned; it is good for the country that the gold in his coffers should be made to enrich the land. But do not hold him up as an example to be followed by those who have not the means to do likewise; and very few have; not one in ten thousand probably—for it is rather tantalizing for a poor man to be told that he can make his land as rich and productive as his neighbor Dives', if he will expend five or ten thousand dollars in its improvement! Rather tell him how to do it by the means he possesses, his industry, for that is all his capital, and lay before him instances with details, of other cases that have succeeded by the same means. The man that shall raise from impoverishment a piece of land in this way, that is by his own industry out of its own resources, deserves more of his country than all the mere politicians that ever lived since the world was formed.

G. B. S.

Baltimore, Sept. 1844.

SALERATUS A SUBSTITUTE FOR SALT PETRE IN CURING MEAT.—Saltpetre has long been considered by physicians as a bad article to be used in curing meat, being extremely injurious to digestion; it is of so cold a nature that only a small quantity is sufficient to destroy life. In the article of saleratus, we have an excellent, convenient and harmless substitute, and should be used in the same manner as saltpetre has been. Meat has a stronger affinity for saltpetre than for common salt. Saleratus has the same power in that respect, and thereby prevents the meat from becoming too salt; and the same quantity should be used as of saltpetre. There is this difference in them, that saltpetre dissolves readily in cold water, whereas saleratus does not; it should be pounded and dissolved before it is put into the brine. Saleratus is composed of sulphate of potash and pearlash; and if any person is disposed to procure the sulphate of potash at the shops, and use it instead of saleratus, they will find its effects substantially the same.

The usual way of saving hams and shoulders, is to cut them as soon as possible after the hogs are killed. This course makes the meat tough and stringy. In cool weather they should be kept on hand just as long as they can be, and not be in any wise tainted. Then rub them over with sugar or molasses, and let them lie a day or two. Then put them into brine in which has been put an ounce of saleratus dissolved, for each ham or shoulder; let them lie three or four weeks in the brine. Smoke them in an airy smoke-house, and they will be found tender and delicious.

C. D.

NIAGARA FALLS.—From a paper in a receut number of Silliman's Journal, it appears that "the motive power of the cataract of Niagara, exceeds by nearly forty fold all the mechanical force of water and steam power, rendered available in Great Britain," and that probably the law of gravity puts forth in this single water fall more intense and effective energy, than is necessary to move all the artificial machinery of the habitable globe. From a series of observations and measurements made with great care and skill at Black Rock and Lewiston, it is estimated that there flows out of Lake Erie, 22,440,000 cubic feet, or 1,402,500,000 lbs. of water every minute. The whole power used in driving machinery in Great Britain, is equal to 233,000 horse power, while that of Niagara is 4,533,334 horse power

MR. BANCROFT'S ADDRESS,

At the New-York State Fair, Poughkeepsie, Oct. 19, 1844.

MR. PRESIDENT AND GENTLEMEN
OF THE AGRICULTURAL SOCIETY:

Farmers of New-York—The hour of separation for this dazzling array of beauty, this vast multitude of men, is at hand. Fruits richer than ever graced the gardens of Pomona—a paradise of flowers—needle-work the most exact, delicate and even—ingenious farming implements and manufactures of all sorts, cloths of the finest quality, from your own looms, and from looms in Massachusetts—horses, fit to win prizes at Olympia—cattle such as never fell in a hecatomb to Jove, and never were dreamed of by the highest genius of the Dutch painters—all these and more have arrested our gaze and filled us with wonder and delight. And now I am commissioned to summon you, and through you the population of this mighty commonwealth, to come up and join us, as, under the auspices of the State, honor and distinction are awarded to agricultural industry and genius.

A spectacle like this around me, of culture, order, and the peaceful virtues, cannot be surpassed in the world. In this hour, hushed be the spirit of party; be it utterly exorcised and banished from this enclosure, which is consecrated to the peaceful triumphs of the agriculture and the industry of New-York. [Applause.] We yield on this occasion to no narrower sentiments than the love of country, and of collective man, and we invoke the blessed influence of that universal Providence, which watches over the seed-time, and matures the harvest. [Applause.]

The theme for this occasion is the Agriculture of New-York. But what need of words to speak its praise? Look around you. The cultivated earth is its own eulogist. The teeming wealth that gushes from its bosom—the returns of its industry in every form, that present themselves in their abundance and perfection to our never wearied eyes—are the evidences of its magnificence. The trees in your market-place, and on your hill-tops, are older than the settlement of civilized man in our America; they are older than the presence of the plow on the soil of New-York: they are witnesses of the quite recent day, when your forests stepped down to your river's bank, and the glades and prairies of your west were covered with useless luxuriance. And behold the change which little more than two centuries have wrought: the earth subdued; the forest glades adorned with the white spires of churches, and gleaming with the light of villages; towns nestling in every valley; crowded cities, competing with the largest of the earth—profusely supplied with every article of food. And by whom has this miracle been wrought? By the farmers of New-York. [Applause.]

As I turn my eye northward, along the banks of the Hudson, my mind reverts to the memory of one of your ancient landholders, who died before our independence. Join with me, Farmers of New-York, in recalling the gentle and humane Robert R. Livingston, the elder, the father of the Chancellor. His home was in your vicinity; his mind was greatly and firmly, though not passionately, devoted to your service. An only son, husband of an only daughter, father of those whom the world will not soon forget; he was of so lovely a nature, that it seemed as if the fragrant atmosphere of spring, and the melody of its sweetest birds, and the softened reflection in your tranquil river of its grandest scenes, had blended together and melted themselves into his soul. Peace to his memory; let it not perish among you. Let the lines on his monument be refreshed and deepened.

Nor let me limit the achievements of the farmers of New-York to the subjection and beautiful adornment of its soil. The great works of internal communication, making this State a wonder to the world, were commenced by the enterprise of yourselves, were undertaken when farmers held power. Call to mind the immense structures which make this State the astonishment of the world; its channels for inward communication carried upwards to the waters of the St. Lawrence, stepping aside to the Ontario, and united at the northwest with the illimitable wildernesses of our inland seas; and then join me in paying tribute to those who were the servants of the public mind in commencing this gigantic system. To De Witt Clinton, whose capacious mind grasped in advance the sum of its infinite benefits—whose energetic, vehement and commanding will, was to the enterprise like a powerful mill-stream as it dashes on an overshot wheel of vast dimensions. (Applause.) To Van Buren, who, when the bill for the construction of the canal had almost been abandoned by its earliest friends, put forth those noble-spirited, well-remembered exertions, which resuscitated it when all seemed lost, and restored it to the approbation of your Legislature. (Applause.) Well might those chiefs in the world of opinions, embrace each other in the hours of their success. If in action they were often divided, in this great service, they share a common glory. (Applause.)

But the farmers of New-York are not content with improvements in the material world alone. From their generous impulses spring your system of free schools. They have proved themselves the liberal benefactors of academies and colleges. They too, have been careful for the means of their own special culture, and have founded and nurtured societies for promoting agriculture. For an example of the virtues of private life, I name to you the farmer of Westchester county, the pure and spotless Jay, who assisted to frame our first treaty of peace, which added Ohio and the lovely West to our agriculture. Side by side with him, I name the friend of his youth, Robert R. Livingston, the younger, the enlightened statesman of our Revolution, whose expansive mind succeeded in negociating for our country a world beyond the Mississippi, and gained access for our flag to the gulf of Mexico. Here, on the banks of the Hudson, he is celebrated as it were by every steamboat, and remembered on your farms through his experimental zeal. On this day be remembered the virtues of Stephen Van Rensselaer, who first brought Durham cattle into this State, and liberally diffused the breed.

Join with me also in a tribute to Mitchell, the faithful advocate, and perhaps institutor, of one of the earliest agricultural societies; to Jesse Buel, who connected science with fact, taught how the most barren soil may be made vastly productive, diffused his acquisitions by the press, and by life and by precept was the farmer's friend; (applause;) to Willis Gaylord, whose agricultural essays are standard authorities, honorable to the man and to the State; to Le Ray de Chaumont, who kept alive an agricultural society in Jefferson county, when all others had expired, and gave the impulse to the formation of the State Society, of which he was the first president; to James Wadsworth, for his skill as a cultivator, and still more for his liberal exertions, pouring out thousands after thousands, at the impulse of a generous mind, as if from a well-spring of good will, to promote agricultural science in primary schools. (Great applause.) And I should be wanting on the occasion, did I not tender the expression of your regard to the present president of the State Society, to the influence of that institution of which he is the honored head; to its Journal of Agriculture, to its annual fairs. But let me also entreat its friendly wishes to its purpose of establishing an agricultural school; and to that other more diffusive design of introducing, through its secretary, scientific works on agriculture into school libraries. I am happy also to announce that efforts are now making to constitute agriculture, as it deserves to be, a branch of instruction in one, at least, of your Universities. (Loud cheers.)

I have named to you some of the benefactors of Agriculture in New-York. Their benefits endure. The pursuits of the farmer bind him to home. Others may cross continents and vex oceans; the farmer must dwell near the soil which he subdues and fertilizes. His fortunes are fixed and immovable. The scene of his youthful labors is the scene of his declining years; he enjoys his own plantations, and takes his rest beneath his contemporary trees.

But the farmer is not limited to the narrow circumference of his own domain; he stands in relation with all ages and all climes. Your society has done wisely to urge on those who bear the Gospel to untaught nations, to study their agriculture, and report for comparison every variety of tillage. All ages and all climes contribute to your improvement. For you are gathered the fruits and seeds which centuries of the existence of the human race have discovered and rendered useful. Tell me if you can, in what age and in what land the cereal grasses were first found to produce bread ? Who taught to employ the useful cow to furnish food for man ? When was the horse first tamed to proud obedience ? The pear, the apple, the cherry, where were these first improved from their wildness in the original fruit ? And whose efforts led the way in changing the rough skin of the almond to the luscious sweetness of the peach ? All ages have paid their tribute to your pursuit. And for you the sons of science are now scouring every heath, and prairie, and wilderness, to see if some new grass lies hidden in an unexplored glade; if some rude stock of the forests can offer a new fruit to the hand of culture. For you the earth reveals the innumerable beds of marl; its mineral wealth, the gypsum and the lime, have remained in store for your use from the days of creation. For you, Africa and the isles of the Pacific open their magazines of guano; for you, (turning to John A. King and some other gentlemen from Long Island) old Ocean heaves up its fertilizing weeds. (Great applause.)

And as the farmer receives aid from every part of the material world, so also his door is open to all intelligence. What truth is not welcomed as an inmate under his roof ? To what pure and generous feeling does he fail to give a home ? The great poets and authors of all times are cherished as his guests. Milton and Shakspeare, and their noble peers, cross his threshold to keep him company. For him, too, the harp of Israel's minstrel-monarch was strung; for him the lips of Isaiah still move, all touched with fire; (applause,) and the apostles of the new covenant are his daily teachers. No occupation is nearer heaven. The social angel, when he descended to converse with men, broke bread with the husbandman beneath the tree.

[At this moment, Mr. Van Buren appeared and took his seat with the officers and other gentlemen upon the platform. He was received with the warmest enthusiasm, and it was some time before silence was restored so as to enable Mr. Bancroft to proceed.]

Thus the farmer's mind is exalted; his principles stand as firm as your own Highlands; his good seeds flow like self-moving waters. Yet in his connection with the human race, the farmer never loses his patriotism. He loves America—is the depository of her glory and the guardian of her freedom. He builds monuments to greatness, and when destiny permits, he also achieves heroic deeds in the eyes of his race. The soil of New-York, which he has beautified by his culture, is consecrated by the victories in which he shared. Earth! I bow in reverence, for my eyes behold the ground wet with the blood of rustic martyrs, and hallowed by the tombs of former heroes! Where is the land to which their fame has not been borne? Who does not know the tale of the hundred battle fields of New-York ? Not a rock juts out from the Highlands, but the mind's eye sees inscribed upon it a record of deeds of glory. Not a blade of grass springs at Saratoga, but takes to itself a tongue to proclaim the successful valor of patriot husbandmen. (Applause.)

Here the name of Schuyler, the brave, the generous, the unshaken patriot, shall long be remembered; the zealous, reliable George Clinton, a man of soundest heart, a soul of honesty and honor, a dear lover of his country and of freedom. Nor do we forget him—the gallant Montgomery—twin martyr with Warren—who left his farm on the Hudson, not, as it proved, to conquer Quebec, but to win a mightier victory over death itself.

I renew that theme once more, to recount how the farmers of New-York have served their country and mankind. They were invested with sovereignty, and they abdicated. Glorious example! Highest triumph of disinterested justice! They themselves peacefully and publicly renounced their exclusive authority, and transferred power in this republic from its territory to its men. (Applause.) May your institutions, under the spirit of improvement, be perpetual. May every pure influence gather round your legislation. May your illustrious example show to the world the dignity of labor; the shame that lights on idleness; the honor that belongs to toil. To the end of time, be happiness the companion of your busy homes, and the plow ever be found in the hands of its owner. (Loud cheers.)

The farmer is independent. With the mechanic and manufacturer as his allies, he makes our country safe against foreign foes, for it becomes perfect by its own resources. All America, thanks to New-York, is united in the bonds of internal commerce; our exchanges at home exceed our foreign traffic; and were our ships driven from the ocean highways of the world, America has become competent to sustain herself. She has less to fear from war than any nation in the world. She may pursue her career and vindicate her rights, and call forth all her energies in conscious security, (Applause.) But why do I say this? To foster a spirit of defiance? Far otherwise. Let us rejoice in our strength, but temper it with the gentleness and spirit of love for all mankind—a love that shall perpetuate tranquility, and leave the boundless and rapidly increasing resources of the country at liberty for its further development.

Forests of New-York! under the hands of skill, shape yourselves into models of naval architecture, and go forth upon the seas to reconcile inequalities of climate, and confirm the brotherhood of nations. American ideas shall travel on your prows, and the genius of humanity guide your helm; while we who remain at home will water the tree of peace, so that its roots shall strike to the very heart of the earth, and its branches tower to the heavens: we will so nurture and protect it, that its verdure shall be perennial, that no spirit of animosity shall sway its branches, that not even a whisper of discord shall rustle in its topmost boughs. (Enthusiastic applause.)

One word more, and I have done. But with that last word, I am about to address, though but in imagination, the assembled people of New-York. It is a tale often repeated, that to do honor to agriculture, the Emperor of China is, himself accustomed in the spring-time of every year, to hold the plow and turn a furrow. Under our republican institutions, far more is achieved. The State itself includes, and is in the greatest measure constituted by its farmers. They themselves are the kings that hold the plow and drive the team every day in the year. (Applause.) The whole commonwealth watches over the farmer. This Society performs its office as the agent of the people. They are assembled at our fair, to view with honest exultation the products of the farms and workshops, and single out this occasion alone, on agricultural pursuits to award public honors to exalted merit. It is right, therefore, to assume that the Empire State itself is present in your midst.

[At this moment a sudden alarm was created by the settling of the stage, which was closely crowded. There was a crashing sound, and the whole appeared to be giving way. Mr. Van Buren was the first to spring up, and beg all to be quiet, as there was no danger. Mr. Bancroft immediately turned it off very happily—"Yes," he repeated, "the Empire State is in your midst, and when she is here with the broad shield of her parental protection over our heads, no evil and no danger can befal any of us—no, not even to hurt a hair on the head of the youngest, and weakest, and tenderest among us"—stooping, as he spoke, to lay his hand kindly on the head of a little child which had been seated up by its mother on the edge of the platform immediately at his feet. This little incident elicited great applause, after which Mr. Bancroft proceeded.]

And has it occurred that this great commonwealth—the most numerous people ever united under a popular form of government—is emphatically a commonwealth of the living ? Go to the Old World, and your daily walk is over catacombs; your travel among the tombs. Here the living of the present day outnumber the dead of all the generations since your land was discovered. All, all who sleep beneath the soil of New-York, are fewer in number than you who move above their graves. Look about you and see what the men of the past have accomplished.

Concentrate in your mind all that they have achieved; the beauty of their farms, the length and grandeur of their canals and railroads, the countless fleets of canal boats they have constructed; their ships that have visited every continent and discovered a new one; their towns enlivening the public plains; their villages that gem the valleys; the imperial magnificence of their cities; and when you have collected all these things in your thoughts, then hear me when I say to you, that you of this living generation, as you outnumber all the dead—are bound, before your eyes are sealed in death, to accomplish for New-York more than has been accomplished for New-York thus far in all time. Well have you taken the device on your banners; the sun as he emerges gloriously above the horison and comes rejoicing in the East:—Well have you chosen your motto: "*Excelsior*," upwards, still upwards. Mighty commonwealth! lift up your heart; let your sun ascend with increasing splendor towards its zenith. You shall be a light to humanity: a joy to the nations—the glory of the world.

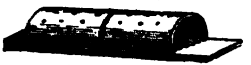
LETTER FROM "DOWN EAST."

Messrs. Editors—I belive that you have a correspondent to your truly valuable paper, from every State in the Union, but this, and for lack of a more interesting writer to fill this vacancy, I take advantage of a leisure evening to tell you a little about the part of the country I live in. And firstly, as to locality. If you will take a map of the State of Maine, and glance at the north-eastern portion of said State, that tract of land formerly known as the "Disputed Territory," you will see in the first range from the east line of the State, about forty miles north of Houlton, a township with a capital D in the middle of it. Well, in that township, only two miles from Fort Fairfield, so celebrated in the annals of the Aroostook war, lives your humble servant. Doubtless some of your southern or western readers will wonder what there can be to write from such an out of the way corner, that can interest any body "out in the world," as we term it. But I can assure you that this place is not so devoid of objects of attraction as one might suppose. In the first place there is some comfort in being far enough east to have a fair view of sunrise, and then I am only half a dozen miles from the "jumping off place;" the eastern end of this lower world. Then again there are yet to be seen by the curious traveler, the identical stump on which some time in the course of the aforesaid Aroostook war, in the times that tried men's *soles*, sat one of our soldiers, the unfortunate Bassett, when he cut his thumb making a pudding stick, for which he now receives a pension of seven dollars per month, and the house in which our Land Agent was captured, while sleeping soundly upon that feather bed, to enjoy which, he had left the "posse" sleeping upon boughs at the Fort, and had crossed the river into the enemy's country. The road too, upon which we travel into this country, is quite a natural curiosity, and I think would rival any of the Michigan roads of which Miss Martineau gives such a spirited description in her letters. The gridiron bridges, generally the dread of travelers, are the only decent part of our roads. The swampy places are mostly causewayed with logs laid *lengthwise*, and there they are now, some of them so rotten as to offer no resistance to the wheel's cutting down through deep into the mire below, while of the remainder, one end rears up most ambitiously, ready to catch the horse or wagon of the unwary traveler, while the other end is sunk into the lowest depths of the "slough of despond." But no description of mine can convey to you any idea of our roads, and I can only say that I considered I "escaped a great mercy," as I once heard a person say, in only breaking *one* axletree while coming in this fall. Perhaps you will wonder at my choice in leaving civilized life for a home in the woods, in leaving the cold regions of my native Kennebeck, for the still colder Aroostook; thus jumping not exactly out of the frying pan into the fire, but out of the refrigerator into the ice-house. But the cheapness and fertility of the land, and the nearness and facility of a good market, offered sufficient inducements to lead me to pitch my tent here, and I have not as yet seen sufficient reason to repent my choice. The State land can be bought here at 75 cents per acre, only one-fourth of which is to be paid in cash, the remainder being payable any time within four years, in work upon the roads built for our own accommodation. The soil, I presume from the representations of those who have traveled considerably through the eastern States, is equal to any that can be found in New-England. It is of four kinds—a light yellow, a chocolate color, a whitish gray, and in the cedar swales, a black mucky substance, apparently as rich as barn-yard manure, lying above one of the other varieties of soil. These different kinds of soil are all frequently found in the distance of two rods, and we like to have them in close proximity so as to mix by harrowing and plowing. The subsoil is generally gravelly and rests upon a limestone ledge, set up edgewise and so porous that the water, in a wet spell, runs down through it as it would through a sieve. The consequence is that the land can never be wet, and is always fit to work upon immediately after a rain. Another peculiarity is that it stands a drouth remarkably well, also. Why this should be, I do'nt know, unless it be that the moisture, in a dry time, draws up from down in the ledge by capillary attraction. The ledge appears to be in process of decomposition, and can in many places be shovelled with facility; the soil is full of little pieces of slate or limestone, which upon being turned up and exposed to the air, soon pulverize and disappear. The soil is generally pretty clear from stone, although there is now and then a stony spot, but there are no large boulders to be found. The great drawback upon this region as a farming country, is its liability to early frosts, but I think that all our crops except corn and beans, are as sure here as in Massachusetts, or the oldest settled parts of Maine; that is, I think the frost does not injure us any more than the rust, drouth, &c., do there. And if we are so unlucky as to lose our crops every third year even, we are twice as well off as farmers in other parts of New-England, for we can raise three times as much crop with the same labor in a good season, as they can. Wheat has been raised here on burnt land at the rate of more than forty bushels to the acre, and oats at the rate of eighty. I am satisfied that no part of New-England can compare with our section for raising wheat, oats, rye, barley and potatoes. The growth is generally, I believe, a pretty fair indication of the soil beneath, and the trees here will average about twenty feet taller than in Kennebeck, and large in proportion. The growth consists principally of rock and white maple, yellow birch, ash, pine, cedar, fir, spruce, and hackometack, juniper or larch, as it is variously called. The birches are generally from three to five feet through, and I saw one which was cut down last year which measured five feet across the stump. The cedars are very large and plenty, and grow on as dry land as any we have, with birches scattered among them. A missionary who is now visiting us, noticing that a spruce recently felled, looked very long, took the trouble to measure it, and found it 130 feet in length. The greatest difficulty with this country, appears to be in the way the inhabitants manage the soil. I notice that a great deal is said now-a-days in the agricultural papers, of rotation of crops, and I have seen several shifts recommended, but none quite equal to that adopted here. The first two crops after clearing are wheat; then they take off two of oats, three of barley, half a dozen of buckwheat; and then they will swear at the land, because it does not bear grass. This applies however only to the blue noses, the aborigines of the country, as you might term them, who have been in quiet possession of the country on the banks of the Aroostook until within four or five years, but are now fast clearing out as the Yankees come in and take possession of the country. But the length of my epistle admonishes me that it is time to close. So no more at present. When the crops are threshed, I will write something about the yield here. Georgius.

Mending a Tree.—The Boston Cultivator says—"We saw at Isaac Frost's, Newton, a tolerably large apple tree that had the bark eaten all around by mice, some years ago, and of course would have died, without some extra pains to save it. Mr. Frost set about a dozen scions in the tree, one end in the green bark and wood below, and the other above the wound. They all took at both ends and grew well, except one which took only at the bottom, and is forming a little tree by itself. The scions are now about two inches in diameter and are touching each other. The tree is in a *fine flourishing* condition."

TILES FOR DRAINING.

It is hoped that the attention of farmers and agricultural societies may be directed to the encouragement of the manufacture of this article, as to one of the most important aids to successful cultivation. The difficulty of constructing durable under-drains in sandy grounds, has doubtless been felt by every one who has attempted it to any extent; and the frequent severe disappointments and vexation caused by the breaking in of the soil during heavy rains, and the consequent obstruction of large portions, render it exceedingly desirable to discover some means of avoiding these losses. It is believed the only effectual one, yet discovered, is the use of tiles. With a very few exceptions, these appear to be unknown in this country. They will be appreciated, as facilities for their general use are increased.



In the annexed figures, one of the best modes of construction is represented. Each piece or tile forms an arch about 1 foot long, and of a size adapted to circumstances, generally about 3 inches wide and 3 high, inside. Where the ground is very hard, they sometimes rest immediately upon it; it is best, however, in all cases, to use flat plates or "soles," of the same material, to support the lower edges. These should be a little wider than the outside of the tile. The following just remarks, as to their shape and construction, are from an eminent manufacturer in Ayrshire. "All tiles should be *one-fourth* higher than wide; the top rather quickly turned, and the sides nearly perpendicular. Tiles which are made to spread out at the lower edge and flat on the top, are weak and bad for conveying water. Some people prefer tiles with flanges instead of soles; but if placed even in a drain with a considerably hard bottom, the mouldering of the subsoil by the currents of air and water causes them to sink and get deranged." "Tiles," says Johnson, "should be smooth on the surface, heavy, firm, and ring like cast iron when struck with the knuckle. They should be so strong when set, as to allow a man, not only to stand, but to leap upon them, without breaking. The introduction of machinery in the manufacture of drain-tiles, by compressing the clay, and working it thoroughly in a pug-mill, to prepare it for being compressed, has greatly tended to increase the strength of tiles. An underburnt as well as an overburnt tile, is bad, the former being spongy and absorbing water, and ultimately falling down; and the latter is so brittle as to break when accidentally struck against any object."

It will be perceived by the figure, that the joints of the tiles alternate with the joints of the soles, both being of equal length. Straw is placed round them before filling the ditch, to prevent the washing of the soil through the crevices at the joinings, which admit sufficient passage for all the water.

The price of tiles must of course vary with circumstances, price of fuel, &c., and their cheapness will also be increased with the amount of manufacture and improvement of machinery. A machine, invented by the Marquis of Tweeddale, driven by one horse, and attended by one man and two boys, will make 12,000 tiles in a day of ten hours; the clay being previously prepared—three or four men being required to produce 1,500 tiles by the common way, in the same time. Judge Buel, who laid about two miles of tile drain, procured them manufactured in Albany, at an expense of twenty-five cents per rod, which afforded a passage for the water 4 inches square. He used boards for the "soles."

It is not known that any well laid tile drain, has ever given way or become obstructed; and hence, though costing more at the first outlay, they may be the most economical in the end. The diminished width needed in digging the drain, and the facility in laying them, will of course materially lessen the cost of tile-drains.

J. J. T.

Ruta bagas should be pulled with a ruta baga hook—a tool with a small sharp hoe on one side to top the root with one stroke, and two prongs on the other for drawing the root after topped, from the ground.

TO COLOR SCARLET.

MR. TUCKER—I have been asked several times within a year or two past, how to *color scartet*. Not possessing a practical knowledge of the *art of dying*, all the information I could give was based upon a knowledge of the chemical principles involved in the process. Those who tried the experiment in accordance with the directions given, failed; and as I believed in consequence of not procuring the proper *Mordant* or Tin compound; but all said they made a very nice pink. I have felt desirous of gratifying that portion of community most interested in operations of this kind, and have thought of making the inquiry through the columns of the Cultivator; but, having a few weeks since read an article in Dr. Ure's Dictionary on Arts, Manufactures, &c. on *dying Scarlet*, I have taken the liberty of transcribing it for publication in your paper, hoping that it will be acceptable to at least some of your female readers, as the present is the usual season for dying woolens.

Bouillon, or Coloring Bath.—For every pound of cloth or wool, take 14 drachms of cream of tartar, (put into a convenient quantity of water.) When the bath is boiling and the tartar all dissolved, add 14 drachms of solution of tin (*Tin Mordant,* which see below,) and let the whole boil together during a few minutes. Now introduce the cloth, and boil it for two hours; then take it out and let it drain and cool.

Rougie or Finishing Dye.—(Three modes of preparing this are given, either of which may be selected.) For every pound of woolen stuff take 2 drachms of cream of tartar. When it begins to boil, add 1 onnce of cochineal reduced to a fine powder, stir the mixture well with a rod of willow or any white wood, and let it boil for a few minutes. Then pour in by successive portions, 1 oz. of solution tin (*Tin Mordant,*) stirring continually with the rod. *Lastly,* dye as quickly as possible. The color will be a beautiful scarlet.

Second scarlet process.—The Bouillon or coloring bath, the same as above given, and always estimated for one pound of stuff.

Rougie or Finishing Dye.—Take 1 ounce of cochineal in fine powder, and two ounces of *Tin Mordant* without tartar.

Third Scarlet process.—The *Bouillon* being as above. *Rougie.*—For a pound of woolen stuff—take two drachms of cream of tartar, one ounce of cochineal, one ounce of solution of tin, and two ounces of sea salt, dye as in process first. The salt, it is said, helps the dye to penetrate into the cloth.

Tin Mordant for dying Scarlet.—Pour into a glass globe, with a long neck, 3 parts of nitric acid at 30 deg. and one part of muriatic acid at 17 deg.; shake the globe gently, avoiding the corrosive vapors, and put a loose stopper into its mouth. Throw into this nitro-muriatic acid one-eighth of its weight of pure tin, in small bits at a time. When the solution is complete and settled, decant it into bottles and close them with ground stoppers. It should be diluted only when about to be used. When the tin compound is prepared as above directed, it may be depended upon. The following is often used by dyers, but is an inferior article.

Mix one pound of nitric acid with one pound of water, and dissolve in it an ounce and a half of sal ammoniac. Stir it well, and add, by very slow degrees, 2 ounces of tin turned into thin ribbands upon the lathe. Yours,

Clifton Park, Sept. 24, 1844. H. C. C., M. D.

POTATOE ONIONS.—The Brockport (N. Y.) Watchman says that Mr. J. Greenleaf, of that place, has raised this season, 500 bushels of potatoe onions from an acre of land. Some of the largest weighed 1¼ lbs. each, and were 17 inches in circumference. This kind of onion is thought by seme to be valuable as an early sort—they grow wholly in the ground, like the potatoe. They are said to be mild and palatable.

ESSAY ON THE HISTORY, CHARACTER AND VALUE OF GUANO, by D. P. GARDNER, M. D., New-York. We have scarcely had time to glance at this pamphlet, but have seen sufficient to satisfy us that it is got up in an interesting and instructive manner.

SAXON SHEEP AND THEIR CROSSES.

Notwithstanding that the Escurial or Saxon breed of sheep have been so long in the United States, it would seem that their merits and demerits are not yet fully understood. The truth seems to be that the Escurial, or pure Electoral Saxony, are a hardy race of sheep, and that in their organization they possess every element which, in other breeds of sheep, is necessary for their preservation and prosperity. Their bones are small, but their bodies are very round, with broad shoulders, thereby forming a chest which is anteriorly large, and which gives them great strength according to their size. They have less yolk than other kinds of merino; but it may not be necessary for them, as their wool is very thick, and time has adjusted their qualities and proportions so that they can sustain themselves with moderate care in almost any climate of the temperate zones. The only reason why they have been esteemed so very tender and delicate, is that they were known almost only by the crosses which have been made between them and other breeds of Merinoes, and these generally were worthless, miserable animals.

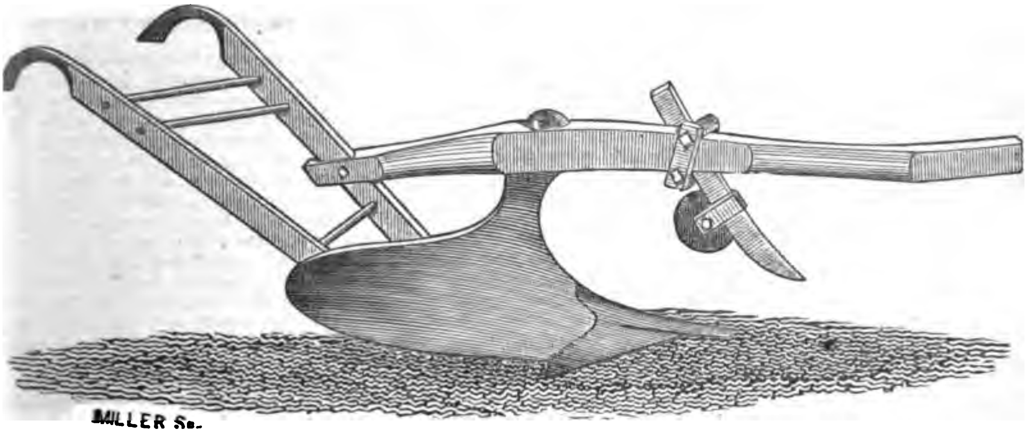
The Escurial flock in Spain formerly contained fifty thousand, and if they had been so very tender and delicate as thought by some, it does not seem reasonable to suppose that their proprietors would have continued to propagate them, as they could easily have obtained others which were hardy. Mr. Grove's success with them, goes to show that they are hardy—but as one experiment may not satisfy all, I will relate the experience of my neighbor, Mr. Jacob Cook, and also my own, which may serve to elucidate the subject. Mr. Jacob Cook formerly owned a flock of the short wooled breed of Merinoes, but not being pleased with the appearance of dirty looking sheep, he purchased, ten years ago, a few *White Merinoes*, as he calls them, which were brought from the State of Maine. They are high grade Saxon, and are evidently a cross between the Saxon and the old breed of New-England sheep, without any mixture of any other breed of Merinoes, and have less yolk than the pure Saxons. They are great milkers, and he has been very successful in raising lambs. He gives them very little grain, and in winter, in latitude 41 deg. north, he provides them no shelter from rain and snow, having neither sheds or stables for them, and they do not appear to suffer with cold any more than the best breeds of Merinoes of other kinds. Their wool is nearly equal in fineness to that of full blood Paular. The last time at which he took an average of the weight of the fleeces of his flock, it was 4 pounds two ounces.

Again, in 1837, I had a hardy well formed high grade Saxon ewe, having very little yolk, which I afterwards kept till she was twelve years old, and then fatted her off, making most excellent mutton of her. I crossed her that year with a long wooled ram of another breed of Merinoes, whose wool was black with yolk. The cross produced a round bodied well formed ram, having a great abundance of yolk, but which, when four years old and in good order, and standing with a dry fleece in a sheep barn among other sheep, would shiver with cold, when both sire and dam and all others, appeared perfectly unaffected by the cold.

These experiments would seem to show that the Saxon sheep, pure or of high grade, are hardy; that crossed with the old breed of New-England sheep, they make a hardy race, which are well suited to the use of those who wish to raise wool which is not quite so fine as the pure Saxon, but whose fancy is such that they must have *clean white sheep*; and therefore a cross between the pure Saxons and the Leicester or South Down might possibly make useful sheep for such persons.

Unfortunately, almost all the Merino sheep in the United States have been crossed with the Saxon. Mr. William Jarvis imported six kinds—among the rest, Escurials, which he mixed with the others; and therefore probably all the sheep in Vermont are tinctured with this breed; but as the people of Vermont have attended to those points which more particularly distinguish the Paular breed, it would seem that they must have nearly run out the Saxon, and that by selection and improvement, may show fleeces as thick and heavier than those of the Rambouillet flock, as their wool may be of a longer pile. For the Rambouillet flock is also tinctured with the *Escurial or Saxon breed*, as may be seen by the color of its wool, which is a cream color—and their wool is also shortened by it. Don Pedro, the first Rambouillet ram imported to this country, had wool only one and three quarter inches long, whereas the Negretti wool will average two inches in length, and the Paular two and a quarter to two and a half in length. Nevertheless, this Rambouillet flock may be hardy sheep; for this point of hardiness can only be determined by experience. And therefore the Rambouillet flock is still capable of improvement by increasing the length of its wool. When a flock is made up of a number of different breeds, it is very difficult, nay, almost impossible, to consolidate it so that their progeny shall appear homogeneous. Each kind will seem determined to dissolve the confederacy and set up for itself; and the remains of Chancellor Livingston's flock will exemplify this fact. The skillful breeder, taking advantage of this circumstance, may by selection, run them all into one of its kinds so as nearly to resemble each other. By reference to Burgoanne's travels, it will be seen that the Rambouillet flock was originally composed of seven different kinds or cavanas of sheep. Selections were made from the Paular, Negretti, and *Escurial (or Saxon)* cavanas—also from the cavanas of the Marquis de Irancla, the Marquis de Perases, Manuel de Balbucua, and the Count de San Rafael. The commissioners appointed by the French in 1785, were permitted by the Spanish king to select from the best flocks in Spain, and have, by publishing their proceedings, pointed out where the best may be obtained. Mr. Jarvis informs us that the remains of the Paular and Negretti flocks were taken to England and Scotland. But as the insane practice of mixing all breeds together does not provail so extensively in Britain as in this country, it is probable that the Paular or Negretti breeds may be obtained from them in their purity. Among British sheep, it seems the best sheep have been formed by improving each kind by itself—witness the Leicesters, South Down, Cotswold, &c., and it seems as though the same course should be taken with the Merinoes—for there is as much difference between the different kinds of Merinoes as there is between different breeds of British sheep, only that their wool being all fine, these differences are not so readily noticed as those of coarse sheep. Any person who will import the Paular or any long thick wooled breed of pure Merinoes from Britain or Spain, and improve them as Mr. Grove has done the Saxons, and keep them unmixed, will confer a great favor on the wool-growing interest. We may then obtain fine wooled sheep, having good constitutions and large fleeces well covered with yolk, unique in their appearance, having wool of an even length on each sheep and of a greater softness than can be obtained from flocks made up from a variety of breeds. For superfine wool, we must always depend upon the Saxon; and between them and all other breeds of *Merinoes*, there should be a perpetual non-intercourse. C. D.

COLLEGES.—We have long been of the opinion that reform was no where more needed than in the course of studies pursued at our Colleges. The necessity for this reform is well set forth in the following paragraph, which we take from one of Mr. COLMAN'S Agricultural Addresses:—"Classical learning, so called, which occupies now a large portion of the best years of those who pursue it, excepting as matter of mere taste, pastime, or embellishment, is of little substantial use to any one. It is a notorious fact, and in my opinion sufficiently disgraceful to the boasted wisdom of the age, that at least two-thirds of the young persons, who enjoy the best advantages of a liberal and classical education, and come out adorned with the highest honors of our colleges and universities, are even then incapable of keeping themselves from starvation; and have then to begin to learn the practical arts of life; and the remaining third are able to do it, not from any thing they have learned at these places of education, but from what they were compelled perhaps by stern necessity to learn elsewhere."



CODDING'S AMERICAN PLOW—(Fig. 98.)

Represented by the above cut, is manufactured at Rochester, N. Y., by M. D. & T. H. Codding. Its symmetry of form and proportion, are such as to secure to it the qualities of lapping the furrows, or of turning them perfectly flat—but more naturally gives the half lap, which possesses all of the advantages of both the other forms, with none of their disadvantages; and leaves the soil very loose and friable, which is the result of its concave form, which also gives it great superiority for turning in stubble and clover, which it completely covers. Turns uphill perfectly, and is very superior for working in stony and hard land. It runs very steady, and requires less power to do a given amount of work, than a plow made on any other principles, if of the same size. The wood work, which is of the very best of white oak, is all prepared by machinery, and put together in the most simple and substantial manner; the castings are polished; and to suit every variety of taste, the coulter, roller, and clevy fixtures are made after several different models, some of the new ones being very superior in many respects.

Rochester, N. Y., Oct. 10, 1844. M. D. CODDING.

DISINFECTION OF FECAL MATTER:

Its cheap and immediate conversion into manure.

Agriculturists are acquainted with the powerful properties of poudrette manure. The expense of its preparation and transport has hitherto limited its use to gardens and farms in the neighborhood of its manufactory. From the facts contained in the following letter, laid by M. Dumas before the French Institute in July, and which we commend to the serious attention of our readers, we learn that this potent auxiliary of production may be made quickly and at a trifling cost on every farm. The disinfecting agent used, is the sulphate of iron, or the copperas of the shops, which can be purchased at $1,37½ the hundred pounds. Should the practice of using it for this purpose become general, it is evident a great addition will be made to the resources of agriculture, particularly in the neighborhood of towns and villages. There is one application of the solution of copperas, not alluded to in the letter, which we would suggest to those who shall make a trial of it; we mean its application to the ordinary dung-hill. If each new layer added to a manure heap were sprinkled with copperas water, much, if not all of that most valuable element, the ammonia, which is now lost by its volatility, would be converted into a fixed salt, and thus saved. We suppose, of course, that the double decomposition which ensues on the addition of sulphate of iron to human excrement, would take place equally in the farm yard, a fact easily determined by experiment.

T.

Translated from the Moniteur Industriel of July 11, for the Cultivator.

SIR—In experimenting upon the simplest and most economical practical means of saturating the carbonate of ammonia of fecal substances, I have ascertained that sulphate of iron is to be preferred. This salt in small crystals and of the commonest quality, may be had for 8 or 10 francs the *quintal metrique*, (220½ lbs. avoirdupois—in Albany, copperas is sold at from $1,37½ to $1,75 per 100 lbs.,) and is more easily transported and managed than acids, which may occasion accidents in unpracticed hands. But sulphate of iron offers another remarkable advantage which must secure for it a preference.

The noxious and disagreeable effluvia exhaled by fecal substances, proceeds chiefly from the volatilization of carbonate of ammonia and sulphuretted hydrogen gas, which has been often fatal to scavengers. If we pour a solution of sulphate of iron into fecal matters, a double decomposition immediately takes place; the sulphuric acid of the sulphate combines with the ammonia, converting it into a fixed salt, and the iron forms with the sulphur, sulphuret of iron. The exhalations of ammoniacal vapor and sulphuretted hydrogen immediately disappear, and the fecal substances lose all but a slight smell peculiar to them, combined with the odor of the little vegetable matter they contain, and are not at all offensive.

When these substances are sufficiently liquid, the solid excrements are *dissolved* (in great part;) what remains, precipitating as a blackish slime.

I obtained this result by treating in the above manner, the contents of my house privy. The liquid I used at two degrees of strength for watering my garden, and the blackish deposit of trifling volume which had subsided, was spread upon the beds without occasioning the least inconvenience.

Fecal matters saturated with a solution of sulphate of iron may be transported by day as easily as common manure, without incommoding any body. As they form a very rich manure, they can be carried to greater distances than ordinary dung, and be readily diluted to two degrees to be used in the liquid form. (By two degrees, are meant two degrees of Beaume's hydrometer, which is graduated to 72 degrees generally—the first degree corresponding with water taken as unity—the last representing a liquid of twice the density of water, so that 2 degrees indicates a liquid of a density 1 1-72 greater than water.)

Fecal substances without previous saturation lose their carbonate of ammonia, which volatilizes, and are thus deprived of their most energetic fertilizing element.

The greater part of human excrements are lost at the present day, because they are not collected with care nor properly treated, on account of the repugnance they inspire. Yet they are of immense importance to agriculture. The solid and liquid excrements of a man may be estimated at 1.65 pounds per day, or 618 pounds per annum, containing 3 per cent of nitrogen, or 18 pounds, a sufficient quantity, according to Boussingault, to produce 880 lbs. of wheat, rye or oats.

Some portions of a meadow which I watered last year with a solution of ammoniacal salts at one degree, of two quarts to the square yard, still continue to exhibit superior vigor of vegetation, and will yield double the quantity of hay that the unwatered part will give. The result exceeds my expectations, for I did not think that the action of a small quantity of ammonia would continue for several years. I no longer doubt that it will be felt for three years at least. Ammoniacal salts may thus be easily made to supply the wants of soils where dung enough is not produced—for if we admit that 880 lbs. of these salts at 5 cts. and 3 mills, or about $47, are required to manure two and a half acres for three years, the annual expense would hardly be $16, (about $6,40 per acre,) which would be more than compensated by the increased production. I am, &c.,

SCHATTENMANN,
Director of the mines of Bouxwillier.

TURNING UNDER CLOVER, &c.

MR. TUCKER—There is perhaps no method of enriching lands more efficiently, and at so cheap a rate, as that of plowing under green clover. Clover is acknowledged by all practical farmers, as one of the best, if not the best grass in existence for fertilizing lands. Its long tap roots reach into the subsoil below, and loosen and render the soil light and mellow; and there is a substance which gathers around the roots over clover, in the form of rich mold, which I think no other grass is capable of producing. Yet with these general facts before the eyes of farmers, how few of us have yet resorted to this method of renovating and enriching our worn out lands. Many of us farmers, when we get a crop of clover grown, dislike to plow it in, as it looks too good to be wasted, and the consequence is that it is cut for hay, and ten chances to one if it is not spoiled in making, so that by the time it gets into the barn, it is nothing but a bunch of stems. There are many different opinions as to the management of clover, and as to the best time of turning it under for enriching the soil. Some prefer to have the stalk in a dead ripe state before they plow it under, and think that in this state it is in a more fit condition to furnish food for plants than when in a green state. Others prefer to have the crop fed off one or two seasons by cattle, and then have the mass of trodden down clover, together with the droppings of the animals, turned under for a crop of corn or grain as the case may be. We have succeeded in raising the largest crop of rye which we ever raised, by pasturing off a crop of clover two years, and then turning the whole under, with once plowing. There is no question, I believe, but that if farmers will allow clover to grow on their farms, it will enrich them greatly, whether fed off or turned under as a green crop; and yet many farmers are afraid to have this grass grow on their lands. They say that they do not want to sow much clover on their lands, as enough will come in of itself. This doctrine plainly indicates that they are afraid of this best of all grasses for enriching the soil. I think the majority of practical farmers will say that the best time for plowing under clover, is in a green state, at a time when the stalk contains the greatest quantity of saccharine juices. That time is when the stalk is in full blow. Where a crop of clover is thick and heavy in the ground, a heavy roller passed over it the same way that you plow, may press it down sufficiently to turn under. If not, a chain attached to the plow beam, let down so as to drag the clover down, will do the work pretty well. Care should be taken to have all turned under that possibly can be. In this state it should lie till it is thoroughly decomposed. On plowing it again, it will be found that the ground is light and mellow. But it may be said by many that on poor, worn out lands, it will be of little use to sow clover, as the soil will not produce it. In answer to this, I would say that on such lands, commence with buckwheat, and turn in a crop or two of that, and then oats, and then try clover, and do not be discouraged if the first crop of clover is not as thick as you could wish, but try another crop, and you will soon have the satisfaction of seeing your worn out lands in a state of fertility. In conclusion, I will say to the farmer, that whether you feed off your clover, or turn it under green, or make it into hay, sow clover. L. DURAND.

Derby, Conn., Oct., 15, 1844.

STOVES—THEIR DELETERIOUS EFFECTS.

MR. TUCKER—I have for years been aware of the fact that the effects of stove heat were very injurious; that many, very many of the chronic complaints, which have been increasing to such an alarming extent for the last few years, have been wholly or in part produced by the use of *stoves;* that silently, and almost, if not quite, imperceptibly, they have continued to sap the foundations of health, without giving an alarm, until too late for the application of successful aid. Even those who have been to some extent aware of these effects, have not imagined the extent of the evil, and consequently this prolific parent of those most afflicting diseases, such as consumption, nervous and dyspeptic complaints, together with others, has been permitted unarrested to prey upon the vitality of our constitutions. This is no picture of fancy, but a sober, serious fact, forced upon my understanding by experience and observation, and against my prejudices, for they were in favor of the use of stoves until absolute certainty of conviction compelled me to yield the point. Experience, followed by observation, had years since convinced me that the effects of stove heat, were to check *expectoration,* thus deranging the action of the *lungs*—to produce a corresponding effect upon the *skin,* which prevented *perspiration,* and through these, to affect and derange the whole system; thus producing a debilitated action, and feverish or inflamed state of the blood, causing coldness of the extremities, and followed by other symptoms in their turn, according to the constitution. Want of change of air in the room, difference of temperature between the air in the top of the room and at the bottom, and obstruction of moisture, had been looked upon as some of the causes of these effects, but there appeared to be still another one farther back; some organic change of the atmosphere, the effects of which were perceptible, but its nature, incomprehensible. This has heretofore prevented me from publicly sounding the alarm, though I have continued to do it in private.

The light thrown upon the subject, by a new system of philosophy, which the recent developments of science have enabled me to combine, has removed that barrier, hence this communication.

Electricity being one of the principal combining agents in nature, is consequently a necessary element of physiological combination, and is introduced into the system principally through the lungs, and has to do with the action of the skin also. It is also necessary in the combustion of fuel, and we find the atmosphere charged with the requisite quantity of it for these purposes, but the construction of stoves is such as to limit the amount of air; hence iron being a good conductor of electricity, that agent is abstracted from the surrounding air. This process also decomposes the moisture which the atmosphere contains, which consequently loses its most essential ingredients for the support of animal life, and also becomes a non-conductor of electricity, which prevents it from receiving a fresh supply from without. Water upon the stove, in part, but not wholly, remedies the defect.

In view of these facts, it behooves the American people, to look for, and apply a remedy for these evils, if they would escape the threatened curse of becoming a miserably sickly and enervated race. M. D. CODDING.

PEACHES.—The editor of the Boston Cultivator gives an account of a visit to the "Allen neighborhood" in Walpole, where he found some of the finest peach orchards in the country. He states the following singular fact in relation to a variety of the peach reproducing its kind. He says: "The principal peach cultivated here is the Allen peach, which is a seedling that has been propagated from the seed more than 40 years, through many generations of trees, always producing about the same, without budding or grafting. There is no more deviation from the original or standard kind, than there is in the Baldwin apple, or other varieties of fruit propagated by budding and grafting. We saw some trees bearing full that were 28 years old, and they had borne well from their youth to their old age." It is said to be a good peach—well deserving a place among the best—color light, with a red cheek—a freestone.

DESTRUCTION OF NUT GRASS.

Bermuda, West Indies, 4th Sept. 1844.

L. Tucker, Esq.—I have been one of your subscribers for some time. I have seen in the Cultivator for May last, information requested to extirpate "Nut Grass," and some person has recommended salt. We are much infested with it here, and I have tried every way to get rid of it. Salt did kill it where it came immediately in contact with the nut, but it does not kill them any distance in the soil, and is very expensive. The more you plow or spade, the worse it is, as you cut the fibres and make a dozen plants for one. I got at last, strong four prong forks, like potatoe forks, and after it was well grown in the spring, I made my men fork it up. In doing this, great care should be taken not to break the fibres, but as they throw up the soil, break the lumps, and take it out gently, throw it forward on the ground that is dug. You will sometimes follow a string of nuts two or three feet long. After it is all dug over, remove it from the field and burn it, or you may put it in casks, press it down well, and saturate it with strong pickle; let it stand for some time, and it will rot the nuts and the grass, and make good manure. This may be considered a tedious and expensive job, but it is the only way I can find out to get rid of it. A good piece of ground may be redeemed, and the forking pulverizes the ground so well that it will pay the expense, particularly in this Island, where we have no good ground to spare.

The first year will not clear it altogether. It must be followed up every year. Wherever a bit is seen, fork it up. and take it away, for if you leave it on the ground, it will take root again directly. Your correspondent in Alabama can try a few rods first, and he will be able to see if it is worth the expense.

As we are much put to it here for manure, we are obliged to grow green crops, say oats, buckwheat, and rape, and turn them in as manure, but the difficulty is to get a good plow for that purpose; can you recommend me to one of the best? Our soil is mellow, cuts easy, but adheres very much to the plow. F. P.

☞ Prouty's Centre-draft Plow is highly recommended for turning in green crops. At a late meeting of the Philadelphia Ag. Society, Dr. Emerson stated that he, in company with several other gentlemen, had recently seen a trial of the capacity of this plow for this purpose, and that its performance was highly satisfactory. The grass and weeds—the latter of which were from three to four feet high, were completely covered, six or seven inches deep; the ground afterwards presenting a fine, well broken, clean surface, requiring but little application of the harrow. The soil was a mellow, sandy loam. Will our correspondent favor us with an article on the Agriculture of Bermuda, embracing notices of the crops cultivated, manner of tillage, &c.?—Ed.

CULTIVATE YOUR FRUIT TREES.

The influence of the cultivation of the soil on fruit trees, appears to be less known and appreciated, than any thing else of the kind equally important, which has been practiced since the time of Hesiod and Homer. Persons who purchase fine fruit trees, appear to have more or less of five different objects in view, which are the following, to wit:

1. To kill the trees at once—2. To kill them by inches;

3. To keep them alive, with the hope that they may bear small and imperfect fruit in ten or twenty years;

4. To make them grow vigorously for a year or two, and afterwards neglect them, reducing the fruit to one-third in quantity and one-tenth in quality of what it should and might be.

5. To keep them well cultivated constantly during the term of their natural lives, and as a consequence receiving full crops, and of the most delicious quality.

1. Although many *appear* to pursue the first of the above named objects, they probably do not really intend it. They are however much more successful than they intend to be in killing their trees, by drying them in the sun, freezing them in the cold, bruising them, or otherwise treating them as already dead while life yet remains. A large number pursue this course.

2. Others avoid these attempts to produce death, but practice another kind, which is, to crowd the roots of the trees when setting them out, into very small holes dug in hard soil, and then to suffer them to perish gradually from such careless transplanting and subsequent lack of care and culture. A much larger number follow this practice.

3. Others again transplant *well*—but that is all. This done, they consider the whole work as finished. The trees are suffered to become choked with grass, weeds, or crops of grain—some live and linger, and others die from discouragement. An intelligent friend purchased fifty very fine fruit trees, handsomely rooted, and of vigorous growth; they were well set out in a field occupied with a heavy crop of clover and timothy. The following summer was very dry, and the grass crop crowded them hard on every side—most of them necessarily perished. The browsing of cattle the next winter completed the work for the rest—it would have been cheaper to have thrown them away at once. Another person, a neighbor to the first, bought sixty trees, of much worse quality in growth; he set them out well, and kept them well cultivated with a crop of potatoes. He lost but one in the sixty, and by pursuing the same course of raising among them, low hoed crops, his trees now promise to give him loads of rich peaches, before the dead stubs of the trees of his neighbor have disappeared from the grounds. Another neighbor last spring bought fifty fine trees. A few days since I passed his house, and he said to me, "I thought a crop of wheat was one of the best for young peach trees?"

"O no," said I, "it is one of the very worst; avoid all *sown* crops, and occupy the ground only with low, hoed crops, as potatoes, ruta-bagas, carrots, and the like."

"Well," answered he, "I have found it so—my fifty peach trees all lived, but I have lost one year of their growth by my want of knowledge."

I examined his trees—they had been well set out, in a fine soil, all the rows but one, had stood in a field of wheat, but the one excepted was hoed with a crop of potatoes. The result was very striking. Of the trees that stood among the wheat, some had made shoots the present summer *an inch long*, some *two inches*, and a very few *five* or *six* inches. On nearly every one that grew with the potatoes, new shoots *a foot and a half* could be found, and on some, the growth had been *two feet*, *two and a half*, and *three feet*. Other cases have furnished nearly as decisive contrasts.

4 and 5. An eminent cultivator of fine fruit, whose trees have borne for many years, says in a late letter, "My fruit garden would be worth twice as much as it is, if the trees had been planted in thick rows[*] two rods apart, so that I could have cultivated them with the plow. Unless fruit grows on thrifty trees, we can form no proper judgment of it. Some that we have *cultivated* this season, after a long neglect, seem like *new kinds*, and the flavor is in proportion to the size." Large trees often stand in thick grass, and poor crops and poor fruit can hardly fail to result; and the nurseryman who sold them is sometimes pronounced a scoundrel for having furnished such despicable stuff.

"But," exclaims some one, "are we always to be troubled with cultivating and taking care of our trees as long as we live?" Exactly. This is the condition of living and enjoying the fruits of the earth, which has existed these last six thousand years. Besides, if this labor gives a return of a hundred fold, who ought to regret it? If my orchard, yielding a hundred bushels now, of poor fruit, will, by putting a hoed crop and some manure into it, more than double its products, and greatly improve them in quality, where is my loss? Would it be grateful in me to complain of a little care and attention with so great a gain? Labor cannot be avoided, but it brings its reward. J. J. Thomas.

Macedon, 9 *mo.*, 1844.

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[*] The "thick rows" here spoken of, are meant to contain fruit trees standing six to ten feet apart in the row, so that the plow may be passed on each side parallel with the rows, the last few furrows in immediate contact with the trees to be plowed with two horses, one before the other, a boy riding the forward one. A very short whipple-tree should be used on the plow, and long traces attached to admit the plowman steering far to the right or left as necessity may require.

MONROE CO. AG. SOCIETY—RURAL ARCHITECTURE, &c.

Friend Tucker—The Annual Fair and Cattle Show of our County Agricultural and Horticultural Society, took place in the city of Rochester, on the 8th and 9th inst. The exhibition, upon the whole, was tolerably good, but not what it should have been. The apprehension that this fair, at best, would contrast but meagrely with the brilliant and imposing pageant, and the successful results of the State Fair, which was held at this place the last year, instead of inspiring our farmers with renewed zeal (as it ought to have done) and arousing among them a more determined spirit of emulation, served rather to dampen their ardor, or at least to discourage their efforts.

The first day was principally occupied by the exhibition of stock. There was a very fair display of horses, some tolerable specimens of Berkshire hogs, and some very fine sheep of the Merino, South Down, Cotswold, and Paular Merino breeds—of the latter, there were several beautiful samples from the justly celebrated flocks of Mr. **Jewett**, of Vermont. They were purchased and brought on here by Gen. **Harmon**, the enterprising President of our County Society, to improve his already highly cultivated flock. The show of cattle was quite slim. There were one or two pretty good Durham bulls, two or three fine yoke of oxen, but three or four cows that were passable, and of young stock, not over half a dozen head, or thereabouts, in all; among these, however, I noticed the full blooded Durham heifer (now owned by Mr. Sidney Allen, of this city,) which took the first prize at the State Fair, last year, as the best heifer calf—and yet this, probably the best blooded and most perfect animal on the ground, did not obtain a premium, because, as the committee stated, she had no competitor of the same blood. Mr. Latta, of Greece, had one or two very fine grade cows and heifers, nearly full blood Durham; and Mr. Smith of Brighton, had several good looking cows and heifers of the Holderness breed, (nearly pure,) the former said to be excellent milkers—one cow, in particular, it was stated by her owner, had given forty quarts a day. There were none, I believe, but grade cows, on the ground; there was not, to my recollection, a single pure Durham, Devon, or any other improved thorough bred cow, among them; *nor did I see a single cow of our native breeds*. Of this latter fact, at least, I think the farmers of our county ought to be ashamed; they, themselves, I have no doubt, would be slow to admit that they did not possess some as good native cows as any county in the State can produce; then why not bring them out and exhibit them with a statement of their dairy properties? If they have not yet made up their minds to adopt the thorough-bred, improved stock, on the ground that they consider their native breeds the best, why not bring them out and exhibit them side by side, so that all may see, compare and judge for themselves? For my own part, I have made up my mind from some little experience, and a good deal of observation, reflection and investigation, that the true policy for our farmers, in this matter, is to adopt the most approved breeds of thorough-bred, improved stock, such as the Durham, Hereford, Ayrshire, Devon, &c., then select out the *best* of our native stock, for the purpose of crossing or of comparison, and the remainder *knock on the head* and sell to the butcher; for all must admit that it costs no more (if as much,) to feed and raise a good animal, than a poor, mean one, that will not fetch, when it is three years old, as much as the straw it has ate would be worth for manure. But I am digressing.

If the meagre display of cattle at our Show, were to be attributed to the want of any other good stock in the county than that exhibited, the owners of several fine herds that were not represented at all, would be as provoked at the imputation, as those present had reason to be at the absentees, for their negligence or want of spirit. I could name several owners of fine herds of improved cattle, who had not a single animal at the Fair, although the day was unusually pleasant and favorable.

The horticultural exhibition, on the second day, was very respectable, though not as extensive as it might and should have been. Of vegetables, there was a very good display; and also of some varieties of fruits, apples in particular. The productions of the dairy were somewhat limited. There was a goodly display of farming implements.

The address was delivered by Dr. **Lee**, of Buffalo; it was an able, scientific production, illustrating some of the more important principles of agricultural science, in a very clear, concise and intelligible manner. I meant to have given you a synopsis of its contents, but my limits will not allow of it; but as it is to be published with the transactions of our county society, you will have an opportunity of perusing it ere long. The list of premiums awarded, you will find in our city papers.

My thirst for the quiet luxury of rural life, with its invigorating, healthful, tranquilizing pursuits, does not abate in the least; it is growing into a ruling passion. There is more true satisfaction in planting and rearing one choice fruit tree—in making "two blades of grass grow where but one grew before," than in proselyting or colonizing a regiment of *political* parasites—and I believe it to be at least of quite as much *profit* to the best interests of our common country; and yet, if we were to contrast the overwhelming political gatherings which take place almost daily in our midst, with the recent slim annual ingathering of the farmers of our county, and that too, at their "harvest home" jubilee, one would be irresistably led to the conclusion that the great mass, even among our agricultural brethren, are more zealously bent on accomplishing the latter than the former of these objects. But another month will produce a "turn" in this political "fever," when, it is presumed, the body politic will have its healthful, legitimate functions restored.

I am making some improvements in my fruit, poultry, &c., and hope another year, to get my little "Rural Home Farm," in successful operation, with a small variety of the choicest stock, &c. I have got up a plan of a "Rural Home Cottage," which I design building on my place, next spring. It is in the "Rural Gothic" order, and an improvement, I think, as to beauty, simple elegance and convenience of arrangement, even upon the excellent and well-digested and tasteful designs of Mr. **Downing**, whose inimitable works on "Landscape Gardening & Rural Architecture," "Cottage Residences," &c., I have perused and re-perused with so much interest and delight, and I trust with no little profit also. My plans are drawn by Mr. **Austin**, formerly of New-Haven, and an architect of rare taste and ability in his profession, as his elegant specimens of workmanship will abundantly testify. I will furnish you with the drawings for your valuable paper, if you wish it, and can find room for them, in some future number. Your efforts, and those of Mr. Downing and others, to disseminate among our rural population a more correct architectural taste, are in the highest degree commendable, and are doing much towards advancing that too long neglected improvement.

Rochester, Oct. 12, 1844. T. H. Hyatt

MUSTARD SEED.

The Farmers' Cabinet contains a letter from C. J. Fell & Brother, of Philadelphia, by which it appears that our friend, J. H. Parmelee, Esq. of Duncan's Falls, Ohio, has reared the past season an extraordinary crop of brown mustard. Twenty-seven acres of land were appropriated to the crop. The seed was planted in rows one foot apart one way, and two feet the other. The crop was well worked during the season, and when near ripe was cut with sickles, laid on sheets or waggon covers, hauled to the barn in the sheets, and there threshed out and fanned.

The Messrs. Fell have purchased of Mr. Parmelee a part of the crop. One hundred and fourteen barrels, containing 382 bushels, weighing 52¼ lbs. per bushel, making 20,100 lbs., for which they paid him 8 cents per lb., making,.......... .... $1,608 00

Mr. Parmelee has 100 bushels of *tailings*, which he estimates to clean up 75 bushels, say 50 lbs. per bushel, making 3,750 lbs. at 8 cts.,........................... 300 00

Giving as the product of 27 acres,......... $1,908 00
or $70 66 per acre.

CULTIVATION OF FRUIT—No. XI.

THE STRAWBERRY.

The varieties of this delicious fruit enumerated in catalogues, are very numerous. The late President Knight considered them all as having originated from one species, while others regard them as properly divisible into several species. Passing from the notice of these, it may be useful to cultivators in this country to give brief descriptions of the different classes into which the numerous varieties are divided. Mistakes in names are very frequent, and this may assist in rectifying them.

Class I. includes *scarlet strawberries*, and the general character is thus described by Loudon:—"Leaves nearly smooth, dark green, of thin texture, with sharp pointed serratures; the fruit mostly of small size, and bright color, with the seeds more or less deeply imbedded between ridged intervals; the flavor acid, with slight perfume." Examples, Roseberry, Methven Scarlet or Methven castle, Old Scarlet, &c.

Class II. Black Strawberries. The general character is, "leaves rugose, [or swollen between the veins,] pale green, and small; fruit conical, with a neck; seed slightly imbedded; flavor rich and highly perfumed." Examples, Downton, Pitmaston black, Elton seedling.

Class III. Pine Strawberries. "Leaves almost smooth, dark green, of firm texture, with obtuse serratures; flowers large; fruit large, varying from almost white to purple; seeds prominent on a smooth surface; flavor sweet and often perfumed." Examples, Keen's seedling, Carolina, Mulberry, Southborough seedling.

Class IV. Chile Strawberries. "Leaves very villous, hoary, with small leafets of thick texture, with very obtuse serratures; fruit large; seeds prominent; flesh insipid in the True Chile, and more or less so in the varieties which have originated from it." Example, Wilmot's Superb.

Class V. Hautbois. "Leaves tall, pale green, rugose; scapes tall and strong; fruit middle-sized, pale greenish white, tinged with dull purple; flesh solid and musky."

Class VI. Green Strawberries. Characterised as the *Fragaria collina & F. viridis* of botanists, the varieties of which are little known and not of much value.

Class VII. Alpine or Wood Strawberries. Characterised as *F. semperflorens & F. vesca.* Examples, Red and White Alpine, Red and White Wood.

The following are descriptions of some of the best varieties:

Old Scarlet, Early Scarlet, or Early Virginia; fruit middle-sized, globular, of a very light scarlet color, seeds deeply imbedded, flesh pale, and very highly flavored. Although not a great bearer, yet highly deserving cultivation, as it ripens several days earlier than any other.

Grove End Scarlet, or Atkinson's Scarlet. Fruit large, roundish, somewhat hemispherical, brilliant scarlet, flesh pale, with an agreeable sub-acid flavor. Remarkable for the wide serratures of its leaves. A good bearer and early.

Roseberry. Fruit large, conical, with a very short neck, dark red; flesh firm, pale scarlet, with a rich flavor. An abundant and long-continuing bearer.

Methven. Fruit very large, round, sometimes coxcomb shaped, bright scarlet; flesh pale and not firm; flavor good, but not so rich as the preceding. Sometimes weighs upwards of half an ounce.

Downton, or Knight's seedling. Fruit large, with a neck, often assuming a coxcomb shape, dark purplish scarlet; flesh scarlet, firm, with a rich, juicy, and high flavor; a good bearer, ripening late. Requires good culture.

Elton seedling. Fruit large, ovate, often compressed or coxcomb shaped, and not filled out at the end of the berry, shining, dark red; flesh fine deep red red, firm, juicy, with a sharp rich flavor; fruit on long footstalks, frequently projecting above the foliage; ripens late; must be allowed to remain on the stem till it becomes very dark colored, to avoid too great acidity.

Keen's Seedling. This variety requires protection in the winter by a covering of straw, and is somewhat difficult of cultivation; but when it succeeds well, it is an abundant bearer, and has a very fine appearance. The fruit is very large, ovate, the largest of a coxcomb shape, dark shining red, especially next the sun; flesh scarlet, firm, of a rich and agreeable flavor; ripens rather early in the season. It is considered the best strawberry for forcing.

Wilmot's Superb, is only to be recommended for its great size; the fruit is round or irregularly ovate, sometimes compressed, pale scarlet, shining; seeds projecting; flesh pale red, nearly white, and wooly at the center; flavor moderate.

Prolific or Conical Hautbois, Hudson's Bay, double bearing, Musk, or Spring Grove. Fruit medium size, (large for this class) conical, very dark dull red, inclining to purple on the sunny side; flesh greenish, rather dry, but of a rich and highly perfumed flavor. An abundant bearer. Considered by some as the finest of all strawberries. According to the London Horticultural Society's Catalogue, "of all strawberries, the hautbois are the most variable. They certainly retain a general character, from which they naturally do not depart; but constancy of character in varieties, denominated as distinct, is but little to be depended upon; the fruit will occasionally change from globular to ovate, and the contrary, while fertile plantations will produce runners that may, perhaps, be sterile, and seedlings, many of which will certainly prove so. The latter ought to be carefully looked after and extirpated, which can be only effectually done in plantations newly formed while the plants are single, and at the time they are in blossom. It is also necessary to observe, that in all the sorts of hautbois here enumerated, there exist both the *Prolific,* and also these sterile plants commonly called *Males,* which have *long stamens.* The latter ought, in all cases, to be certainly destroyed." The sterile flowers are distinguished in all the varieties of the hautbois by their long stamens, except in the *Prolific,* which also has long stamens; from *this* they are distinguished by their smaller flowers, and imperfect fructification. Thompson, in Loudon's Encyclopedia of Gardening, says: "I believe there is no such thing as distinct plants of male and female hautbois. Stamens and pistils are to be found in either a *perfect* or *imperfect* state in every individual flower. Imperfection generally takes place in the pistil, together with the receptacle. To see that these are sound is all that is necessary to be attended to."

Red Alpine. Fruit, the largest of this class, conical, red; flesh sweet and high flavored. Bears abundantly in suitable soils and situations, from early in summer till late in autumn. I have seen a dish of them on the table picked the first day of the twelfth month (December.) The *white alpine* is similar to the preceding, except the fruit is white instead of red. These two varieties are frequently grown promiscuously together.

The Red Wood and *White Wood* resemble the alpine, but the fruit is smaller and rounder.

The Bush Alpine is distinguished by not spreading by runners. It is not so good a bearer as the red and white running alpine, nor is the fruit quite as good.

The following is nearly the order of succession in which the preceding varieties ripen, except the alpines which continue in succession.

Old Scarlet,
Grove End Scarlet,
Roseberry,
Keen's Seedling,
Methven,
Prolific Hautbois
Wilmot's Superb
Downton,
Elton Seedling.

A. J. Downing, in Hovey's Magazine, says, "The finest of the large English varieties of this fruit which we cultivate here, is the Bishop's. It is remarkably large, a most abundant bearer, and of superior flavor. It appears to us to unite all that can be desired to constitute a truly fine and delicious strawberry." Hovey's Seedling, for size, productiveness, and excellence of flavor, is recommended as one of the very finest by those who have thoroughly tried it.

Modes of Propagation. Strawberries multiply rapidly during their growth, by runners from the parent plant, which, rooting at every joint, form numerous new plants. To form new plantations, these need only to be removed to the bed where they may flourish. This work may be done early in autumn, or early in the spring; the former is best. If done in autumn, care should be taken that the plants are not thrown out by frost, especially on heavy soils. This may be prevented by treading the soil closely about the roots before the ground becomes frozen. Such beds will bear some fruit the summer following the transplanting, and will furnish an abundant supply the second season. The alpines produce well in one year.

The only exception to this mode of increasing, is the Bush Alpine, which never increases by runners; the only way for this variety is dividing the root, and transplanting as above described.

Strawberries are only propagated from seed for producing new varieties, except the woods and alpine, which, says Loudon, "come regular from seed, and bring a finer fruit than from offsets."

Soil and Situation. The best soil for the strawberry is a deep rich loam, though it will succeed and bear on any soil which is fertile. The situation should be open and well exposed to light and air. It succeeds very well when planted in single rows as edgings. The alpine and wood strawberries may be placed in a more shady situation than the others; it is during hot and dry seasons of the year that they are intended chiefly for bearing. They are consequently well adapted to edgings for shrubbery. When the soil is rich, the advantages of employing strawberries for edging is great, as they succeed in such soils much better when in single rows than when crowded together in a bed.

General Culture. A very general error is to plant too near together, especially if the soil be fertile and well prepared. *Thorough* culture is by far the best, at the same time that it is, ultimately, the *cheapest* method. It is true that on common rich garden soils, a bed may be transplanted which will produce fine fruit and good crops with little care after once prepared; we have known beds to yield plentifully which were almost untouched for years, not even having been weeded, the thick growth of the strawberry keeping down in a great measure, every thing else. But by the following thorough mode, or one similar, practiced by Keen of Isleworth in England, who first raised the celebrated variety known as Keen's seedling, the greatest amount of fruit may doubtless be obtained for the care and labor expended, while the quality is greatly superior. The soil for this mode of culture, should be plowed or trenched deep, and mixed with decomposed stable manure; if the subsoil be somewhat sterile, it should not be thrown to the surface. The ground should be prepared at least a month before transplanting. "The best way," says Keen, "to obtain new plants, is, by planting out runners in a nursery, for the express purpose, in the previous season; for it is a very bad plan to supply new plantations from old plants." The distances of the rows asunder are about two feet, and eighteen inches in the row, for the large varieties, as Methven and Keen's seedling; the smaller varieties may be a little nearer. This distance may seem too great, but it is necessary for sun, air and culture. "These large distances," says Keen, "I find necessary; for the *trusses of fruit in my garden ground are frequently a foot long.*" This fact is a sufficient proof of the excellence of his mode of culture. "After the beds are planted, I always keep them as clear of weeds as possible, and on no account allow any crop to be planted between the rows. Upon the growing of the runners, I have them cut when necessary; this is usually three times in each season. In the autumn I always have the rows dug between; for I find it refreshes the plants materially; and I recommend it to those persons to whom it may be convenient, to scatter in the spring, very lightly, some loose straw or long dung between the rows. It serves to keep the ground moist, enriches the strawberry, and forms a clean bed for the trusses of fruit to lie upon: and thus by a little extra trouble and cost, a more abundant crop may be obtained. A short time before the fruit ripens, I always cut off the runners, to strengthen the root; and after the fruit is gathered, I have what fresh runners have been made, taken off by a reaping hook, together with the outside leaves around the main plant, after which I rake the beds, then hoe them and rake them again. In the autumn, unless the plants appear very strong, I have some dung dug between the rows, but if they are very luxuriant, the dung is not required; for in some rich soils it would cause the plants to turn nearly all to leaf. I have also to remark, that the dung used for manure, should not be too far spent; fresh dung from the stable door is preferable to spit dung, which many persons are so fond of." The writer has found great advantage, both as a matter of economy of labor, and for the increase of productiveness, to set out strawberries in long rows about two or two and a half feet apart, and ten inches apart in the rows, so that they may be cultivated with a horse. The difference between suffering a bed to become thickly matted over, and keeping the plants or hills well hoed separately, is almost incredible to one who has not seen it. A half pint of the largest and finest strawberries from one hill is easily thus produced.

The strawberry, though never diœcious, from an imperfection in the fructification contains fertile and barren flowers in most varieties, except the Alpine and Wood. The barren plants are the most vigorous and productive of new plants; and in some cases will overrun and crowd out the fertile ones. Hence the unproductive state of many beds of fine varieties where this has taken place. A few sterile plants, perhaps one-tenth, are necessary to cause fertility to the others; for the proper management of which, see an article on the culture of the strawberry on page 247, current volume of the Cultivator.

In England, where the climate is much more moist and less hot than here, decided advantage is found in watering strawberries during hot weather.

Beds, once prepared, generally continue in a good bearing state from three to five years. J. J. T.

CAUSE OF ERGOT.

EDS. CULTIVATOR—I infer from your article on ergot in a former number of the Cultivator, that the late investigations of M. Debourge on the cause of this curious phenomenon, have not fallen under your notice. I therefore take the liberty to send you an account of them from the Home Examiner.

The grains in which it appears first, soften, become very friable, and undergo a species of fermentation, exhaling at the same time a very disagreeable smell. Their outer surface is now seen to be intersected with many small furrows, moistened by a whitish, viscous and saccharine liquor, which reddens turnsol-paper. This liquor exudes in greatest quantity from the summit of the grain, where it agglutinates together all parts of the inflorescence. At this period, the perisperm becomes every where destroyed, except towards the summit, where it is the cause of the greater consistence of the ergot. The outer surface, previously white, now becomes brown, and afterwards black, first in the inferior portion, and then throughout the rest of the grain. The furrows disappear, the grain elongates, and it soon emerges from its outer covering (the glume) in all its distinctive characters. Thus, the formation of the ergot presents two distinct epochs; the first comprising the destruction of the perisperm, the softening, and the saccharine fermentation of the grain; and the second, the period of its assuming its deep color and morbid enlargement.

It was formerly supposed that the ergot was the result, jointly, of a mal-development of the germ, and the presence of a parasitic fungus, which, though still hypothetical, has been denominated by some French authors, *sphacelia segetum.* But what was considered by these to be the fungus at the superior extremity of the grain, is now shown by M. Debourge to be only the undestroyed portion of the perisperm, with some part of the hairy epitheluim, the decayed stigmata, and sometimes anthers entire, agglutinated together by the viscous discharge. M. Debourge naturally asks how it is that a parasitic body should become marked with a similar longitudinal wrinkle, and covered with the same hairy epithelium, as the grain? The ergot invariably begins to form some time after the inflorescence of the rye and other gramminæ, and for the most part on the grains which are most tardy in their development.

N. N. D.

We ought either to be silent, or to say what is better than silence.

CONTINUANCE OF MILK IN COWS.

Messrs. Editors—It certainly would be a very great advantage to those who wish to keep a cow or cows, solely for their milk, if any feasible method could be adopted by which cows could be made permanent milkers, or their owners, particularly those who live in cities, be saved the trouble and inconvenience of their breeding. There are two ways in which this seems practicable. The first method is to keep the cow in milk, from the bull, by constantly stabling her, after her first and second calf, and in this state, milked regularly and well fed, she will continue to give milk for two or more years. She usually ends, however, by becoming too fat for profit as a milker, her milk gradually failing, and she then goes to the butcher. The large dairies of London, have their cows treated in this manner, and in practice it is found far preferable to the old one, of having them *"come in"* annually.

There is another method of obtaining constant milkers which has been extensively practiced in France, and known to some extent in this country. This is by *spaying the cow* some four or six weeks after calving, and thus by preventing impregnation, securing the cow in milk for several years. In the London Veterinarian may be found a paper by M. Rogere of Bordeaux in France, who had for many years been engaged in a series of experiments on this subject, that had been eminently successful. The cows operated upon were of various ages, some quite old. The operation of spaying was followed with a restricted diet to prevent the tendency to inflammation. This had the effect of reducing the quantity of milk for a few days, but the flow soon returned, and continued unaffected for a long time. No danger was incurred by the operation when skilfully performed, and when from age or failure of milk, it became desirable to make beef of the animal, she was found altogether superior for that purpose to the unspayed ones.

In one of the earlier volumes of Ruffin's Farmer's Register may be found a paper on spaying cows or heifers, not only for milk, but for feeding. Mr. Tabb of Virginia, under whose superintendence the operations were conducted, confirms the representations made of the value of milch cows so operated upon, but thinks it not less essential or important where cows or heifers are to be fed. The following extract is from Mr. Tabb's paper. "The operation is performed on heifers not intended for milk when they are about a year old, and with the single precaution of keeping them entirely from food or water during twenty-four or thirty-six hours previous—is not attended with the least risk—is performed in the same way, and may be done by any person in the habit of spaying pigs. They go to their food immediately after, and require no attention. We select the most indifferent heifers to spay, which is one way to improve the stock. You increase the size amazingly. They gradually become as large as ordinary oxen—are easily kept—make the finest beef—and as they are not in perfection until six or seven years old, we work them after three or four, to make them gentle, and for that purpose, consider them superior to the ox."

The practice of working milch cows is common in Germany, as appears from the accounts of various travellers in that country; and teams of spayed heifers have carried off prizes at the plowing matches of Agricultural Societies in England. The suggestion made above, by Mr. Tabb, as to the practice of spaying having a good effect in the improvement of stock, is an important one. If the breeders of stock could so far forego the hope of immediate profit, as to be willing to submit all inferior, or part blood bull calves to castration, and all inferior heifers to spaying, it is evident the chances of breeding inferior animals, would diminish rapidly.

Mr. Winn, keeper of an extensive hotel at Natchez, communicated to Judge Peters, of Pa., the result of experiments made by him in spaying cows for the purpose of securing permanent milkers. It appears from the paper as given in the Transactions of the Penn. Ag. Soc. that he had two cows, which after being spayed, gave milk constantly for three years each. He preferred cows that had produced two or three calves, as the bags of such would be more capacious, than if spayed after the first calf. I hope some of our breeders or farmers will try this experiment, since if successful, there can be no doubt such cows would command greatly advanced prices in places where cows are kept for their milk alone.

Ontario, Oct. 1844. A Farmer.

IRRIGATION, &c.

Mr. Tucker—As far as my information has extended, very few attempts to adopt a systematic course of irrigation, even on a moderate scale, have been made by the farmers in Massachusetts, at least in this vicinity. Some years since, Gen. Wm. Hull, residing at Newton, attempted to carry on a course of irrigation, by bringing a stream of water which took its rise in his estate, into his garden and grass lands; by constructing a bank of sods on each side of it, to sustain the stream, and by merely letting down one or two sods from it, whenever he wanted to bring the water on to his land.

According to the information which he gave me, his grass lands were rendered much more lucrative and valuable by means of the irrigation. Land, which previous to it, produced a worthless grass of little or no use, was made to yield one and two tons of good grass to the acre. I was informed that he was obliged to abandon the scheme from the great injury which it caused to one of his neighbors.

Extent of Irrigation near Roussillon.—It is said that there is an extent of land, 10 leagues in length by 6 leagues in breadth, all of which can be regularly irrigated by means of small canals and water courses, which are cut in every direction. The distribution of the water is regulated by law. The habitations are still, for the most part, congregated in small towns and villages, but here and there a detached house is to be seen. The plain is covered with trees, which border the water courses in every direction. Among these, the Lombardy poplar is conspicuous.

Cultivation near Seville.—The principal exports from Seville are bitter and sweet oranges and lemons. The sweet oranges are more cultivated than the bitter. The orange groves are estimated of great value. The trees are planted at the distance of 21 or 22 feet each way, and in good years, will yield from 1,000 to 1,200, and even 1,500 oranges each. They are irrigated every ten days, and the soil is disposed in small trenches to allow the water to spread. Wm. Jennison.

Cambridge, Mass., Oct. 12, 1844.

KILLING BUSHES—"OLD OF THE MOON IN AUGUST."

On page 42 of the February number, you give Mr. A. H. Hallock's method of cutting briers, "in the old of the moon in August, and the sign in the heart." Now, while it is true that agriculturists have to do with the earth and its productions, rather than with the moon and its changes, yet it is a *fact*, that the *time* specified, (I know nothing about the location of the sign,) is the very best time in the year to kill not only briers, but all kinds of bushes. I have tried it frequently, and they will sprout less, and the sickly feeble shoots are easier killed if cut "in the old of the moon, (or between the last quarter and the new moon) in August," than at any other time in the year. The reason probably is that the sap moves sluggishly, and is then mostly above ground, leaving the roots with less of the reproductive power than at any other season. Of course they are more apt to die. It is well known that bushes cut at some seasons, throw up a very thrifty second growth. This will be the case when the most sap is in the roots, or at least when the sap is in most rapid circulation.

Now whether this be the true explanation or not, it is yet a fact tested by much experience, that the very best time to kill bushes, briers, &c., is "in the old of the moon in August." And wise men, with no disposition to be carried away with "moon struck theories," will nevertheless govern themselves accordingly. H.

Ohio, Oct. 1844.

PEDIGREES OF COL. RANDALL'S MERINO SHEEP.

Editors Cultivator—I often receive inquiries, and sometimes from editors, in relation to the pedigrees of my Merino Sheep. Though not voluminous, they are too much so, to be daily copied for such applicants.

I will furnish such pedigrees to any editor who will accompany his request with a distinct intimation that he will publish them as they are forwarded, entire and unmutilated; or to any other individual to whose published request, an editorial pledge of the same kind is appended.

Yours truly, Henry S. Randall.

Cortland Village, Oct. 12, 1844.

HOLLOW HORN.

It is familiar to farmers that when any animal has been subject to this complaint, that upon the return of winter the complaint will return again frequently. The complaint may often be kept off in such cases, simply by wrapping the horn with woollen cloth or sheep skin with the wool turned inwardly, and keeping it well bound on through the winter. As soon as the horn begins to become carious, it becomes internally sore, and it sometimes happens that all efforts to save an animal afflicted with this complaint are ineffectual, merely for the want of wrapping the horns, and thereby imparting that warmth to the parts intended to be healed, which all know is necessary for any wound or sore in winter in order to heal it. C. D.

PEPPERIDGE TIMBER.

Pepperidge is occasionally used to make an ox yoke, but more generally is consigned to the fire as useless for any other purpose—whereas it ought to be known that it is one of the best, if not quite the best article for bedsteads which grows in the northern states. It works smooth, and when oiled and varnished, or when stained and varnished, shows the curl of the wood and looks almost as well as curled maple. C. D.

MONTHLY NOTICES.

Sheep on the Prairies.—The Western Cultivator, printed at Indianapolis, Indiana, says that up to the 25th of August, 25,000 sheep had passed through that place on their way to the Western Prairies. In the same paper, we find a communication from Geo. Flowers, Esq. of Albion, Ill., in which he states that he has just returned from a three months tour in Virginia, Pennsylvania, Ohio and Indiana, whither he had been to select and purchase eighty of the best rams and 3,600 ewes. He urges the formation of a "Western Wool Growing Company," by whom a permanent system of improvement in sheep, might be undertaken, which would prove alike profitable to the Company, and beneficial to the public. The subject is worthy of consideration.

Winter protection for Strawberries.—A writer in the Boston Cultivator says he has tried covering with manure, leaves, sea weed, boughs, and "all other kinds of loose covering;" but they did not answer. The leaves would blow off, and mice would get under and destroy the plants. He recommends cleaning the beds well from weeds, and about the last of October or first of November, put on from one to two inches of rich loam or old compost, made with muck, and a small quantity of manure, such as has no seeds of weeds and rake it in equally, being particular to have the plants covered so as only to present the centre leaves; this protects the roots and tops, and in the spring the beds and borders are all ready for them to grow, and will not need any cultivating until the plants are in blossom, and until the middle of May, and then with a fork about six inches wide, with three round stiff prongs 10 inches long, blunt and round at the end of the prongs, stir the soil.

Destruction of the Aphis and Sheep Ticks.—A writer in the Mass. Plowman says he has succeeded well in killing the aphis or plant louse on trees and shrubs, by smoking them with tobacco, mixed with a small quantity of brimstone. The smoking did not apparently injure the leaves or stem. His process of smoking is simply to take one of those boxes in which ground mustard comes packed, (say half pound boxes) in the lid of the box, have a tube soldered in, of such size as will fit on to the nose of a bellows; in the bottom of the box put another tube similar to the one in the lid, fill the box with tobacco, (no matter how poor) turn into the box a little water to prevent the tobacco from burning too rapidly, put in a coal of fire, fix on the lid, which is attached to the bellows nose; you can then smoke to your liking.

We have often smoked sheep with an apparatus like this, to kill ticks. In the winter or spring when the wool is long, and the weather is too inclement to justify dipping sheep in a liquid, smoking is the best plan that can be resorted to, and if well done, is quite effectual. Smoke seems to be very deadly to insects in general, and we do not see why it may not be used to good advantage in killing plant lice.

Three hundred spinning wheels in operation on Boston Common.—In an Address delivered before the Caledonia (Vt.) Agricultural Society, by Henry Stevens, Esq., in which the importance of affording suitable encouragement to domestic manufactures, is very forcibly set forth, the author says:—"We find in the American Annals, an account of the anniversary of a society for encouraging industry, held 1753, on which occasion Boston common presented a novel sight. In the afternoon, about 300 young female spinsters, decently dressed, appearing on the common at their spinning wheels, the wheels were placed regularly in three rows, and a female was seated at each wheel; the weavers also appeared cleanly dressed, in garments of their own weaving. One of them working a loom on a stage, was carried on men's shoulder's attended with music; an immense number of spectators were present at this interesting spectacle. The Rev. Dr. Cooper preached a discourse, and a collection was made for the benefit of the institution. Ladies of Boston whirling three hundred spinning wheels! These were afterwards the matrons who refused British tea, and who never saw a piano. Wonder if a thousand delicate ladies could not now be seen in the city, at their pianos, where one old fashioned rosy damsel could be found at the healthy exercise of the spinning wheel?"

Mr. Stevens adds—"The woman who manufactures for her own household, and one piece of goods to sell, does more to retain the solid coin in our State, than all the banks or the greatest financiers."

Good Advice.—"A Burke Planter," in the Southern Cultivator, says—"We must begin at once the practice of frugality and economy. We must combine farming with planting; produce all that is practicable at home, and no longer permit ourselves to be furnished with any of the means of support or of labor from beyond the mountains. But first of all, we must turn our undivided attention to our own business; study fully the theory of our pursuit, and practically apply its principles. We must test the discoveries and improvements that are constantly being made; and by original experiments, add to the knowledge of the country. It is erroneous to suppose that planting is an easy and indolent vocation. Properly pursued, it is one of the most arduous; demanding untiring activity and energy to regulate the negroes, divide and task them judiciously, designate work, mode of doing it, and to observe from day to day that it is correctly done; attend to stock; the manure pit; the experiments going on; with many other matters depending on the variety of his collateral works. And exacting constant mental exertion to acquire a knowledge of all the physical sciences, so indispensable to enlightened and successful planting, and to keep pace with the improvements in the country; and a cultivated judgment, to investigate the thousand theories that are broached, to experiment, to compare facts, to combine and to apply them. And while the overseer may be exempted from very much of the mental labor of the owner, his physical activity should be increased· his time, his efforts, and his thoughts, should be devoted to the welfare of his employer, and he should take the deepest interest in every operation tending to promote it."

Making Compost.—The great art of obtaining good crops, consists in the saving and application of manure. Of this truth, very many farmers are beginning to be convinced, and they are contriving various ways to save and increase their manures by the addition of such materials as will absorb those portions which have hitherto been wasted. The N. E. Farmer thus describes the course pursued on the farm of J. S. C. Green, Esq. at Watham, Mass. by Mr. R. Murray:—"The urine from the cattle is all saved and conveyed to a cistern underneath the stable, that holds about nine hogsheads. The floor of the stable is sprinkled with gypsum, every morning after the cattle have been turned out, and the stalls cleaned. The solid manure is also thrown into the cellar below, which is accessible to the hogs. The manner in which the urine is disposed of is as follows: As often as the cistern is filled, a lot of well pulverized meadow mud, or peat, which had been exposed a year, containing 18 common cart-loads, is made into a broad flat bed, with the sides raised up so as to retain the liquor; into this basin the contents of the urine cistern is discharged. As the liquor soaks into the peat, six bushels of ground plaster is spread over the surface, to fix the ammonia; the whole bed is then thrown up into a compact form, four or five feet high; stakes are thrust down into the middle of the bed, that some idea may be formed of the temperature of the heap from time to time, which is examined often, that the mass may not get overheated and burnt, as it may be very much injured or be made nearly worthless; by withdrawing the stake, an experienced person will ascertain very nearly the state of the bed by the heat of the stake; but this is not left to uncertainty; a thermometer is inserted in the hole repeatedly, and when it indicates 90 degrees, the fermentation is deemed sufficient; the heap is then shoveled over, and spread a little, and having remained a week in this state, is ready for application, or to be put under cover for future use. Compost from night soil is made in the same way."

Fattening Hogs.—Fatting hogs must now have as much as they can eat; they should be urged forward as fast as possible before cold weather comes. They will gain more in one week now, than in two weeks three months hence. There is much in the garden now that may be added to the mush for hogs. Pumpkins, refuse squashes, cabbages, apples, potatoes, &c., may be boiled up or occasionally fed out raw, just for variety—for pig is a gentleman that prefers a variety of dishes and a good dessert. Give him, also, your greenest corn, cutting up cob and corn and stalk, an inch or two long. He will eat up all clean, while they are novelties in his pen. After all, your main stay for fatting him up, is grain of some kind. Indian corn ground, is best. Buckwheat comes next; rye is good, mixed with Indian; and oats always make the breakfas' relish well. You should bear in mind to let your hogs have charcoal every year; therefore we name it that you need not suppose what was said and done about it last year, will answer for this. A little brimstone, too, is good—and brimstone need alarm no one since we keep it to whiten straw with.—*Mass. Plowman.*

Apple Pomace.—Let this not be wasted. If considered of no value as food, let it be incorporated with the materials in the hogs' yard, or put in heaps, spreading lime plentifully over each layer of a foot or less of pomace, and, mixed with other manure previous to being applied in the spring, it will well repay for whatever care has been bestowed upon it. We have known cases where it has been thrown away as worthless—the farmer declaring that as food it was hurtful to his stock, (probably from being allowed to eat too much of it,) and that for manure it was of no sort of value, being "poor, sour stuff." Its sour quality is the sole cause of it worthlessness as manure: get rid of this—neutralize it—as you can by the process above recommended, and it becomes a fertilizer of soil and a nourisher of vegetation.—*N. E. Farmer.*

"In an experiment in Maryland in feeding hogs with shelled corn, and half the quantity in meal made into mush, those pigs fed on the mush, weighed five pounds heavier in a given time, than those fed on the raw corn, and their coats much better."

Madder.—The amount annually paid by this, to foreign countries, for this article, used in dyeing, is perfectly astonishing. Mr. Ellsworth, in his report, estimates the amount annually imported at five thousand tons! The wholesale price is now from fifteen to eighteen cents a pound. At fifteen cents the annual importation amounts to the round sum of one and a half millions of dollars, for an article that can be produced as good and as cheap at home. This is not theory. Mr. Joseph Swift, of Erie county, Ohio, planted nine acres, and allowed it to grow four seasons, and the crop was harvested and sold in 1842, and an account given of it in the New Genesee Farmer, for March, 1843. The product of the best land was two thousand pounds per acre, (and he is certain that with his present knowledge he can produce three thousand pounds per acre.) The labor required per acre to raise and prepare the crop for market, was from eighty to one hundred days' work, and his figures show, after paying for the labor and use of land, a nett profit of two hundred dollars per acre. Although the crop requires several years to arrive at maturity, and needs considerable knowledge and labor, yet the value of the crop is greater in proportion to the cost and the quantity of land it occupies, than any other farm crop that can be named. Our farmers should give more attention to the cultivation of this article, while the profits are so great.—*West. Farm.*

Shovel in the Muck.—The present time is favorable for those who have a *muck mine* and are desirous to avail themselves of its benefits. The effects of decomposed muck are now so well understood, that there are very few farmers who are not desirous of laying in a good store of it for future use. No better raw material can be found for hogs to operate upon and convert into the best of manure. A worthy old farmer of our acquaintance, makes it a rule to hire a hand for a month in the fall—furnish him with a cart and yoke of oxen, and keep them all at work hauling muck. In this way he lays in a large supply, and in the spring has a large quantity of excellent dressing for his land. He says he cannot invest the amount of the man's wages and service of cart and oxen in a more profitable way. Perhaps some of our readers who have never thought much of this plan may be induced to adopt it.—*Maine Far.*

A good plan of making Manure.—A writer in the Southern Planter recommends the following plan of making manure, of which we highly approve:

"Have a pit thirty or forty feet square, and two or three feet deep, with a good bank around it. In this pit let the materials, viz: oak leaves, pine tags, earth, &c., be put in suitable layers; on which throw all the slop-water, soap-suds, yard-sweepings, as ley, contents of chambers, and in short, every thing that can be conveniently got together. It may be at any convenient distance from the kitchen, so that the slop-water, soap-suds, &c., may be conducted to it by a trough. Be sure that no water gets into it in any other way. If at any time it should become offensive, start your teams immediately and cover it with *sand* or earth sufficient to prevent the escape of any effluvia." We say we approve of this plan of making manure; but we think it might be improved by sowing plaster over each layer of the materials of which it is composed, and occasionally, say at intervals of two or three weeks, sowing it over the surface, by which means all unpleasant smells would be avoided, and the enriching gases saved to fatten the land. Any pit which may be made for the purpose should be protected from the weather.—*West. Farmer.*

FOR SALE.

15 SAXONY BUCKS, raised upon the farm of the late Elam Tilden, can be had at reasonable prices, by applying to Col. Tanner, on the premises. M. Y. TILDEN, P. M.
New Lebanon, Columbia Co. N. Y. Sept. 7, 1844—1t.*

IMPROVED STOCK.

THE subscriber has now on hand and will sell, at fair and reasonable rates, several Durham cattle, consisting of cows, heifers and calves; also two bulls, a cross of the Durham and Ayrshire stock.

SOUTH DOWN SHEEP.—Two yearling bucks, several buck lambs and 16 ewes from 3 to 4 years old.

All letters, (post paid,) will be punctually attended to. Address
C. N. BEMENT,
September 1, 1844. *American Hotel, Albany.*

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☞ **ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

SHORT HORN DURHAMS FOR SALE.

ONE or two Heifers three years old, in calf by the prize bull Meteor, and one yearling and one two year old Heifer. The two latter were got by the imported bull, Duke of Wellington—also a fine bull calf, now about 6 months old got by Meteor. GEO. VAIL.

Troy, Oct. 25th, 1844.

HIGHLAND NURSERIES,

NEWBURGH.

THE subscribers, from their extensive nurseries, offer for autumn planting, all the finest varieties of fruit trees suitable for this climate. The constant practice here of proving the sorts by bearing specimens enables them to guarantee the *accuracy of the different fruits* cultivated; and the soil and exposure of the nurseries are such as give the trees peculiar advantages in point of vigor and hardiness when transplanted.

Ornamental trees and shrubs, Roses, Grape Vines, Raspberries, Strawberries, Washington Thorns and Buckthorns for hedges, together with all other trees and plants for hardy culture. Also Downing's Colossal Rhubarb, a new variety, larger and more succulent and tender than the Victoria. $1 each.

Descriptive priced Catalogues of the whole collection furnished by mail on post paid application. A liberal discount made on wholesale orders. Address A. J. DOWNING & Co.

Newburgh, Oct. 1844.

FARM FOR SALE.

THIS farm lies in Alexandria County, D. C., six miles from the Washington Market House, and three and a half from Georgetown. It contains two hundred and thirty-nine acres; from seventy to eighty in low land meadow, and from eighty to ninety in excellent timber, with a comfortable dwelling, good barn, ice house and dairy. Lime, which has been used already with fine effect, can be procured very cheap within three miles. It can be conveniently divided into two farms and will be sold upon accommodating terms as to price and credit. Apply to T. L. RINGGOLD.

Washington City, D. C. Oct. 1844 1t *

SOUTHERN GRAPE VINES, WINE, AND DIVERS NURSERY ARTICLES.

THE subscriber has a pretty large supply of more than 100 choicest American varieties of well rooted grape vines, (mostly Scuppernong,) at from 10 to 30 dollars per hundred according to age, size, &c. Cuttings of such as succeed from them (the Scuppernong do not, though well by grafting,) at rates of 30 dollars per thousand. Some 20 barrels (not including a new large vintage,) of best pure American wines at medium prices of a dollar a gallon. And divers nursery articles peculiarly fitted for southern culture at lower than northern prices Important for more southern patrons to send orders (with remittances) soon. SIDNEY WELLER, P. Master.

At Brinckleyville, Halifax county, N. Carolina, Nov. 1. 1t.

SUPERIOR FARMS FOR SALE.

TWO superior productive farms in Rensselaer county, 2 miles from Hoosic Falls. The farms are about one hundred acres each, and so situated as to be conveniently worked as two or one farm: each having the necessary buildings, and being judiciously divided into pasture and tilled land, all recently fenced with entire new materials in the most durable manner. The land is all of the first quality, and its present state of cultivation would bear a good comparison with any land in the county. These Farms will be sold together or separate, on terms most accommodating as to price and credit. Apply to

Lansingburgh, July 16, 1844. ALEXANDER WALSH

RENSSELAER INSTITUTE.—TROY.

THE Winter Term of this Institution will commence on Wednesday, the 6th of November next.

The following is a brief view of the branches pursued in the Institute:

1. Theoretic Mathematics.
2. Practical Mathematics, with special application to Surveying, Navigation and Civil Engineering.
3. Natural Philosophy, including Mechanics, Hydrostatics, Hydraulics, Pneumatics, Optics, Electricity, and Magnetism, with their applications.
4. Chemistry, experimental and practical. This science will be taught and illustrated with particular reference to Agriculture and the Arts.
5. Natural History, including Botany, Geology, Mineralogy and Zoology.
6. Occasional lectures will be given on subjects pertaining to Taste, Morals, and the Christian Religion.

Besides the courses of lectures by the Faculty, each student is required to give lectures on the branch of science which he is pursuing, illustrating his subjects—in Mathematics and Natural Philosophy by surveys, measurements, observations or experiments of his own—in Chemistry with experiments performed by his own hands—and in Natural History, as far as possible, by specimens of his own collection; and he thus acquires theoretic and practical knowledge, as he is explaining it to others. In this method of instruction, it is hardly possible for a person to pass through the appointed lectures, illustrations and experiments, without attaining an intimate and familiar acquaintance with the studies prescribed. The learner becomes himself the teacher, and he must first learn in order thus to explain his subject to others.

Rev. Dr. Eliphalet Nott, President.
Rev. N. S. S. Beeman, 1st Vice-Pres.
George H. Cook,
John Wright, M. D, } Professors.

The price for tuition will be $15 per term—two terms in the year—one commencing on the first Wednesday in November, and continuing 20 weeks, and the other commencing on the first Wednesday in May, and continuing 22 weeks. Those who perform a course of experiments in Chemistry with their own hands, are charged $8 extra for chemical substances and apparatus, unavoidably destroyed.

Board can be had from $2 to $2.75 per week.

Troy, Oct. 21, 1844. 1t.

FRUIT TREES.

THE subscribers would respectfully call the attention of the public to their assortment of FRUIT TREES. They are enabled this fall to offer a choice collection of many of the most esteemed varieties of Apples, Pears, Cherries, Peaches, Plums, &c. The assortment of trees having been considerably increased, persons desirous of obtaining articles in the nursery line, will find it worth while to examine the collection previous to purchasing elsewhere. All of which will be offered at very reasonable prices for Cash.

N. B. All articles intended for distant transportation will be carefully packed at the expense of the purchaser, and delivered free of cartage to any part of the city.

WILSON, THORBURN & TELLER.

☞ Orders sent to William Thorburn, Seedsman, Albany, will receive prompt attention.

Albany, Oct. 1, 1844—2t.

BUFFALO NURSERY AND HORTICULTURAL GARDEN.

THIS establishment is now somewhat extensive; from 25,000 to 45,000 trees are engrafted or inoculated each year, and these too, mostly from bearing trees, embracing nearly all of the most choice and leading varieties of the Apple, Pear, Peach, Plum, Cherry, Quince, Nectarine, Apricot, Grape, Gooseberry, Raspberry, Strawberry, &c. Also, a large stock of ornamental trees, flowering shrubs, and green-house plants.

The new descriptive Catalogue, recently published, will be forwarded to every post-paid applicant. This Catalogue gives in detail the name, color, form, size, &c. of the various kinds of fruits cultivated at the establishment, together with ample descriptions of ornamental trees, shrubs, plants, roses, &c.

Trees thrifty and fine; prices moderate. Orders promptly attended to. Trees packed in superior order. B. HODGE.

Buffalo, Sept. 20, 1844—2t.*

FINE FARMS FOR SALE.

THOSE very superior Farms situated near Galway Corners, in the county of Saratoga, collectively known as the Earl Stimson Farm, will be sold cheap and on terms most accommodating to the purchasers as to credit. The property consists of about 340 acres, is so situated as to be conveniently divided into three or four farms, all having the necessary buildings, and will be sold together or in parcels, to suit purchasers. Each farm is properly divided into pasture, tilled and wood land, and is in the highest state of cultivation, fenced in the best manner and with the most durable materials. The property comprises among other buildings, a large and convenient hotel, which is a favorite resort of families in the summer on account of the superior healthiness and beauty of the country. The farming buildings of all kinds are most extensive and convenient for all the purposes of agriculture and the raising of stock. The premises also include a country store, a most eligible location for a country merchant, having been occupied as such for about forty years. It is within two hours drive of Ballston, Saratoga, and Schenectady. The farm is well known among leading agriculturists, and in the agricultural periodicals, as the Pattern Farm. For terms, &c., apply to J. OAKLEY,

Oct. 1.—tf. No. 75 Nassau street, New-York.

THE CULTIVATOR.

NEW “TO IMPROVE THE SOIL AND THE MIND.” SERIES

Vol. I. ALBANY, DECEMBER, 1844. No. 12.

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

ONE DOLLAR A YEAR.

Seven copies for $5,00—Fifteen copies for $10,00—all payments to be made in advance, and free of postage.

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OFFICE IN NEW-YORK CITY, AT
M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,
where single numbers, or complete sets of the back volumes, can always be obtained.

THE CULTIVATOR.

TO OUR SUBSCRIBERS.

With this number terminates the first volume of the new series of “The Cultivator,” and with it, in accordance with the custom pursued from its commencement, all subscriptions cease, except those paid for another year. The low price of our paper renders it necessary for us to adhere to the “cash system,” as it would be impossible to collect the trifling amount of the annual subscription from subscribers scattered over the whole extent of our country. We hope, however, that most of those who have read “The Cultivator,” the present year, have been sufficiently interested in its monthly visits to induce them to renew their subscriptions for the vol. for 1845, by immediately remitting their dollar through the hands of their postmaster.

The Cultivator was the first to introduce, to any extent, the system of illustrating Agricultural subjects by engravings; and in this branch of our paper we can promise our friends some very decided improvements in the course of our next volume. We have already in the hands of the Engravers, FOUR SPLENDID DRAWINGS, representing some of the beautiful residences on the banks of the Hudson, and portraits of the prize animals at the late State Fair at Poughkeepsie—two of these are being engraved on STEEL, in the best style of the art—the others on wood, in a style far superior to any we have heretofore given. These plates, with the other numerous cuts interspersed through each number, will give a beauty and character to the next volume far exceeding any that have preceded it. Our printer also promises us some improvement in the quality of the paper on which the Cultivator is printed, as well as in the manner in which the printing is executed.

The Proprietor has also made such arrangements for assistance in the editorial department, as will, he trusts, enable him fully to sustain the high character his paper has heretofore enjoyed. To improve its character in this respect, he has little hopes; but his readers may rest assured that the whole energies of his mind will be devoted to his favorite pursuit, and that no effort on his part will be wanting to render the succeeding volume of the Cultivator a worthy and welcome visitor at the domestic hearth of every farmer and every lover of rural pursuits.

To our numerous friends, in every section of our extended country, who have favored us with their valuable contributions to our pages, and thus given to them a value and interest they would not otherwise have attained—to those who have so liberally exerted themselves from year to year to extend the circulation of the Cultivator among their neighbors and friends, without other reward than the hope of benefiting those into whose hands they placed it—and to Postmasters and Editors, to whose courtesy we are so much indebted, we tender our grateful thanks, and beg to assure them that we shall deem ourselves most fortunate if we can continue to make our paper worthy of the kind reception it has hitherto received at their hands.

The Central New-York Farmer, which has for the last three years been published at Rome, will, on the first of January, be united with “The Cultivator,” and one of its Editors, Mr. Comstock, will become a regular contributor to this paper. This, with occasional communications from his associates, Messrs. Johnson and Bement, will, it is believed, commend the Cultivator to the attention and favor of the friends of the Farmer.

Messrs. Comstock and Johnson, the proprietors of the Central N. Y. Farmer, will publish the Cultivator at Rome, where subscriptions will be received and business transacted the same as at the proprietor's office in Albany. This arrangement will, we doubt not, meet the approbation of the friends of both papers.

Agents.—We publish on our last page, a list of Agents in the principal cities, that our subscribers in those places may know where they can renew their subscriptions. To give a list of all our Agents would occupy more room than we can spare; we would therefore state that all Postmasters are authorized to act as Agents, and so also are all subscribers, many of whom will, we hope, second our efforts in behalf of agriculture, by making such exertions as they can conveniently, during the present month, to increase the circulation of our paper for the next year.

The Farmer's Museum.—The paper issued from this office during the present year, under this title, will be discontinued this month.

MONTHLY NOTICES.

COMMUNICATIONS have been received, since our last, from S. Y., A., J. P. Norton, L. H. Hare, C. T. Jackson. J. Eights, A. Leeds, (dated in *May*,) A Subscriber, J. Boyd, H. S. Randall, C. C. Hamilton, Wm. N. Green, J. J. Thomas, J. A. Badger, A. Coffin, A. D., A Farmer's Wife, D. B. L., Tyro, P. Eastwood, T. H. Darrow, O. Hussey, Noyes Darling, W. C. Redfield, D. G. Mitchell, W. R. Gilkey, Joseph Walker, E. R.

BOOKS, &c. have been received as follows:—"Landscape Gardening and Rural Architecture," by A. J. Downing, 2d edition, and Johnston's "Agricultural Chemistry," complete in two vols., from the publishers, WILEY & PUTNAM, New-York—"The American Poulterer's Companion," by C. N. BEMENT, from the author—"The Journal of Agriculture, for October," from the Highland and Ag. Society of Scotland—Papers containing Proceedings of Ag. Societies and Ag. Addresses, from A. L. KENNEDY, Esq. Philadelphia, C. C. HAMILTON, Esq. Cornwallis, Nova Scotia, Messrs. CARVER & WASHBURN, Bridgwater, Mass.; L. L. LOWELL, Esq. Calias, Maine; SIDNEY CHAPIN, Esq. Springfield.—Report of the Committee on Horticulture, at the Fair of the American Institute, from T. BRIDGEMAN, Chairman, New-York.—Transactions of the New-Castle (Del.) Ag. Society, together with the Address delivered at its late Fair, by J. S. SKINNER, Esq., from Dr. THOMSON, President of the Society—"Notes on Indian Agriculture, as practiced in the Bombay Provinces of India, by Alex. Gibson, Esq." from Hon. EDWARD EVERETT, our Minister at the Court of St. James.

We are also indebted to Messrs. H. & P. G. ALLEN, Duanesburgh, for a capital cheese, and to various other friends for three barrels and a box of Apples, and a lot of choice Poultry, for all which, those who have thus remembered us, will please accept the assurance that these tokens of respect are most kindly remembered.

FOREIGN CORRESPONDENCE.—We esteem ourselves most fortunate in being favored with the Letters of Mr. NORTON, all of which have been marked by a sound and discriminating judgment, and a direct and practical character, reflecting the highest credit upon our young countryman. We would invite particular attention to the one we publish this month, which will be found of unusual interest. It will be seen that we this month commence a series of letters from another of our countrymen in England. Mr. MITCHELL contemplates spending most of the next year in Great Britain, and has promised us a series of letters, from which we anticipate much interest.

☞ M. B. BATEHAM, Esq. at present editor of the New Genesee Farmer, at Rochester, is, we regret to learn, about to leave our State. He has done much to advance the cause of agricultural and horticultural improvement in Western New-York, where he has long resided, by the introduction of now seeds, fruits, implements, &c. as well as by his labors as Editor of the Farmer. We understand he designs locating himself in Ohio, and we take this opportunity to commend him to the people of that State, as a gentleman of extensive knowledge in rural affairs, a scientific and practical horticulturist and florist, and in all respects entitled to their confidence.

SUPERIOR APPLE.—Mr. T. H. Hyatt, of Rochester, has left with us a sample of a kind of apple which he thinks a seedling. It is medium sized, has a thin, smooth skin, of a golden color, with a rosy tinge on one side. It is a fair, beautiful, and exceedingly well flavored apple, ripening from first of November to Christmas. Whether it is a seedling or not, it is certainly a very valuable apple. If it should appear that it has never received a name, we would suggest that of *Hyatt's seedling*.

SALE OF THE LATE MR. GROVE'S SAXON SHEEP.—We are glad to learn that these sheep brought fair prices. The flock in Medina county, Ohio, sold at an average of about $9 per head, and the home flock averaged over $7 per head. For the production of wool for the finest cloths, these sheep are highly valuable, and if properly managed, will yield good profits to the owners.

FRANKLIN COLLEGE, near Nashville, Tennessee.—We have before spoken of this institution, and it now affords us pleasure to state that the necessary buildings, and all the arrangements, are so far completed, that it will soon be opened to the public. The first session will be commenced on the first day of January next, under the charge of T. FANNING, President, assisted by able Professors in the different departments. A more extended notice of the institution will be given in our next.

STOCK FOR THE GENESEE VALLEY.—Mr. T. H. HYATT, of Rochester, lately purchased of Mr. BEMENT, of this city, from Durhams, viz.—one cow "Victoria," a yearling heifer, the bull calf which received the first premium, and the heifer calf which received the second premium on Durhams at the late Show at Poughkeepsie. Mr. H. also purchased of MESSRS. CORNING & SOTHAM, a pair of yearling Herefords—a bull and heifer. They are of prime blood, and will give the farmers of the rich district where they are to be kept, an opportunity of estimating their qualities in comparison with other noted breeds.

NOTICE TO COUNTY AG. SOCIETIES.—We are requested to call the attention of the proper officers of the County Ag. Societies of the State to the 4th section of the "Act for the encouragement of Agriculture," passed 1841, or that part which is in these words: "And the said Presidents of the several County Agricultural Societies, shall annually transmit in the month of December, to the Executive Committee of the New-York State Agricultural Society, all such reports or returns as they are required to demand and receive from applicants for premiums, together with an abstract of their proceedings during the year." Attention to this provision is deemed important, that the State may receive the full benefit of its expenditures, in the embodying of the information intended to be so collected, in the annual Report of the State Society to the Legislature.

SOUTH-WESTERN FARMER.—This is a weekly paper published at Raymond, Mississippi, devoted to agriculture, general intelligence, &c., edited by Dr. M. W. PHILLIPS and N. G. NORTH, Esq. It has been in existence about three years, has been ably conducted, and is altogether a paper well worthy the patronage of the south-western public. The next volume is to be published in octavo form, at $3 per year. Success to it.

NEW-CASTLE COUNTY (DEL.) AG. SOCIETY.—We have received a pamphlet containing the transactions of this Society at the annual meeting held at Wilmington, on the 11th and 12th of September, 1844, together with the address delivered on the occasion by JOHN S. SKINNER, Esq. The reports of the various committees show that there was a good exhibition of fruits, flowers, domestic manufactures, and agricultural implements, neat cattle of all descriptions, horses, sheep, and swine. In addition to the departments of the exhibition mentioned, there was a plowing-match and trial of plows. The centre draft plow of Messrs. Prouty & Mears, received the preference at the match. A premium was awarded to Mr. Wm. Webb for a sample of 20 lbs. of corn-stalk sugar, which the committee appointed to examine it, say was—"well grained, and a handsome light brown color, affording evidence that this manufacture is *progressing and improving*." Mr. Skinner's address, was a very spirited and excellent production, well calculated to encourage the agriculturist in his career of improvement, and to induce him to take the high stand which justly belongs to him, in his social and political relations.

AGRICULTURAL SURVEY OF HAMILTON COUNTY, OHIO.—We learn that the Agricultural Society of Hamilton co. O., have appointed A. RANDALL, editor of the "Plow-Boy," and CHAS. WHITTLESEY, formerly a member of the geological corps of that state, to make an Agricultural Survey of the county. The work has been sometime in progress, and the commissioners expect to be able to publish their report soon after the first of January next. The survey is conducted with great minuteness. The commissioners proceed from farm to farm, collecting the details of every man's practice and management, and the matter so gathered, will constitute the basis of their report. In their Circular, the Commissioners say: "with the facts we expect to procure we shall be enabled to give not *theories* but *results*,—we shall thus give to every farmer the *experience* of every other farmer, engaged upon the same crops, in the same agricultural region."

This appears to us to be a very judicious mode of conducting such a survey, and we cannot doubt that it will prove highly useful.

CONDENSED CORRESPONDENCE.

Pumpkins.—Mr. L. Durand informs us that he raised the past season, eleven large cart loads of pumpkins, from about three acres of corn ground. The pumpkins were planted one seed in a place, about the first of June, in about every third hill of every third row of corn. The ground was well manured with long stable manure. The corn crop was good. Mr. Durand mentions that the little striped bug, (*Galeruca vittata*, of Dr. Harris,) which is often so destructive to vines, has not been seen in his neighborhood, the past season. We are also informed that in some parts of Massachusetts, the same remarkable disappearance of that insect has been observed. The curculio has almost totally vanished from the eastern section of that State. No cause for their sudden exit is known. The periodical appearance and disappearance of insects, is sometimes strange and unaccountable. Mr. Durand also says he has not seen any of the large black pumpkin or squash bugs, (*Coreus trispis*,) the past season. We do not know that this insect has been generally less common this season than usual. Mr. Durand says he "never could see that these bugs eat either the stalk or vine." They certainly do eat both. When squashes or pumpkins are but just out of the ground, and have only two leaves, (seed leaves, as they are called,) the black or brown bug screens itself on the under side of the leaves, and feeds on the stalk near the ground. At this tender stage of the plant, the punctures of the insect soon destroy it. As Mr. D. suggests, the use of ground plaster, scattered on the leaves, is a good thing to keep off the bugs.

Bone Mills.—We have received a letter from Mr. Peter Eastwood, who is desirous of obtaining a contract for the erection of a mill for grinding bones. He states that he has had much experience in England in building such mills—that he is by trade a mill-wright, and for the last thirty years, has ground bones both for his own use, and for sale—and is well acquainted with the application of bones to the different kinds of soil, the different quantities required, &c. Should any person be disposed to engage Mr. Eastwood for the erection of a bone-mill, a letter would reach him, addressed to the care of Anderson Keese, Keeseville, N. Y.

Bokhara Clover.—Mr. Jos. A. Badger, of Fabius, Onondaga county, N. Y., makes some inquiries about the Bokhara clover, to which we reply, that it is ascertained to be nothing more than common melilot, (sweet clover,) or a species so nearly resembling it that the difference is scarcely perceptible. We are not aware that it possesses any valuable properties as food for stock. It is sometimes used in a similar manner to sage in seasoning cheese, and it makes excellent pasture for *bees*.

Inquiry—Straw Cutter.—Mr. Alexander Leeds, of St. Joseph, Michigan, asks us "which is the best corn-stalk cutter?" He says—"By the best, I mean the one which is most likely to keep in good order; to do the most work in a certain time by the same power; the easiest to work by hand, and the cheapest as to price."

Wm. Hovey, Worcester, Mass., manufactures a machine which is very popular. For cutting hay or straw, it is by many thought superior to any other. He received the first premium at the New-York State Show this year, and also that of the Mass. State Ag. Soc. We think the price of this machine is $25. We noticed a machine at the Poughkeepsie Show which we thought particularly well adapted to cutting corn-stalks, offered by Thos. P. Thorne, Fishkill. It received one of the premiums. The price of this machine is $25. Another quite simple and effective machine was offered by J. C. Conklin, Peekskill. Its price is $18.

Mr. Leeds also further inquires—"Will you also inform me if it is better to cut hay for cattle, or to feed it out uncut? Farmers here depend much upon the hay from the wild grass of neighboring marshes, there not being much Timothy or clover raised, and the cattle waste nearly if not quite one quarter of this wild hay."

On this subject, our correspondent will find a valuable article in the current volume of the Cultivator, at page 18. In relation to the wild grass he speaks of, his cattle would probably eat it better if cut, and especially if a small quantity of bran, shorts or meal was mixed with the chaff. There is unquestionably a saving of fodder, whether it be hay, straw or corn-stalks, by cutting, but the economy of the operation must depend on the comparative price of hay and labor.

Wives and Daughters.—Our correspondent "L—," of Michigan, strongly recommends the English practice of all hands, men, women and children, joining in the labors of the harvest field. We have not room for the article at length, which is prefaced by an extract from Thomson's seasons, beautifully descriptive of the harvest scene, and even, did space allow, we fear that L.'s remarks would find but little favor. We give a brief extract: "At the present time, in most of the countries of Europe, harvest work is done by male and female reapers in about equal numbers; and it is much to be wished that the fair daughters of Columbia, would imitate their European sisters as much in the harvest field as they do in the toilet. It would invigorate their constitutions, improve their appearance, and add much to the prosperity of the country; and instead of having the appearance of factory girls, they would resemble the picture of rural beauty, so graphically drawn by Walter Scott in his Lady of the Lake:

> What tho' the sun with ardent frown
> Had slightly ting'd her cheek with brown?
> What tho' upon her speech there hung
> The accent of a mountain tongue?
> A foot more light, a step more true,
> Ne'er from the heath flowers brush'd the dew."

Raising Clover.—Mr. Henry Bremen, of Enfield, Tompkins county, N. Y., thinks the raising of clover seed is very profitable. At four dollars a bushel, he thinks it affords a better profit than any kind of grain. His mode of raising seed from the *large kind* of clover, is to pasture it till the 12th or 15th of June, then sow on some plaster, and mow as soon as three-fourths of it is ripe. He says by mowing it thus early, more seed is got than if it stood till fully ripe; because in the latter state, a quarter of the seed is lost in gathering. For the *small kind* of clover, mow from the 20th to the 24th of June; plaster immediately after the hay is off. The second growth will give good seed. It is common for many farmers to gather their clover seed early, and sow the sod with wheat the same fall, and in most cases, it is the best fallow we have for wheat, leaving the ground in fine condition for wheat, and affording much vegetable matter to plow under.

N. Y. STATE AG. SOCIETY.

The annual meeting of this Society, will be held at the Society's Rooms in this city, on Wednesday, the 15th of January next, at 10 o'clock. Applicants for premiums on farm crops, Experiments, Essays, &c., are reminded that their statements must be forwarded to the Recording Secretary, Albany, on or before the first of January.

AGRICULTURAL SOCIETIES IN NOVA SCOTIA.

We are glad to learn that agriculture is evidently improving in this province. In the *Halifax Morning Post*, we have accounts of several exhibitions which have been held during the past fall, evincing a spirit and enterprize highly creditable to the farmers of that country. The Cattle Show of the King's County Ag. Society, which took place on the 25th of September, was well attended—many fine animals were exhibited, and more than £100 were distributed in prizes. We trust our Nova Scotia brethren will persevere in the good cause which they seem to have commenced with so much zeal, and send us another account of their progress.

He who masters his passions conquers his greatest enemy. Mature deliberation is always better than hasty decision.

Foreign Correspondence.

MR. NORTON'S LETTERS—No. V.

Lab. of Ag. Chemistry Association,
Edinburgh, Sept. 24, 1844

MESSRS. EDITORS—In the August number of the Cultivator I noticed a paragraph, attributing much value to horn piths as a manure. It especially interested me, as I have lately made an analysis of these piths, or flints, as they are called in this country. They are sold in this city for $4 a ton, and are shipped to Manchester and else where, for the purpose of making size for calicoes. The specimen analyzed by myself was sent to the Laboratory by a gentleman who wished to know its agricultural value. The result was as follows:

Water,	10·81
Organic matter, fat, gelatine, &c.	35·84
Ash—consisting of Phosphate of Lime, 46·14, Carbonate of Lime, 7·71,	53 65
	100·00

We thus have in these horn flints a most powerful manure, both as to its organic and inorganic constituents, fully equal to bones. In *England* such manures are not suffered "to lie on the hill sides" and "manure the air." Bones, as containing nearly every substance required for the growth of crops, have now an undisputed place among the very first of fertilizers. They are brought here from all quarters of the world, and to our shame it is a fact that English agents are purchasing them in the United States. You may truly ask "what is the use of importing guano, or buying poudrette," when we are neglecting a manure, nearly equal in its immediate effects to either of them, and far more permanent.

The price of bones in this country is from £5 to £6 per ton. When buried whole, they remain for a long time almost unchanged in appearance, but nevertheless afford a constant though limited supply of nourishment to the crops. As they are generally applied in the crushed state, the effect is more striking and immediate. Even then, it is permanent and has been known to last for 30 years. It has been a disputed point, whether the fertilizing action of bones is due to the organic or inorganic part. Some celebrated authorities have not hesitated to ascribe it wholly to the phosphates of the latter, but we know that the gelatine or glue of the former is also a very powerful manure, and that even at the end of many years, a portion of it still is retained in the bone, practically refuting those who have founded their arguments upon its perishability. It is far safer to conclude that both portions have their appropriate action and that both are necessary.

The horn flints cannot well be crushed in a bone mill as from their softness they clog the mill. They may however be with much advantage dissolved in sulphuric acid. This mixture, of sulphuric acid with bones, has within a few years come into use in this country, and is one of the beautiful results of science applied to agriculture. Prof. Johnston has furnished me with some statements upon this subject, from which I will quote, as facts are worth far more than words to the farmer. Mr. Bell, the farm steward at Gordon Castle, conducted experiments in four different ways:

1. One Imperial acre manured with 8 bushels bones and 14 cubic yards farm yard dung at £3, produced 12 tons of turneps.

2. One do. manured with 2 cwt. 91 lbs. guano, and 14 cubic yards farm yard dung at £1 17*s*. 4*d*. produced 11 tons 4 cwt.

3. One do. manured with 16 bushels of bones, at £1 16*s*. produced 11 tons.

4. One do. manured with 83 lbs. sulphuric acid and 2 bushels bone dust, mixed with 700 gallons water, at 11*s*. 6*d*. produced 12 tons 4 cwt.

Mr. Manson of Spynie, gives a similar result. In his field of 21 acres of turneps, 13 were sown with farm yard dung, and 8 with bones and sulphuric acid. 20 cart loads of the dung were applied per acre at a cost of £2 10*s*. Of bones 4 bushels and sulphuric acid 96 lbs per acre; the mixture largely diluted with water; the result was:

Sulphuric acid and bones at £1 per acre, produced 12 tons 5 cwt. 80 lbs.

Farm yard manure at £2 10*s*. per acre, produced 10 tons 17 cwt. 104 lbs.

Mr. McWilliam of the Sheriffston farm in Morayshire has furnished a report of 19 experiments made on 30 acres of turneps, which all go to prove, as instances above, the very great value and *economy* of this application.

The best method of preparation is to dissolve the bones in acid so weakened by water that it will not char them. When they are completely dissolved it is ready for use. Those experiments seem to have been most successful when the solution of bones thus prepared was very largely diluted with water, so as to make it nearly tasteless. It is applied by means of carts contrived for the purpose. It would be less expensive, if instead of diluting with water the solution were taken up by peat or some other absorbent and sown by hand—the *immediate* effect, however would not be as great.

Sulphuric acid alone has been found to exercise the same beneficial action upon clover, that attends the use of gypsum, (sulphate of lime) and it is therefore with every prospect of benefit that this mixture, containing not only the sulphuric acid and the lime, but the other substances which plants most need, might in such a diluted state be applied as a top dressing to clover and all those crops upon which gypsum has been found to produce a good effect. Of course the first trials should be made cautiously, and in small quantities.

As in a former letter I wrote at some length of guanos, I may mention that I have recently examined a specimen of an artificial guano, known as Potter's Guano. It has been sold somewhat extensively, and he professes to adapt its composition to various soils. A former specimen analyzed here contained 30 per cent of sand, and this was sent to ascertain if similar fraud had been practiced. My result shows that he has been a little more cautious in this instance.

Water,	14·55
Organic matter,	17·32
Portion soluble in water, consisting chiefly of sulphate of soda, common salt and gypsum, with a small quantity of potash and ammoniacal salts,	40·43
Phosphate and carb of lime,	11·61
Coarse sand with bits of gypsum,	16·06
	99·97

There is much here that is valuable, but the prudent farmer would think twice before he paid $15 or $20 a ton for a manure containing 30 per cent of sand and water. A microscopic examination showed it to contain woolen clippings, seeds, horn shavings, bits of sticks, leaves and weeds, sand, small stones, pieces of gypsum and several kinds of salts.

A specimen of an adulterated guano has also lately been examined here. It contained about 40 per cent of gypsum to 25 of water and sand. There was also a large quantity of some finely powdered material, probably coal ashes, mingled with it to give the proper color. This is the first instance of adulteration that has come under our notice. This laboratory has been a terror to evil doers throughout Scotland.

In my last letter I spoke of the examination in Glasgow of some boys from the Larne school. A letter received from Dr. Kirkpatrick states that the effect had been wonderful, spreading through all Ireland. Repeated applications have been made to the commissioners of schools to establish similar institutions. The number of applicants for admission to the Larne school has much increased, and they have been thronged with visiters. Mr. Colman has been there with Dr. Daubeny.

The schoolmasters of Scotland held their annual meeting here, a few days since. Prof. Johnston delivered two most admirable lectures of which I send a report. They were received with great interest, with even enthusiasm. Spirited resolutions were passed, and the whole body dispersed to the various parts of Scotland, determined to introduce agricultural instruction into all the primary schools.

Very truly yours,
JOHN P. NORTON.

LETTERS FROM MR. MITCHILL—No. I.

Liverpool, England, Nov. 4, 1844.

Luther Tucker, Esq.

Dear Sir—A month ago, and I was in Albany, and rode with your hospitable friend Bement, to look up his Three Hills and fine cattle, and then ran down your river, looking either side, and seeing much. Now, here I am, and a moment ago, in the street, a woman (will you believe it ?) was gathering with her bare hands, into her apron, the fresh dung from the horses. What a change! Attend me a short walk into the country, and you shall see it more strikingly. First, the universal greenness, dazzles and tempts you, if subject to such impulses, to throw up your hands and exclaim, "beautiful!" There are no crooked fences—there are no tottling walls; but beside the pleasantly winding and McAdamized road, are fences of hewn stone, laid in mortar, and finished with coping. Back of them run the various hedges to every point of compass, varying the brightness of the meadow, with hundreds of brown brushy lines. Nor should I forget the trees, though bare, which belt around each large enclosure, and in the back ground interweave, seemingly, into a forest hedge, over which, however, peeps some tall gable end, or turret or chimney top. For these modest stone houses, with vine or ivy clambering over them by the roadside, do not contain the land owners. Even now, at our right, the hedges and shrubbery and trees are thickening, and a black smoke is soaring above them, and a diamond window and a porch, and beds of flowers and laurel trees and gravel walks, and an elegant gateway, and now a "fine old English gentleman's" house is in plain sight, which means that a rich merchant of Liverpool bought the place in view, employed a man of taste to arrange matters, and from it he rides in the morning, in a carriage somewhat like our old fashioned barouche, only a deal heavier, and to it again at night. We are tempted to stroll through the unlatched gate, along the gravel way, and to the field beyond, where we see some beautiful Southdowns feeding; but the "Notice—trespassers on these grounds, will be apprehended"—deters us, and we pass on.

Opposite, farther along, are the laborers harrowing, one leading the horses, geared *tandem;* the other swinging the harrow by cords, it being wholly of iron, and in three parts with hinges—perhaps 50 teeth. The seed is barley. The field is thrown into lands a rod wide, divided by water furrows, straight as an arrow. The soil, a rich clay loam, which the plow and harrow do not fail to pulverize. The plow is of long beam, very long handles, coulter resting on nose, and share curved under in front, almost joining the land-side—this I suppose, to lessen draught. Other plows I see of cast iron wholly. Objects of interest thicken as I pass on—yonder in the field is a group of cattle, and a score or more of Southdowns, which the boy tells me belong to the butchers—and further, that most of the fields passed, are rented by them. I cannot learn the rent, but jump the wall, and venture upon a look; the cattle are indifferently formed, parti-colored, and rough haired, but in good flesh, and good size. The sheep are the beauties; rampant as blood horses, and sleek as Berkshires; live weight, I should judge about 150 lbs. average. They were beauties. As we stroll back into the road, we see "£10 reward," for a red cow, offered by the Butcher's Provident Society. At the great sign-post, pointing to Warnstred, to Woolton, and to Walton, over the wall, are being dug a fine crop of potatoes of 4 acres, planted in drills, and turning perhaps 400 bushels to the acre. Twenty-eight hands, (I counted them,) are at work, all with a tool resembling our dung fork, with shorter and broader tines. The tops are nearly green, and thrown in heaps for manure. Monstrous heaps of compost arrest the attention in almost every field, of marl, ashes, street dung, &c. A stranger is very much struck with the black appearance of the trees—scarcely recognizing an individual specimen—but remembering the clouds of smoke are deluging the air from the great city behind, the wonder vanishes; I as yet recognize only the poplar, the elm, the maple, (English) the oak and Scotch fir. In choice collections I see the American laurel, (a beautiful shrub,) and the variegated laurel. Never can I cease admiring the tortuous course of the road; ever bringing up unlooked for objects of attention. In the distance, for instance, I see a field of dark blue green, and wonder what it may be; presently a new turn brings it to my side, and peeping through the matted hedge, I see as fine a lot of ruta bagas, and as fresh as were your Albany ones in September. These in rows, and of the size of pint bowls. Ahead, around a bit of a stone cottage, I count 15 stacks of hay, of (say) 10 tons each, all nicely thatched. The mode is in brief this: straw is laid upon outer edges; these bound by tar strings running round, fastened to forked sticks driven into the hay; after this, another layer bound over the jointure in same way. They are perfectly tight, easily thatched, and neat in appearance. Objects fail not, which are a feast to American eyes, the whole circuit home, which I reach at half past two; tired, but gratified. There are walks in reserve, and markets, and sights of farm implements and farm houses, and barns and horses and cattle, &c. &c., of which I may possibly give you future hints. Meantime, I remain yours truly.

D. G. Mitchell.

FOREIGN INTELLIGENCE.

By the arrival of the steamer Hibernia at Boston, we have our usual files of foreign papers to the 4th of November, from which we compile the following:

AMERICAN PROVISIONS IN ENGLAND.

From a letter "*on the present state of the American provision trade,*" published in the Mark Lane Express, from J. and C. Kirkpatrick, dated Liverpool, Oct. 1844, we condense the following.

The strong prejudice which at first existed against American provisions, and for which there was good reason, in the inferior quality of the earliest arrivals, has been gradually removed, as shippers have learned to conform their brands to the wants of the English market.

Beef.—Great difficulty has been experienced in securing a footing in the British markets for this article, owing to the prejudice which the inferior character of the first shipments naturally produced; but the imports have been latterly of better quality. The Americans may have the *exclusive* supply of this article, if they will avoid the faults in cutting and packing which have formerly attached even to their best brands. Complaint is made that some of the late parcels were very dark in color, supposed to have been caused by a bad quality of salt, or badly seasoned casks. The casks have generally been made too large, allowing the meat to roll about ; they should be made of such size as to admit the required quantity with tight packing, leaving room for a good heaving of salt. The meat too has often been most irregularly messed, the pieces being of very unequal sizes, whereas they should be cut as nearly as possible 8 lbs., and should be cut square and compact.

Pork has had less difficulty in finding its way into the English market, and less care has consequently been taken by curers in properly packing it. The position of the trade is therefore about the same that it has been for two years past; but it is capable of great extension if due care is only taken to suit the market. *Prime mess pork* should consist of 50 pieces of 4 lbs. each, from hogs weighing 160 to to 200 lbs., every part being packed except the head and legs. It is important that the meat be firm and well fed, and free from the oily character which American pork generally possesses. It should remain 36 hours after being killed, in order that it may become quite cold and firm, before it is packed.

Cheese.—The import of this article to Liverpool during the past twelve months was somewhat over 1,400 tons; while the steady and progressive increase in the trade gives promise of a much extended import in coming years. The general quality of American cheese shows that the soil of the United States is well suited for its production, and which makes it the more to be regretted that the very obvious *defects of make*, which have so much operated against its more extensive introduction into England, should not be remedied. This might easily be accomplished by the circulation of proper instructions on the subject among the farmers in the cheese-making districts *in America.* Of these defects, the principal arise from a too hurried manufacture, and insufficient pressing, which, by leaving the whey in the cheese, not only injures the flavor, but renders it more liable to decay, while the same cause makes it open and porous, a fault particularly objectionable. The make of English cheese has never been equal to the demand of this country; and the home supplies have, consequently, been supplemented by large yearly imports of Dutch. There is now, however, every prospect of the required supplies being drawn largely, if not principally, from the United States instead of Holland; the diminishing import from the one, and the rapidly increasing import from the other, already indicating such a change. As regards the form of the cheese, it is desirable that they be made of less breadth and greater depth or thickness, which would both conform them nearly to the appearance of Cheshire, with which they have to compete, and would also fit them better for passing through the ordeal of a long sea voyage."

Wheat flour.—The result of the harvest is now pretty well ascertained, and it may be said with confidence, with regard to wheat, the great staple of England, there has never been a more abundant harvest reaped, while the excellence of the quality is fully equal to the abundance of the yield. Oats rank next, but are below an average. Barley and beans, in consequence of the drouth, were a very short crop. The *abundance* of the wheat crop will, however, compensate for the deficiency in the other, and low rates for that article at least, may be looked for. The reduction in price has already advanced the duty to its highest point, 20 shillings per qr., and at which it is likely to remain through the winter, so that the stock of United States flour held in England, and which in Liverpool alone amounts to 140,000 barrels, must remain in bond till next summer at least, with the exception of what may be required for export. The result, so far, of this season's importation from Canada, shows that the object contemplated by Peel's corn-bill of last year has been fully secured, *in drawing to the river St. Lawrence a considerable portion of the produce of the Western States of America.* A late return shows that the exports from Canada, up to August this season, were 307,000 barrels flour, 237,000 bushels wheat—the exports to the same period of last season having been 50,000 barrels flour, and 15,000 bushels wheat.

AGRICULTURAL COLLEGE.—An Agricultural College is about to be opened at Leopardstown, near Dublin. The farm consists of 200 Irish acres of land, of medium quality. The terms for pupils in the Agricultural School will be £15 per annum, for which they will receive a suitable education; they will be engaged one-half of each day at farm-work, under the superintendence of the best practical and scientific agriculturist that can be obtained, and during the other half in the school, over which a teacher of like ability will preside.

COMPARATIVE ADVANTAGES OF OXEN AND HORSES IN FARM WORK.—We find in the Journal of the Royal Agricultural Society, an interesting and well written article on this subject, by James Cowie, from which we gather the following items. Mr. Cowie's oxen are put to work somewhat older than horses, and he thinks they are not at the outset so able for steady work; they cannot be depended on before they are four years old. His oxen are principally of the Angus and Aberdeenshire breeds. The peculiarities in their figure are, a small head, deep chest, round body and short legs. The largest sizes, although frequently selected for work, are not considered the most proper. His oxen average about 800 lbs., the four quarters, when fattened. When much heavier, it is found they want activity and endurance, and their feet, from the additional weight, are more apt to give way. In regard to the work performed relatively by horses and oxen, Mr. C. says that except in frost, when land cannot be plowed, the amount and value of the work performed by each are equal. He works his oxen 10 hours a day, as steadily all the year over, except in frost, as horses, and they keep in perfectly good condition. In regard to the relative speed of oxen, Mr. C. says—"we often see oxen going very slow and sluggardly at work. When well trained, and of a proper breed and size, they will step out as well and as fast as horses—mine do so. At a late plowing match in the district, where upwards of 70 plows started, my ox-team was the second off the field."

In regard to improvements in husbandry, Mr. Cowie gives the following striking example. He says—"The farm which I occupy has been tenanted by my ancestors for many generations. At the Revolution, my great grandfather, and his son, for many years after that, employed 12 working horses, and 28 working oxen, one-half of each set being yoked to one plow. I now work the same land to better purpose, I presume, with six horses and two oxen."

INDIAN CORN IN ENGLAND.—In the New Farmer's Journal, a correspondent who signs himself "A Man of Kent," states that ever since 1829, he has succeeded in growing Indian corn, and having it come to maturity. The kind is Cobbett's yellow, or what is called here, Canada Yellow or Yellow Flint. The writer says—"I am sure that quantity for quantity, corn is, as food for horses, equal to beans, without possessing their heating property; for pigs and poultry, superior to the very best barley; for sheep, very superior to oats; and for bullocks, better, I think, than any thing, oil cake excepted." Green corn for the table, he recommends highly; but hopes the people of England will never be obliged to resort to the use of corn for bread. Corn, as a general crop, can never be grown in England; the low temperature of their summer forbids it.

Advantage of keeping manure covered.—An experiment conducted by the President of an Agricultural Society in England, shows that manure which was kept covered by nine inches in depth with earth, so that no evaporation escaped, produced four burhels more of grain per acre, than the same quantity and kind of manure, applied to the same extent and quantity of land, but which had lain from the 13th Jan. to the 4th of April, exposed to the weather.

GREAT CROP OF BARLEY.—An English paper says that John Stokes, Esq. of Cuffern, has produced this year, from half an acre of ground, 45 Winchester bushels of clean barley, fit for the market.

PARISIAN STATISTICS.—The consumption of butchers' meat in Paris during the month of September last, comprised 5,759 oxen, 1,577 cows, 5,861 calves, 34,707 sheep; being a diminution, compared with the month of September, 1843, of 222 oxen, 1,143 calves, and 3,356 sheep. The consumption of butchers' meat in Paris during the month of September, 1843, exhibited a similar proportionate reduction compared with the month of September, 1842, so that it would appear that the consumption of butcher's meat in Paris is gradually diminishing.

BEES.—A bee hive, which was opened by Swammerdam, was found to contain 1 queen bee, 33 males or drones, 5,635 working bees, 45 eggs, and 150 worms. Total population, 5,864; for whose accommodation there were 3,392 wax cells for the use of the working bees, 62 cells containing bees' bread, and 236 cells in which honey had been deposited; in all, 3,620 cells. From this observation it may be presumed the hives contain 5,000 to 6,000 inhabitants, amongst which there is only one female, viz., the queen bee, and from 3,000 to 4,000 cells.

HORTICULTURAL CURIOSITY.—A curious device was exhibited at the Bristol Horticultural Society last week. It was a donkey carrying an old woman to market, the animal covered with a kind of grass, the exact color of a donkey's coat, and the rider composed entirely of vegetables.

SOWING WHEAT.—August, 1843, one quarter of an acre of a very gravelly soil—in a hot summer produced but little—was, after peas, plowed 4 times in the same day with six horses, 15 inches deep; dibbled with wheat in October, produced at the rate of 5 bushels 3 pecks per per acre more than the land by the side of it, plowed in the usual way for wheat 5 inches deep. Straw 3 3-4 cwt. per acre more than the adjoining land of the same measure and same soil.

THE BEST RUSSIAN HORSES.—The Orloff breed—the most renowned in Russia, especially the Orloff trotters—are very large in size, and from the age of one year, are harnessed to light sledges, and never allowed to break trot; so that an Orloff trotter has, perhaps, never galloped or cantered since he was foaled; and thus, having lost all instinct of the pace, if a wolf were at his heels, would still *trot* away from it. When put to their utmost speed, these horses therefore trot at an astonishing pace.

Hints to Lovers of Flowers.—A most beautiful and easily attained show of evergreens in winter may be had by a very simple plan, which has been found to answer remarkably well on a small scale. If geranium branches are taken from healthy and luxuriant trees just before the winter sets in, cut as for slips, and immersed in soap and water, they will, after drooping for a few days, shed their leaves, put forth fresh ones, and continue in the finest vigor all the winter. By placing a number of bottles thus filled in flower baskets, with moss to conceal the bottles, a show of evergreens is easily ensured for a whole season. They require no fresh water.

NEW BOOKS.

Downing's Landscape Gardening.—We hail with pleasure the new edition of this elegant work, which has just been issued by Wiley & Putnam, New-York. Such had been the demand for this work, that not a copy of the first edition had been for sale for months past; and we anticipate a much more rapid sale for this new edition, a large part of the first portion of which has been re-written, much new matter added, the whole revised, and newly and more copiously illustrated from examples now existing in our own country. The illustrations are admirable, both in the drawing and engraving, and the work is, altogether, got up in a style to compare well with the best English books. This Treatise is justly regarded as an honor to the country, and it has already effected an immense good by inspiring a correct taste for rural improvement, the evidences of which are not unfrequent throughout the land.

"The Fruits and Fruit Trees of America."—This new work, by A. J. Downing, Esq., advertised to have appeared some time since, has been delayed, as we are informed by the Author, that he might have the benefits of the fruits of the present season to enable him to test additional varieties and to settle some doubtful points. It will be issued during the coming winter.

American Poulterer's Companion: a Practical Treatise on Breeding, Rearing, Fattening, and General Management of the various Species of Domestic Poultry, with Illustrations and Portraits of Fowls, taken from Life: by C. N. Bement. This work, the most complete of the kind yet published in this country, has just been issued by Saxton & Miles, 205 Broadway, New-York. It embraces 380 pages, 18 mo., is beautifully printed, and contains many engravings illustrating the characteristics of the different species and varieties, and exhibiting the most approved plans of buildings and other necessary appurtenances to the successful management of poultry. As a work of *practical* value, and containing much information on all branches of the subject to which it relates, we have no doubt it will be eagerly sought, and highly prized by the American public. When we have had an opportunity to examine it more minutely, we shall give it a more extended notice.

Johnston's Lectures on the Applications of Chemistry and Geology to Agriculture.—Among the various attempts which have been made to show the practical relation of the sciences of Chemistry and Geology to Agriculture, we have no knowledge of any which have been more successful than those of Professor Johnston. The "Lectures," here mentioned, are particularly valuable in this respect. They are written in an exceedingly interesting and perspicuous style, no scientific terms being used, or philosophic principles referred to, that are not fully explained. Professor J. informs us, in the preface, that the "first Part of the Lectures was addressed to a society of practical agriculturists, most of whom possessed no knowledge whatever of scientific Chemistry or Geology. They commence, therefore, with the discussion of those elementary principles which are necessary to a proper understanding of each branch of the subject." "For the sake of clearness," says Professor J., "I have, in the following pages, divided the subject into four parts—the study of each preceding part preparing the way for a complete understanding of those which follow. Thus part I, is devoted to the *organic elements* and parts of plants, the nature and sources of these elements, and to an explanation of the mode in which they become converted into the substance of plants;—Part II, to the *inorganic elements* of plants, comprehending the study of the soils from which these elements are derived, and the general relations of geology to agriculture;—Part III, to the various methods, mechanical and chemical, by which the soil may be improved, and especially *to the nature of manures*, by which soils are made more productive, and the amount of vegetable produce increased;—and Part IV., to the *results of vegetation*, to the kind and order of the food produced under different circumstances, and its relations to the growth and feeding of cattle, and to the amount and quality of dairy produce."

These lectures have been republished in this country, by Messrs. Wiley & Putnam, New-York. They may be had, neatly bound in one volume, for $1,25—or bound in two volumes, for $1,50.

SMUT IN GRAIN.

It has been often stated that this is a kind of fungus, the seeds or sporules of which are so exceedingly minute that they are taken up and ascend through the pores or sap-vessels of the plant. Professor Johnston lately spoke upon this subject in a lecture before the Agricultural Chemistry Association. He observed that the smut had received the name of *Uredo segetum*. That these puff-balls or sporules were so minute that it would take 2800 of them to cover an inch. There was no doubt that they ascended through the plant—by examination, it could be seen where they had come up—the tubes of the stalk were filled with black matter that had come through the vessels, affecting first the straw, and then getting into the ear, where it spread itself all over. After passing through the stalk the smut fixed itself under the root of the flower, which it rendered barren, and as the grain approached perfection, the puff-balls became ripe and burst, showing black dust of very minute particles—so minute that it took about 1,100,000 of them to lie across a single inch. He then went on to speak of the manner in which smut was propagated. It was in the first place sown along with the seed. Very often it was so minute that thousands of the particles might attach to a single grain, and yet not be visible to the naked eye. Oats are more subject to smut than other grain. Rye is never attacked by it, and wheat seldom. Grasses are sometimes attacked by it and much injured.

Certain substances have been employed for the prevention of smut. The substances used are sulphate of copper, or blue vitriol, urine, common salt, wood ashes, lime-water and sometimes arsenic. The application of these substances to the seed grain, destroys the black dust or the spores of the fungus, and in addition to this they make the grain grow better. Professor Johnston mentions an instance where a large field of oats was divided into several parts, and the seed doctored in different ways—some not being doctored at all—other portions being dressed with guano—and others steeped in the following composition:

Phosphate of Soda, Solphate of Magnesia, Nitrate of Potash, Common Salt, Sal-Ammoniac, or Sulphate of Ammonia. One pound of each in ten gallons of water, to steep 300 pounds of seeds, the moist seed to be dried with gypsum or quick lime.

On looking at that field it was found that the grain to which nothing had been done, was smutted, that which was dressed with guano was also smutted, as was likewise a portion where Campbell's steep had been used; but there were only two or three stalks affected with smut in the grain steeped in the composition above mentioned.

The smut which is sometimes found in wheat, called *dust brand*, or *pepper brand*, is supposed by some to be a different species of *uredo* from that above spoken of. It is sometimes called *uredo fœtida*. But the same remedies against its attacks are used with equal effect.

MR. FRENCH'S FARM, BRAINTREE, MASS.

During our recent visit to Massachusetts, we took notes in reference to several farms, which we had the pleasure of visiting. We have put these notes in form, and shall give them to our readers in the present and future numbers of the Cultivator.

The farm of B. V. French, Esq., is situated in the town of Braintree, ten miles from Boston. Within the last few years, Mr. French has made great improvements. The farm is naturally wet, and very stoney. It has been divided into small inclosures, and the stones disposed of by putting them into substantial walls. Trenches are dug and filled with small stones for the foundation of the wall. This not only gives a firm basis for the walls, but by a little attention in the arrangement, they serve as drains also. Mr. French has proved, pretty thoroughly, the efficacy of under-draining and subsoil plowing. The benefits of these operations, are obvious and striking. Cold, springy land, with a close subsoil, which was before so wet in the early part of the season that it was impossible to work on it, and which at best only produced a crop of rather inferior hay, is now made to yield good crops of garden vegetables and grain. We were shown a piece of this formerly cold, wet land, where an enormous quantity of stones had been dug out, and the ground afterwards plowed and subsoiled to the depth of fifteen to eighteen inches, that produced last year a crop of carrots of nearly *eight hundred* bushels to the acre. Another piece of four acres, naturally very stony, but not so cold as the former, having a south-eastern aspect, had been thoroughly gone over, and the lot fenced by the stones taken out. It was then subsoiled, and is now appropriated to a nursery. The various kinds of fruit trees thrive remarkably well. The spaces between the trees are cultivated with carrots, and the yield will be a heavy one—not much less than one thousand bushels to the acre. Noticing the great depth to which the carrots penetrated, we tried the soil with a stick and found it very easy to push it down eighteen inches. This land was naturally a hard stoney gravel.

Mr. French uses a good deal of peat muck, as well as mud from the salt marshes, in making manure. It is laid over the cattle yards, thrown into the hog-pens, and made into compost. He obtains the *salt lye* from a soap manufactory. Heaps of peat muck are saturated with this liquid, and found to be a powerful manure.

The principal objects of production with Mr. French, are milk and fruit. He sends a man to Boston with milk every day, and the same man usually finds a market for all the fruit, vegetables, &c.

The cows obtain but a small portion of their support from pastures, but are mostly fed on crops raised for that purpose. They are put in the barn every night, where they are fed with a small quantity of wheat bran or shorts. Carrots, potatoes, or beets, are likewise fed at the rate of half a bushel to each cow per day, during the season of the year when these vegetables are in a proper state for use. Mr. French gives the preference to the carrot, as producing richer milk and giving the cows a better appearance. He raises both the white carrot and the yellow kinds. The white is easiest grown, and yields best, but perhaps is not quite so nutritive. In good weather, the cows are turned during the day into small enclosures, where they have shade and plenty of pure water. They are at all times well fed, and when they get so fat that they are worth more for beef than for milk, they are sold to the butcher.

Mr. French's collection of fruits is extensive. He has upwards of *two hundred* varieties of apples, and about the same number of pears. Among the latter, are most of the choice kinds which have been originated within a few years by Knight, Van Mons, and others in Europe.

Keeping hens in yards—Mr. French showed us a yard where he kept his hens. The yard may contain an eighth of an acre, and has several plum and other fruit trees in it. There is not much grass in the yard. Hens have been kept there for a few years, but they have not done very well. Besides grain, they want grass or something of that kind, and some sort of animal food. The great desire they have to get something as a substitute for grass, was strikingly shown by their having picked off and swallowed every leaf and bud of the trees, so that they were left totally destitute of foliage and nearly dead.

In addition to his farming, Mr. French carries on considerable other business. He has a mill, lately erected near his residence, from which he sells about two hundred bushels of meal, (mostly corn-meal,) per day. It is one of the most neat, convenient and perfect establishments of the kind we have ever seen.

Order and neatness are prominent characteristics in all Mr. French's arrangements and management. Seldom has it been our good fortune to find the motto, "a place for every thing, and every thing in its place," so promptly *lived up to* as here. Every implement wanted on the farm, or in the garden or orchard, is provided. They are all of the most approved kind, and when not in use, are always in the right place.

Mr. French was so kind as to accompany us on a visit to the noted granite quarries, which are in Quincy, on a part of a range of highlands called the Blue hills. A vast quantity of stone has been taken from here within the last twenty years. The first operations, we believe, were commenced by the Bunker Hill Monument Association—the stone of which that noble work is constructed, having been obtained here. A rail-road made for the purpose of conveying the stone from the quarry to tide-water, a distance of three miles, was the first undertaking of this kind commenced in the United States. Soon after its completion, we took our first rail-road ride on it, which we shall never forget. This was in 1823. The granite of which many of our large public buildings were made, the Exchange at New-York, the Custom-house at Boston, &c. was obtained at these quarries. For the custom-house, there were 26 pillars, each 32 feet in length, and four and a half feet in diameter. We were informed by Mr. Willard, the architect and superintendent of the work, that these immense blocks of stone were got out and finished here, carried on a massive frame constructed for the purpose, nearly three miles, to the water, and thence to Boston, without the slightest accident, and without defacing the pillars to the value of a cent. The quarry where these stones were obtained, was not accessible by rail-road, and the transit from the quarry to water navigation, had to be effected by teams—each pillar requiring, when placed on the frame, about fifty oxen to draw it.

The town of Quincy is likewise noted as having been the birth-place and residence of two of the Presidents of the United States—John Adams, and his son John Quincy Adams. Mr. French pointed out to us the dwellings where both of these distinguished men were born. They are simple old fashioned New-England wood houses, and are in so good a state of preservation, that they may stand long enough for several more Presidents to be born in them. The present residence of the Hon. John Quincy Adams, is not far from those just mentioned. This is also an unassuming wood building, of a style which was quite common in this part of the country seventy-five years since.

Salt for Fruit Trees.—A writer in the Boston Cultivator says a pear tree was killed by a quantity of salt having been left in an old flour barrel near the body of the tree. A heavy rain dissolved the salt and forced it into the ground among the roots. The tree soon exhibited signs of blast or decay, and on cutting off and examining the branches, he "found the leaves not only highly impregnated, but encrusted with a visible saline matter." During the summer, the tree died. Too much salt was undoubtedly the cause of the trouble. A small quantity has been recommended to be put round trees for the destruction of insects. The editor of the Boston Cultivator says two quarts is enough for a tree of "middling size."

The Ark, and Odd Fellows' Western Monthly Magazine, devoted to the cause of Odd Fellowship. From what we have seen, we think it a well managed work. It is a neatly printed octavo, published monthly at Columbus, Ohio, by John T. Blain and Alex. E. Glenn. One dollar a year in advance.

MR. COLMAN'S EUROPEAN AGRICULTURE.

The second part of this work has made its appearance. The great difficulty of procuring the information sought, in an exact and authentic form, amidst the embarrassments and inconveniences which surround a stranger, are mentioned as reasons why this portion of the work has been so long delayed. Mr. Colman says he cannot promise his third and fourth numbers at any particular time, but assures us that no unreasonable delay shall be permitted. He has yet to visit Ireland, some of the counties of Scotland, the dairy portions of England, and the flax and hop districts. In the spring he intends to visit the continent, and hopes to be able to return to this country in the autumn.

The first division of the number before us, is devoted to a continuation of remarks on the *Allotment system*. Under this head, many useful facts are given, showing the large amount of sustenance which the soil, under proper management, is capable of yielding—though, as Mr. C. says, it is probable that the "utmost productive capacity of an acre of land, in any crop has not yet been fully determined."

An instance is mentioned where a man had supported himself, wife and son, from two acres of land, for which he paid a rent of $45,60; and in the course of 7 years saved enough from the produce of his two acres to purchase two acres at $144 to $192 per acre. In another case, 6 acres under spade cultivation, is stated to have given an average of 52 bushels of wheat per acre. Another witness brought before the Parliamentary committee, testified that on the estate of Lord Howard, Barbot Hall, Yorkshire, twenty-eight bushels of wheat had been obtained from a quarter of an acre; being at the rate of 112 bushels per acre. Mr. Colman thinks, however, that the accuracy of this statement may be considered doubtful.

At Horsham in Sussex, some seed wheat, brought from Australia, was sown in rows 9 inches apart, and hills 6 inches apart, only one seed in a place. At this rate it took 9¼ lbs. seed per acre—at 63 lbs. per bushel, one bushel of seed would plant more than 6 acres. The yield of this wheat was at the rate of 71 bushels per acre. Some of the straw was 6 feet high.

A laborer, John Harris, in Sussex, produced the following crops from his allotment. "One acre and 12 rods, wheat, 53 bushels—half an acre of oats, 61 bushels—30 rods of barley, 13¼ bushels—20 rods of peas, 4½ bushels—one acre potatoes, 404 bushels—half an acre of turneps, 150 bushels—15 rods carrots, 3¼ tons—15 rods mangel-wurtzel, 3 tons. The rest of his land was occupied as green food for his cows, such as cabbages, rye, clover, tares, &c. He kept two cows. He had from 8 to 12 pigs all winter, and they consumed all his potatoes, and his turneps, mangel-wurtzel, and carrots, were given to his cows. He fattened 20 stone, or 960 lbs. pork, which he sold to the butcher. He sold 6 shoats at 3 months old, for stores, and one pig for roasting; he also sold 2 sows in pig for $12,25."

An instance is mentioned where a man in Sussex, John Piper, who occupied four acres, and kept two cows, worked one of the cows in a cart, by which he makes an annual saving of $24. Notwithstanding the cow is worked, "she makes *eight pounds* of butter a week, besides furnishing some milk for the family."

Great pains are taken in all cases to save the manure. Nothing is wasted. The animals are stall-fed, and only turned into a yard a few hours a day for exercise. Brick or stone tanks, well cemented, are sunk near the cow-stables and pig-sties, for the reception of all the liquid manure. "The contents of these tanks, on becoming full, are pumped into a small cart with a sprinkling box attached to it, like that used for watering streets in cities, and distributed over the crops, always with the greatest advantage, and with effects immediately perceptible." All which Mr. Colman saw, convinced him that there is no necessity of impoverishing the soil, but that under the right management, it will keep itself in condition, and be ever improving. The allotment system, though so evidently beneficial to the poorer classes, is strongly opposed by the farmers in general. In relation to the causes of this opposition, it is alleged that the farmers are not willing to lessen the dependance of the laborers on them for support—that the great crops obtained under such nice cultivation, contrasted with those of the farmer, tend to throw the latter into the shade, or by proving what the land is capable of producing, may induce the landlords to raise their rents. Besides, it is said the farmers are unwilling to see the laborers appear in the markets in competition with themselves. Mr. Colman observes, that whether these reasons actually exist or not, the "motives named are but too consistent with the weakness and too often unrestrained selfishness of human nature. Every man certainly has a fair right 'to live,' and the duty of every just man, is to 'let him live.' Blessed be the day, if come it ever should, when every man will learn that his own true prosperity is essentially concerned in the prosperity of his neighbor, and that no gratification on earth, to a good mind, is more delicious than that which is reflected from the happiness of another, to which he has been himself instrumental."

Some of the allotments are managed by men who act in the capacity of school-teachers, and the scholars, who are boys from eight to fourteen years of age, perform the labor of cultivating the crops—working on the farm a given number of hours each day in return for their instruction. The system works well, both for the boys, and the condition and product of the grounds. Yet Mr. Colman feels constrained to add his "strong conviction that the education of the laboring classes is not viewed with favor by those who move in a higher condition of life." "Every approach, therefore," he continues, "in this direction, is likely to be resisted; and this feeling of superiority pervades, with an almost equal intensity, every class in society, above the lowest, from the master of the household to the most menial beneath whom there is any lower depth. Education is the great leveler of all artificial distinctions, and may therefore be well looked upon with jealousy."

QUANTITY OF SEED PER ACRE.—Under this head we find also many useful facts and experiments The English farmers generally practice very thick sowing, and it is the opinion of some very judicious cultivators, that a large portion of the seed may be saved, and quite as large, if not larger crops be obtained, as there are now. Some experiments strongly support this opinion. The practice in England is to sow from 2½ to 3 bushels of wheat per acre. One man has reduced his quantity to only *three pecks* per acre. He however, drills and hand-hoes every thing, clover seed excepted. He sows one and a half bushel rye, two bushels of oats, seven pecks barley, and two bushels peas, per acre. In cultivating cabbages, he allows one to three square feet. He has produced 40 bushels wheat, 104 bushels of oats, and 40 bushels barley, to the acre. There is no doubt that by substituting the drill, for the broadcast mode of sowing, a large portion of seed might be saved.

STEEPING SEEDS.—Considerable has been said, during the past year, of a mode of steeping seeds, introduced by Mr. Campbell, of Scotland. Mr. Colman introduces one or two letters from Mr. Campbell, in reference to this subject. The steeps he employs, are sulphate, nitrate, and muriate of ammonia, nitrates of soda and potass, and combinations of these. One experiment given, is in substance, the following. Some earth was dug up 6 feet below the surface, which was totally destitute of organic matter. It was sown with seeds which had been soaked in these solutions, and produced plants with 7 or 8 stems each, while plants from the unprepared seeds produced no more than three stems each. They had not reached maturity when this statement was given, and of course, the relative yield of grain could not be told.

SPADE HUSBANDRY.—This mode of cultivation seems to be extending itself in Great Britain, and under the cheapness of hand labor which there prevails, is found fully remunerating. The principle is the same as that of subsoil plowing. The best tool for the work, is a three pronged fork, 14 inches deep, and 7½ inches wide. This works easier than a spade, and pulverizes the ground better. Though, as Mr. Colman observes, spade husbandry cannot be generally introduced into the United States with advantage, yet he says there are some cases in which it might be found profitable, such as on farms where the poor are kept. In England, no farm is ever connected with a pauper establishment, and some caution is there used, lest those establishments be found too comfortable and attractive. Mr. Colman cites the example of a man in New-England, who from only seven acres of land, sells annually $2,500 worth of produce.

Condition of Laborers.—Mr. Colman says "it is with England a question of tremendous importance, what is to become of the vast accumulations of people, which are continually increasing here at the rate of from seven hundred to a thousand per day. * * * The subject, it appears to me, and perhaps wholly from my being unaccustomed to a condition of things in any degree resembling it, is daily assuming a fearful aspect; I do not mean of danger to the government, for the government seems never to have been stronger, but fearful in its bearings upon the public peace, the public morals, the security of property, and the state of crime." Mr. C. does not pretend to offer a remedy for this state of things, but seems to think the allotment system the best which has yet been devised, as it is, at all events, capable of improving, to some extent, the laborer's condition.

Progress of Agriculture.—Under this head, Mr. Colman gives an interesting description of the great improvements which have been made and are still going forward in England, by means of draining, irrigation, &c. Of the *live stock*, he speaks in the highest terms, but does not go minutely into this subject, intending to take it up by itself hereafter. He speaks not of the cattle as seen at the cattle shows, but as they are seen every Monday in the Smithfield market, and at the other smaller markets and fairs in various parts of the kingdom. He says—"here are cattle and sheep of several distinct breeds, and all of remarkable excellence of their kind; I do not say perfect, for that, in almost all cases, would be assuming too much, but leaving very little to be desired beyond what has been attained. Their condition and form, their symmetry, their fatness, are admirable; and each breed is seen retaining its distinct properties; and what is most remarkable, showing how much can be done by human art and skill, in improving the animal form and condition, and bringing it to a desired model."

Application of Steam to Agriculture.—The application of steam to the plow, so far as Mr. Colman has heard, has not been attended with much success. Steam engines are extensively used in some sections, for threshing grain. In the Lothians of Scotland, it is said that the use of steam power for this and other purposes, saves one quarter of the horse power required on the farm. A very important item, as the keeping of horse teams is the greatest single source of expense to the British farmer. A six horse steam power, usually threshes from 30 to 40 bushels of grain per hour. Mr. C. suggests that in the prairie districts of our western country, wherever coal can be had, steam power might be advantageously used for many farm purposes.

A very important use of steam power in Britain, is the conveying of live stock to market by means of steamboats and rail-roads. Cattle are brought in immense numbers to Smithfield market by these conveyances, without loss of condition—sometimes the distance of seven hundred miles. Mr. C. thinks no parties have suffered injury from rail-roads. Contrary as it may be to all theories, the farmer near market is not injured, though the distant one is largely benefitted.

The Increase of Agricultural Products in Britain, is shown in a very striking light. The average importation of wheat into England from 1801 to 1810, when the population was set down at 17,442,911, would have given a fraction over one peck to each person. From 1811 to 1820, when the population was 19,870,589, the quantity imported would have given less than a gallon and a half to each person. From 1831 to 1835, the population was 25,000,000, and the quantity imported would have given to each person one gallon. Taking the three years 1833-4-5, the importation would have allowed only one pint and one fifth to each consumer. This will give some idea of the immense production and resources of that little island. Under a fast increasing population, as before mentioned, the dependance on foreign supply, has been constantly growing less.

Among the means of improvement, Mr. Colman remarks that the Royal Agricultural Society is an efficient organ. It was instituted in 1837. It has begun the establishment of an agricultural library and museum, the object of which is to exhibit specimens of agricultural productions which are capable of preservation, seeds, plants, grasses, samples of wool, mineral manures, models and drawings of implements, &c. &c. Mr. Colman remarks that he has often urged the establishment of agricultural museums in the United States, especially in the capitals of the States, where the different legislatures assemble. The suggestion is a valuable one. Cannot our New-York State Ag. Society profit by it?

The management of the Royal Ag. Society at its exhibitions, is spoken of as admirable in many respects. Mr. C. says—"every possible effort is made to secure an impartial decision among the competitors; for besides that they are not suffered by their presence to influence the examiners, the examiners themselves are selected from among persons as far as possible disinterested, and not likely to be influenced. They are chosen, likewise, with a special reference to their characters and qualifications, to the nature of the subjects submitted, and every pains is taken in this way, to secure the greatest aptness and talents. The name of the competitor is not given if it can be avoided, but only the number of the article presented. The rules of admission and competition, are stringent and absolute, and no exceptions are on any account allowed."

The Highland Agricultural Society of Scotland, and the Royal Ag. Society of Ireland, are both spoken of as excellent institutions, similar in their objects and management to the Royal Ag. Society of England.

Model Farms.—Mr. Colman notices some of these. He has visited that at Glasnevin, near Dublin, and furnishes some highly interesting particulars in regard to it. In connexion with this establishment there is also an agricultural school, where young men receive such an education, theoretical and practical, as fits them to pursue the occupation of farming to the best advantage. The young men work in the field about 6 hours a day. Mr. C. had the gratification of listening to an examination of fourteen of these young men, brought out of the field from their labor, and declares that "it was eminently successful, and in the highest degree creditable both to master and pupil." The products of this model farm, as given by the superintendant and teacher, are quite remarkable. Seven hundred and twenty bushels of potatoes per acre, are given as an average crop. The superintendent states that the largest crop he ever obtained, was in a field where the sets were three feet apart each way. Medium sized potatoes, planted whole, are preferred to cut ones. The experiment had been made, and the difference between whole potatoes and cuttings was marked and obvious in favor of the former. The cattle on the farm are *soiled*. Italian rye grass is mentioned as one of the best articles for feeding. It is cut four times in a season, yielding at each cutting a good crop. Lucerne is sometimes cut five times. The Scotch potatoe oat, and the Hopetown oat, are the varieties of this grain here raised. They yield an average of 80 bushels per acre, and weigh about 44 lbs. per bushel.

The typographical execution of the second Part of Mr. Colman's work, is very perfect, and though the matter is somewhat miscellaneous, it is of a nature calculated to interest not only the agricultural, but general reader. The style is exceedingly chaste and agreeable, and a most beautiful moral tone pervades the whole. His remarks on the condition of the laboring classes in England, show how vastly superior are the advantages of that class in this country.

American Masonic Register.—This work has just commenced its sixth volume. The form has been changed from a quarto to a royal octavo of sixteen pages, each number. It is neatly printed, and is well filled with matter which we doubt not is highly interesting to the "brethren of the mystic tie." Published monthly, at Albany, by L. G. Hoffman. One dollar a year in advance.

PRODUCTS OF THE YEAR 1844.

Wheat.—This great staple product, has yielded variously in different sections of the country; but in a territory embracing so many degrees of latitude, and possessing so varied a climate, it can hardly be expected that the same crop will succeed equally well in all parts, the same season. In Maine, New-Hampshire, and Vermont, Spring-wheat is generally cultivated, as it is considered better adapted to the climate than the winter wheat. The worm in the head (*Cecidomyia tritici*,) improperly called weevil, has prevailed there to such an extent for several years, that this crop has been considered quite uncertain. The insect has, however, been less destructive during the two last years, and from all the accounts we have seen, the yield of wheat in that section has been generally good the past season. In the eastern part of this State, (New-York,) the insect above mentioned injured the winter wheat to some extent, but in the Genesee Valley and the great wheat districts of the State, the crop was good. In northern Indiana, northern Illinois, Michigan and Wisconsin, the *fly* (*Cecidomyia destructor*,) did much injury to the crop—in many instances occasioning almost a total failure—and we are informed that this enemy has already made its appearance in great force in the early fall-sown wheat. In the southerly part of Ohio, Indiana and Illinois, wheat in many cases did not fill well. The growth of straw was very great, but the prevalence of warm, wet weather occasioned much of it to fall down or rust. This was quite generally the case on rich land. On the uplands of not so rich a quality, the crop was better and the grain plumper and heavier. Taking the western States together, however, we think the wheat crop did not give an average yield per acre, though from the large quantity of ground sown, the aggregate product was not probably less than in any previous year. So of the country at large; there was, probably, as much wheat produced the past season as in any former one.

Indian Corn.—Although this crop did not appear so promising in the fore part of the season, owing to the coldness and backwardness of the spring, yet the mild and favorable weather of the latter part of the summer so well matured the plant, that the yield has generally been an uncommonly good one. In the northern and eastern States, as well as in Canada, we feel justified in stating, that so good a crop has not been generally got for several years. This is a crop of very great consequence to all sections of the country, and for *home consumption*, is undoubtedly of more value, every thing considered, than any other kind of grain. Well has it been said by a distinguished agricultural writer, that it is "*meal, meadow, and manure.*" The grain affords a most wholesome and nutritive food for man and beast, the stalk and leaf afford, when properly cured, a most excellent fodder for cattle; in fact, from no grain crop can so great an amount of sustenance be raised per acre, and from none can so good a return be given to the land in the shape of manure.

Oats.—This, as a grain crop, may be considered as entitled to rank next to the preceding in importance. As food for horses, especially those which are employed in quick work, oats are preferable to any other grain, and constitute the most convenient food which can be given. The yield this year is generally good, in most sections.

Rye and Barley.—These are less cultivated than any other grain. In some neighborhoods, barley might be cultivated more largely to good advantage. On soils to which it is well adapted, it will produce from forty to fifty bushels per acre. The straw is excellent fodder for sheep and cattle.

Hay.—In the easterly part of Massachusetts, and some other sections, we have complaints that the crop of hay was much cut off by drouth, but taking the country together, we think the crop was at least an average one, though the quality may not be so good.

Potatoes.—This crop has suffered much in many districts from the epidemic which seems to be overspreading this country, as well as the old world. Considerable alarm is justly excited from the prevalence of this disease. To the northern portion of this country, as well as to a large portion of Europe, the potatoe crop cannot be considered of less value than any other. It has become an important article of human sustenance among all classes. By the rich it is prized as a wholesome and palatable article of diet, while to the poor it is indispensible—affording more sustenance in proportion to the expense of production, or to a given extent of land, than any other crop. Where it has not been affected by disease, the crop of the past season, has been generally a good one.

Fruit.—We do not recollect any year in which the different fruits have been so abundant and of so fine a quality, as the last. The various stone fruits, particularly plums, have been uncommonly plenty and good. This may be in a great degree owing to the disappearence of the curculio, which for several years has been so deadly an enemy to this description of fruits. Apples are generally plenty. From Maine and New-Hampshire, we hear that best kinds are almost a drug. We should suppose they might be exported to good advantage. We believe the apples of that region are generally found to keep better than most others, and are well liked in the southern markets. What better article can the farmers of Maine turn their attention to, than good winter apples for exportation?

THE POTATOE PLAGUE.

The disease which has largely affected the potatoe crop in Europe and America during the last two or three years, (though in this country chiefly during the *last* season,) is exciting anxious inquiry among the community, and close observation among scientific men. Mr. Teschmacher of Boston has published the result of his observations; and we now add the opinions of another gentleman of New-England, Prof. Charles T. Jackson, who left the following hasty note in reply to inquiries made while he was passing through this city:

Albany, Sept. 23, 1844.

Dear Sir—While passing through the western part of New-York, my attention was called to a peculiar disease, which affects the potatoe plant this year, and having heard something about it in Michigan and Wisconsin, I was anxious to examine the first potatoe field where the disease could be witnessed. This I had an opportunity of doing in or near the village of Trenton, N. Y., where a very intelligent farmer exhibited to me the ravages which had been effected by it in his fields. The disease was first indicated by numerous small drops of honey dew on the stems of the potatoe plant, about a month ago. Then followed a rust, with death of the stems, and the disease was found to extend along the bark to the potatoe tuber, which is a subterranean stem, and not a root as some have supposed. I observed that the potatoe began to rot next to the skin, and the disease penetrated inward in many cases to the depth of half an inch. No fruit or potatoe balls formed on any of the diseased plants, and the vines looked parched and blackened as if they had been killed by frost.

I learned that where lime had been used in the proportion of about a table spoonful to the hill, that there no disease has appeared. Also, that after vines had become affected, the best remedy was to cut the stems off close to the ground. The good farmer in Trenton said that his crop had suffered very severely; and that where he had formerly raised average crops of 300 bushels to the acre, he shall this year realize but 50 bushels. The German population who depend on digging potatoes on shares, will severely suffer this season. I would invite you, sir, to inquire into the origin of the honey dew. I find various theories offered, but none of them are satisfactory. I have heard the disease of the potatoe ascribed to the age of the plant, reproduced continually from tubers, but this cannot be the fact, for no such distinction can be found in the potatoes of various ages and kinds. The Yellow, Red, Pink Eye and Chenangoes, have all equally suffered this year. No peculiarities of soils or of manures, appear to afford any explanation, for the plant appears to have been affected in one as much as another.

The potatoe crop in Wisconsin, as I learned from a farmer just from there, has suffered severely, as have those of Illinois and Michigan. C. T. Jackson.

THE PEA AND THE BUG.

A gentleman in Pennsylvania sent some peas, supposed to be wild, to J. S. Skinner, Esq., who forwarded them to Dr. G. B. Smith of Baltimore, for inspection. Dr. S., in a letter to Mr. Skinner, says:—"I have no doubt the pea you kindly sent me, is a variety of the common garden pea, acclimated, if it be acclimated, accidentally, by the seed being distributed by birds, &c. The bug is the genuine 'pea-bug,' *Bruchus pisi*, of Linnæus, and is fully described by Harris, beginning at the bottom of page 54 of his Treatise on Insects. I shall have the peas carefully raised next spring by some careful hand. Its appearance is the same every way, as that of the common brown pea that we used to have in the north when I was a boy. It is a tolerable good pea, nothing very extraordinary one way or the other.

"You hatched the bugs by wearing the peas in your breeches pocket. You can hatch the bugs out of any peas that were grown in this country, in the same way. We call it a bug—it is a *weevil*; what we call weevils, however, are not weevils—look into Harris. Is it not curious, that the pea-bug or pea weevil, does not affect peas grown in Europe? They have not that insect there. It does not generally hurt the germinating principle of the pea."

SALT AS A FERTILIZER.

Statements in regard to the action of salt, when applied to the soil, are quite various, and sometimes contradictory. Some accounts would lead us to suppose that its operation is highly beneficial, while others seem to show that its effects have been of an opposite nature.

In a paper read before the N. Y. Farmer's Club, by F. Mortimer Butler, Esq., a copy of which we find in the Farmer and Mechanic, is some interesting suggestions which tend to reconcile former discrepancies, and perhaps show the true theory on this subject.

Mr. Butler entertains the idea, that for salt to act beneficially, it is necessary that it should be combined with lime, or calcareous earth—that "whenever salt and lime have been used together, the effect has been good: while on the other hand, where either is used alone, there is need of some other governing material, or the effect is not good." Mr. Butler supports this conclusion by reasoning on the chemical properties of salt and lime—by reference to several writers who speak of the beneficial effects of the two substances when mixed together—and by some facts which have fallen under his own observation. From an investigation of this subject, he was prompted "to use salt upon a field which had been rendered caustic by an injudicious application of lime. Buckwheat, sown upon this field, had its roots so scorched that the three acres yielded but four bushels of seed." Grass seeds were sown three several times on the field, but, he observes, "did not take well, excepting in one spot, where a single load of yard manure had been strewn; this governed the lime; the Timothy grass came in, and grew full five feet high."

"At this period," (says Mr. Butler,) "coming into charge of the field, I sowed it with about one bushel of fine salt to the acre; in less than two weeks time the clover and timothy came in plentifully, and did well, field pastured."

In conclusion, Mr. Butler says—"the agricultural facts that have come to my knowledge have shown me, that salt has succeeded best upon lands naturally calcareous, lands previously limed, or upon lands limed at the time of its application. Salt, even when accompanied with lime or the carbonate of lime, must not be depended upon for a crop in the absence of a due supply of organic matter. Salt is but a corrective when decomposed in the earth, it then acts as an alkali, or in other words, the beneficial results that follow its decomposition, depend upon the action that the liberated alkali (soda) exercises upon the organic matter of the soil."

Envy is a turnkey by birth, and an executioner by profession.

NATURE OF FOOD, AND THE RELATIVE VALUE OF VEGETABLES AS FOOD.

It seems to be generally conceded at the present time, that the principal value of any food for the purpose of nutrition, is depending on the azote or nitrogen it contains. This, Prof. Liebig, Mr. Madden, Prof. Johnston, and others, in the main agree on this point, as do Boussingault and Bechsteim. Prof. Liebig says, "the substances of which the food of man is composed, may be divided into two classes; into *nitrogenized* and *non-nitrogenized*. The former are capable of conversion into blood, the latter incapable of this transformation. The former may be called the *elements of nutrition*, the latter, *elements of respiration*." Parts of the former are derived from vegetables, and are as follows: vegetable fibrine, vegetable albumen, and vegetable casine; to these are to be added animal flesh, and animal blood. Parts of the latter, or the elements of respiration, are derived from both animals and vegetables, and are as follows: fat, starch, gum, cane sugar, grape sugar, sugar of milk, and some few other products. Liebig has demonstrated that the nitrogenized constituents of vegetable food, have a composition identical with that of the constituents of the blood; and that no nitrogenized compound, the composition of which is different from fibrine, albumen, and caseine, can support the vital process of animals. As a matter of practical utility to every farmer who keeps animals, we give from Boussingault, the following table, exhibiting the relative value of different kinds of food calculated on the amount of nitrogen they contain, or in other words, on the quantity of vegetable fibrine, albumen, and caseine they will furnish to the circulation.

Article.	Am't per cent of solid matter.	Am't per cent of nitrogen,	Val. compar'd with hay as 100.
Hay from Red clover in flower,	83.4	1.76	60
Hay of Vetches, - - - - - -	89.	1.41	74
Lucern Hay, - - - - - - - -	83.4	1.35	75
Common Hay, - - - - - - -	86.8	1.04	100
Green Clover, - - - - - - -		.50	208
Potatoes, - - - - - - - - -	7.7	.37	281
Green Lucerne, - - - - - -		.30	347
Carrot, - - - - - - - - - -	12.4	.30	
Wheat Straw, - - - - - - -	80.7	.20	520
Barley Straw, - - - - - - -	89.	.20	
Oat Straw, - - - - - - - -	79.	.19	574
Rye Straw, - - - - - - - -	87.8	.17	611
Turneps, - - - - - - - - -	8.2	.17	613
Beans, - - - - - - - - - -	92.5	5.11	20
Vetches, - - - - - - - - -	85.4	4.37	24
Kidney Beans, - - - - - -	96.	4.08	25
Lentils, - - - - - - - - -	91.	4.00	26
Yellow Peas, - - - - - - -	88.3	3,40	31
Wheat Flour, - - - - - - -	87.7	2.27	46
Wheat Grain, - - - - - - -	89.5	2.13	49
Rye, - - - - - - - - - - -	89.	2.04	51
Oats, - - - - - - - - - -	87.6	1.95	54
Barley Flour, - - - - - - -	87.	1.90	55
Barlry Grain, - - - - - - -	86.8	1.76	59

In this table Boussingault has taken good common hay at 100 as the standard. Thus 60 lbs. of good hay from red clover in flower, is equal in nutriment to 100 lbs. of common hay, 281 of potatoes, or 520 of wheat or barley straw. The leguminous plants, such as the beans, vetches, lentils and peas, afford the most nitrogen, and every farmer knows they rank deservedly high in the scale of nutrition; still, as they are destitute, or nearly so, of the phosphates required for the formation of bone, experience proves they are the most useful when fed in connection with some of the cerealia, or grains. We believe that most farmers will find that their experience in feeding animals, agrees very well with the estimates of the table. Thus in soiling, 208 lbs. of green clover, or 347 of green lucerne will be found equal to 100 lbs. of hay, a result which few will doubt who have made experiments in this mode of feeding. 46 lbs. of wheat flour are equal in nutriment to 281 of potatoes; but the animal would fare better on the potatoes than the flour, as there would be more bulk for the proper distention of the stomach.

The Gavel, devoted to Odd Fellowship and General Literature. Three numbers of this work have been issued. It is a well filled octavo of twenty-eight pages. Edited by Rev. C. C. Burr. Published monthly at Albany, by John Tanner, at one dollar a year in advance.

DISEASE IN POTATOES.

We see by the N. E. Farmer that Mr. Teschemacher continues his experiments with a view to ascertain the cause of the potatoe-malady. We have before stated that he has discovered a fungus attached to the potatoe. He is now of the opinion that the fungus is the cause of the disease. His reasons for this opinion are, that "the fungus appears on the skin of the potatoe, and can be traced by its dark color penetrating from the outside by degrees into the sound inside, the outside fungus developing itself first, and producing slime and rottenness, while the inside yet remains firm and sound. If the fungus resulted from the potatoes first becoming rotten and thus forming favorable circumstances for its vegetation, then the presumption is that we should sometimes, although perhaps rarely, find parts of the potatoe rotten without the fungus, which, I, at least, have not seen." Mr. T. observes that he has often seen heaps of rotten potatoes, without having noticed this peculiar fungus, which cannot be mistaken on account of its peculiar smell. He thinks if it was a disease merely affecting the rotten potatoe, it would long ago have been observed. In regard to the propagation of this fungus, Mr. Teschmacher is induced to think, from the fact that the tops of potatoes have generally died down and thus indicated the disease, that it has been propagated by the seeds or spores floating in the atmosphere and attaching themselves to the stalk of the potatoe, on that vegetating, and extending downward to the point of junction with the tuber, there producing decay and the death of the upper part of the vegetable, and afterwards the decomposition of the tuber.

In regard to the idea that *insects* have caused the defect in potatoes, Mr. Teschmacher observes, first, that the worms which have been found in them "are the same which are found in all rotten potatoes from whatever cause the decay may arise," and second that "the potatoe decays previous to the worms appearing, for the worms are never found in the sound part of the potatoe eating their way in or depositing their eggs, and it is only in the most rotten part that the worms exist, after the fungus has caused this decay."

HONEY DEW.—We would call attention to the remarks of Dr. JACKSON and Mr. BOYD, in this number, relative to the defect in potatoes having been occasioned by "honey dew." The circumstance mentioned by Mr. Boyd, of the potatoes, over which a carpet was spread, remaining green and healthy, while the remainder of the field was destroyed or much injured, is worthy of particular remark.

Respecting the nature or cause of "honey dew," we believe neither philosophers nor agriculturists are entirely agreed. It has been said that this substance is the exudations of insects called *Aphides*, or plant lice. That the sweet substance which is known to exude from these insects has been sometimes called "honey dew," is no doubt a fact; but that the "honey dew" is always derived from the insects, we cannot believe.. Fields of rye and other grain, are sometimes struck with the "honey dew," when no signs of insects can be discovered.

Several theories have formerly prevailed on this subject, but so far as we are acquainted, the most generally received one at the present time is, that a peculiar state of the atmosphere occasions the bursting of the sap-vessels of the plant, by which the sap is exuded to the outside of the stalk and leaf. The sap there becoming acrid together with the derangement in the functions of the plant, is supposed to occasion the *blight* or *rust* in grain. And hence the prevalent idea that a "honey dew" always precedes blight.

We are not prepared to vouch for the correctness of the bursting of sap vessels, &c.—our own opinion is that the matter is not yet fully understood, and we would recommend continued investigation and observation, and have no doubt additional light will be obtained.

The communication of the Rev. Mr. Abbott, in a late number of the N. E. Farmer, seems to support the theory mentioned by Dr. Jackson and Mr. Boyd. Mr. Abbott thinks that the wet and warm weather produced an overflow of sap. He found the stalks and leaves of oats were burst open, and a gummy substance had oozed out. He thinks a similar effect was produced on the potatoes, and that the disease which has affected them is "similar to rust or blight in grain."

Since writing the above we have met with the following explanation of *mildew* and *honey-dew*, in a report of a lecture delivered by Mr. Heywood before a Farmer's Club in England:—"The former he stated to be caused by the rapid evaporation of water from the leaves of plants after a wet spring, when the salts the water contained were left on the surface of such plants as were already nearly matured, while others which were in a growing state, appropriated them to their uses; hence this effect on late sweedes and not on early ones. Honey-dew was caused by an excess of carbon in the plant, which could only occur in dry weather, when the other ingredients could not be furnished for it to combine with."

COMPOUND FOR FATTENING CATTLE.

Flax-seed and oil-cake have long been considered very valuable for fattening cattle. The English farmers prize these articles highly, and great quantities are imported and used in the British Islands. Oil-cake is even carried from this country to fatten English beef. One great advantage which the English farmer thinks he derives from the use of it, is the improved quantity of the manure, and this is considered of such consequence as to balance a large portion of the expense of the cake. Flax-seed or linseed *oil*, has likewise been sometimes used, mixed with bran, &c., for fattening animals, and the effect has been a very rapid gain. We have occasionally used flax-seed for cattle with good advantage, by boiling it and mixing with meal, cut hay, &c. We recollect the practice of one man in particular, who, more than twenty years ago, was considered to have great success in fattening cattle. He boiled a quantity of ground flax-seed, or instead of that, pulverized oil-cake, with potatoes, and scalded in meal, (either from barley or corn,) in such quantity that when the mixture was cold it could be cut out in pieces, and in that shape was given to the cattle while they were in their stalls.

In the third volume of the American Farmer, is an article by Nathan Landon, of Litchfield, Conn., on the subject of feeding cattle with cut straw, oil-cake and flax-seed. He says he fattened an ox and a three year old heifer, with less expense, even, than that of common keeping, by the following process. He says—"I boiled about two quarts of flax-seed and sprinkled on to cut straw, which had been previously scalded and seasoned with salt, together with some oil-cake and oat-meal, working them together in a tub with a short pitch fork, till the whole became an oily mush. I fattened the heifer first—she was of ordinary size, and in good order to winter. I gave her about three pecks, [of the mixture] which she ate voraciously, and in the course of four days, when the seed was gone, she was visibly altered. I fed her regularly in that way about two months, in which time she had eaten about one bushel of boiled flax-seed, with the other ingredients in proportion,—when she was butchered, she weighed 584 pounds, 84 pounds of which was tallow. She would not have sold before fattening for more than $16. I sold two quarters of her beef for $18,13. She cost me not more than $10, exclusive of the hay and straw she ate, which was chiefly scalded as above. On the first of February I began with the ox. I fed him about three months, but not altogether so well as I did the heifer. He digested about one pint of boiled flax-seed a day, prepared as above, which I suppose formed half the fat in these two cattle. The ox was short, measured [girthed] seven feet two inches, and when killed, weighed 1082 pounds, and had 182 pounds of tallow. He cost me while fattening, twenty-five cents a day; he had previously cost me thirty-five cents. My nett gain in fattening these two cattle, was more than all I have cleared before in fattening oxen and cows in fifteen years; and this is owing, I think, chiefly to the use of flax-seed. I never fattened cattle that appeared so calm, so hearty, and digested all their food with so much natural ease and regularity as these. I kept my cows in the same way in the month of March for one-third the expense of hay. It makes excellent milk and butter."

We have lately seen frequent recommendations of an article used in England for fattening cattle, called "Warnes' Compound." Sir Charles Burrell, in a letter published in the Farmers' Journal, gives an account of the mode of making this celebrated compound, from which we gather the following. It is said to be a very economical and efficacious food.

1st. Let a quantity of linseed be reduced to fine meal, that is to say, let every seed be thoroughly broken. 2d. Put about 156 pounds of water into a copper, and let it boil. 3d. Stir into the water quickly 2 lbs. of the linseed meal, and let it boil for about five minutes. 4th. Let 63 lbs. of barley or bean meal be sprinkled upon the boiling mucilage by the hand of one person, while another as rapidly as possible stirs and works it in. The whole will now have assumed the form of a thick mess or pudding. The fire should be put out, and in a short time the food may be given to the cattle. When cold, the compound should be perfectly stiff. Many farmers put it into moulds like those used for bricks while hot. The compound is generally given in small quantities at first, and increased at pleasure—for the first week, 5 lbs. or 7lbs. per day, when according to the size of the animal and quality of other food given, the quantity may be increased to 14 lbs, 21 lbs, or 28 lbs per day. To make cattle compound with potatoes or white carrots, nothing more is required than, after having been properly steamed or boiled, to remove them from the vessels, *as hot as possible, into a trough*, then sprinkle some linseed meal upon them, and knead the whole into a mass with the rammer. The compound may be put hot into the moulds and made into cakes, or used from the trough. Less labor will be required, if the roots are removed from the cooking vessels in small quantities, and incorporated with the meal. The proportions must be left to circumstances and to the cost at which cattle are intended to be fed. The effect of giving only one pound of linseed meal per day to a bullock, when incorporated with potatoes or carrots, will soon become visible; but if a pound or two more were added, the animal would fatten at a rate which those alone who watched the proceedings could believe.

CURING MEAT.

The difference between doing a thing right, or doing it wrong, is perhaps nowhere more obviously shown than in curing salted provisions. There are few people who do not relish a slice of nice ham, or corned beef; and many a good housewife can speak of the various advantages, in the mysteries of cookery, which belong to well-cured, clear, pickled pork. It is a very easy matter to have all these things of good quality, yet it is too often the case that we find them put up or managed in so careless a manner, that they are either actually unwholsome, or in such condition that they can only be eaten by persons of the strongest appetites.

Hams.—The following mode of preparing hams, we have practiced for several years, and can with confidence recommend it to others.

For every one hundred pounds of meat, take five pints of good molasses, (or five pounds brown sugar,) five ounces saltpetre, and eight pounds rock salt—add three gallons of water, and boil the ingredients over a gentle fire, skimming off the froth or scum as it rises. Continue the boiling till the salt, &c. is dissolved. Have the hams nicely cut and trimmed, packed in casks with the shank end down, as the pickle will thus strike in better. When the pickle, prepared as above, is sufficiently cool, pour it over the hams. They may lie in pickle from two to six weeks, according to the size of the pieces, or the state of the weather—more time being required in cold, than in warm weather. Beef or mutton-hams, intended for smoking and drying, may be cured according to this mode, and will be found excellent.

Much of the goodness of hams depends on smoking. They should be hung at such a distance from the fire, as not to be heated. They should also be hung up with the shank end downward, as this will prevent the escape of their juices by dripping. Small hams, wanted for immediate use, will answer with two weeks' smoking, but larger ones, and those wanted for keeping, should be smoked four weeks or more.

Different articles are used for smoking. Perhaps sawdust from hard wood, where it can be conveniently had, is on the whole to be preferred. Corncobs are first rate, and are said by some to make the "sweetest" smoke of anything. Chips of maple and hickory, or the small twigs and branches of those kinds of wood, do well.

Hams are sometimes cured by adding pyroligneous acid to the pickle, but having had no experience with this mode, we cannot speak of its advantages. Another mode, which we have seen practiced, is to *smoke the barrels or casks* in which the hams are to be kept, and let them remain in pickle till wanted—only taking them out a sufficiently long time before using, to allow them to drain properly. The barrels are smoked by being placed over small fires of chips, cobs, &c. for several hours. The essence of smoke which is thus imbibed by the barrel, is imparted to the pickle and thence to the meat.

Beef.—The best pieces for corning, are the plates, ribs and briskets. Pack the pieces in casks, giving a very slight sprinkling of salt between each piece. Then cover the meat with a pickle made by boiling together, in 4 gallons of water, 8 lbs. salt, 3 lbs. brown sugar, 3 oz. saltpetre, 1 oz. pearlash, for 100 lbs. meat. Keep a heavy flat stone on the meat, that it may be well immersed in the pickle. Beef packed in this manner will keep a year, and will rather improve than grow worse.

Another mode recommended by a gentleman of long experience in the packing of beef and pork, is the following: For 100 lbs. beef take 4 lbs. brown sugar, 4 oz. saltpetre, and 4 quarts of fine Liverpool salt—mix all intimately together, and in packing, sprinkle it evenly over the meat. Add no pickle, the dissolving of the salt, &c. with the juices of the meat, will be sufficient. Keep the meat closely pressed together by a good weight. We are assured that this is the best mode of packing beef that is intended for keeping over the summer, and that the quality of the meat is unexceptionably fine.

Clear pork.—For this we prefer clear salt and water. After having divided the hog, take off the shoulders and hams, and all the lean meat, cut the sides crosswise into strips, four or five inches wide, and after covering the bottom of the cask with salt, pack the strips in layers set edgewise as closely as possible round the cask, with plenty of salt between each layer. When the cask is full and has settled for a day or two, put in cold water enough to fairly cover the pork. There is no danger of using too much salt for clear pork—no more will be taken up by the meat than is needed, and the remainder is safely left and may be used in packing a new parcel.

Beef and Pork for the English Markets.—A great obstacle to the introduction of our beef and pork into England, has formerly been the bad condition in which these articles have been put up. It appears, however, from a table of exports from the port of New-York, that there has been a considerable increase in the exportation of both beef and pork during the present year—there having been sent out from that port alone, 30,015 bbls. more of beef, and 37,903 bbls. more of pork, than in 1843. This increase of exports is thought to be mainly attributable to the introduction of our provisions in England. The improved condition of our beef in particular, it is said, has caused it to be rapidly gaining favor with the English consumer. And as we pay more attention to packing and become better acquainted with the English mode, the trade will no doubt become every year of more consequence. Our *Cheese* is also becoming an article of considerable importance for exportation to England, and when our dairymen can be induced to pay that attention to its manufacture, which is necessary to adapt it to the English market, the exports will probably greatly increase.

Connecticut Farmer.—A new series of this paper, published at New-Haven, was commenced on the 1st Nov. It it well printed, on new type, and published semi-monthly, at $1.00 a year, by J. M. Patten.

Bury not your faculties in the sepulchre of idleness.

INFLUENCE OF WATER ON THE TEMPERATURE OF SOILS.

It is well known that a really wet soil, as well as a very dry one, is unproductive. The various operations of an excess of water in checking vegetation, are not all, perhaps, easily told, but there is no doubt that one of the most important of its injurious effects, is the low temperature which it induces in the soil. It is very common, when speaking of soils, to couple the term *wet* with *cold*, as such a soil is "wet and cold." Now the popular idea expressed in this case, is undoubtedly correct—that is, a wet soil, is of course a cold one. Several reasons why this is so, might be given; one of which is, that the degree of temperature which would otherwise communicate heat to the soil, produces evaporation, by which the heat is abstracted from the soil and dissipated in the air. There are other causes for the deleterious action of an excess of water in soils, but whatever they may be, it will be readily admitted that a removal of the evil by thorough draining, is expedient. In an essay by Josiah Parkes, published in the Journal of the Royal Agricultural Society, we find the philosophy of this subject illustrated in a manner more clear and satisfactory, than we have before met with. Mr. Parkes observes—

"As heat is generally considered to be an imponderable body, we are without the means of ascertaining directly by weight or measure, the quantity of heat absorbed from soil by the evaporation of water. The following illustration of it will, however, be familiar enough to the mind of the engineer, and will also, I think, enable intelligent farmers to form an idea of its immense amount."

"If we suppose the rain falling on the surface of an acre of land in a year to be 30 inches in perpendicular depth, it would amount to 108,900 cubic feet—3,038 tons; which, spread over a twelve-month, gives an average of 298 cubic feet—8¼ tons, or 18,647 lbs. per diem. This weight of water would require for its diurnal evaporation—supposing it were all carried off by that means—the combustion of 24 cwt. of coals, as ordinarily used under the steam boiler, or *one cwt. per hour per acre*, throughout the year! We thus obtain some idea of the abstraction of heat from land under the circumstances of perfect aqueous repletion and stagnation, and there are too many soils approaching them. We may also imagine the depression of the terrestrial temperature consequent on the abstraction of so much heat from the mass of the soil—a depression which must ever be in proportion to the excess of water present in the soil, over and above the due complement required for the supply of vegetation. Soils in that state must necessarily be very cold in the spring months, and much colder at the time of the commencement of vegetation, and throughout the summer, than well drained or naturally drier lands. If we knew the capacity for heat of any given soil, and the weight of water mixed with it in excess, it would be easy to determine, very nearly, the depression of temperature caused by its evaporation. We know that the heat of a pound of water in its gaseous state, that is steam, would keep down the temperature of 1,000 lbs. of earth one degree; of 500 lbs. two degrees, and so on."

"Secondly, excess of humidity obstructs the absorption of heat by the solid matter of the soil. Water in a quiescent state, is one of the worst conductors of heat with which we are acquainted. If it be warmed on the surface—and it derives, when mixed with soil, nearly all its heat from the sun's rays—water transmits little or no heat downwards."

"If a mass of water be heated from below, the whole quickly attains an uniform temperature by reason of motion excited amongst its particles. The lowest stratum, when heated, becomes of less specific gravity than that resting upon it, and the heavier superincumbent portions descend and push that which has been warmed, upwards. Much of the heat of the sun's rays, is, therefore prevented by excess of water from entering into, and being transmitted through, the mass of the soil."

"Thirdly, water is a powerful radiator of heat, that is it cools quickly. All bodies, whether fluid or solid, possess peculiar powers of emitting or radiating heat, and water is esteemed by the late Professor Leslie—in which opinion he has been joined by other philosophers—to stand at the head of radiating substances."

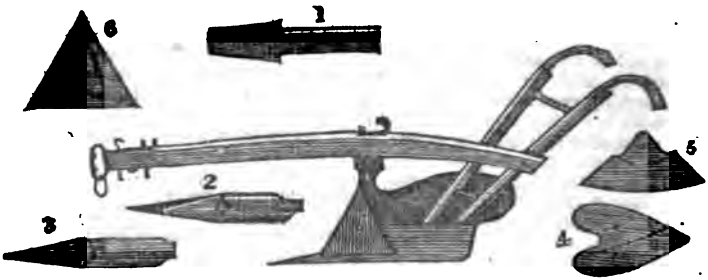
"The phenomena of the production of cold by radiation and evaporation, are essentially exemplified by the well known experiment of exposing water, warm enough to give off visible vapor, in one saucer, and an equal bulk drawn from a well in another saucer. The former on a sharp frosty morning, will be found to exhibit soonest. Boiling water thrown on the ground, will freeze sooner than cold water. The cooling powers of evaporation and radiation combined, and if radiation chiefly, or solely, are represented in this experiment by the order of congelation in the two vessels in time; but the difference in the quantity of heat omitted from each of them, is immense, as appears from what is stated above with reference to the constituent heat of vapor."

"Fourthly, as the temperature of water diminishes during the night, or in the day time, according to the varying conditions of the atmosphere, by radiating its heat to the heavens, its specific gravity increases; and the superficial stratum which is first cooled, immediately descends by reason of its augmented density. This film of cooled and heavier water is as quickly replaced by relatively warmer and lighter portions which become cooled in turn and successively sink. Water, therefore, though a non-conductor of heat downwards, when warmed on the surface, becomes a ready vehicle of cold in that direction, when cooled on the surface; and this cooling process may even continue, under fitting circumstances, until the whole of a given mass is reduced to the low temperature of 42 deg., at which point, water attains its maximum density. The further descent of cold through this process, would then cease; but the refrigeration occasioned by it must effect all soils, to a greater or less degree, which hold water in excess, that is, when in a state of stagnancy near to the surface. Those soils only can be exempt from this chilling influence which are not naturally retentive of water, or which are artificially and deeply drained. Thus excess of water conduces to the production of *cold* in soil by means of several independent, vigorous, and ever active properties."

"On the other hand, when a soil is naturally so porous, or is brought into such condition by art, that rain-water can sink down into the earth, it becomes a carrier, an alert purveyor, instead of a robber of heat; and tends to raise, permanently, the temperature of the mass of useful soil; and this more particularly and beneficially, during the vegetative season. Rain-water, at that time, conveys downwards the more elevated superficial heat of the soil, and imparts it to the subsoil in its course to the drains; it leaves the soil in a fit state to receive fresh doses of rain, dew, and air, and in a better condition to absorb and retain heat, at the same time that it promotes, in other ways, its fertility and productiveness; but a consideration of the chemical effects attributable to the continual circulation and renewal of water and air is foreign to the present discussion."

"In order to render the change of water perfect, and its action uniform throughout a field, all drains should be deeper than the active or worked soil, and covered. Superficial drainage is comparatively of little value. If drains are open, much of the rain precipitated on the surface necessarily passes into them before it has permeated the whole mass; consequently it carries off with it heat, which would have been usefully employed in warming the lower strata. If drains are not deeper than the worked bed, water remains before in a staghant state, which must chill the roots of plants and diminish the temperature of the superincumbent mass."

Crops in Illinois.—Extract of a letter from H. A. Cyrus, Esq. dated Houston, Oct. 17—"In Adams county, the past season, the crops have been, of wheat, about an average; oats, good; corn and potatoes, poor, say two-thirds of an ordinary crop; these last, in part of this and the adjoining counties, are very inferior—had well nigh proved a failure; but in other places are very fine. It has snowed more or less, for three days past, and the ground is now covered from 3 to 4 inches. This is an early start for winter, in middle Illinois."



B. WOODCOCK'S SELF-SHARPENING PLOW—(Fig. 99.)

In reference to this plow, the manufacturers enumerate the following advantages:

"1st. Individuals who have used it, say its draught is about one-third less than other plows—two horses doing the work of three. 2d. It is constructed so as to turn a furrow against a moderate hill equally as well as on level ground, or down hill, and competent judges say it is superior to either the Crane, Hornet, Bull, Crockett, Franklin, Peacock, Patent-lever, or any other plows they have used, as it performs with more ease to man and horse, and makes better work. It turns the furrow round on the top and hollow below, thus leaving the plowed surface more exposed to the action of the harrow, than other plows, and gives the vegetable matter a better chance to decompose than if turned flat or irregular. 3d. It is comparatively free from choking or carrying dirt, and is said to make the ground more productive than other plows. 4th. It admits of three kinds of points and two kinds of shares, (but one point and one share being used on it at the same time,) of which the following is a description: First, the metal point, (fig. 1,) can be turned upside down when the under side wears round, at which time other points become useless, and thus repeated until worn out. The second (fig. 2,) is a renewable point, made of cast or wrought iron, and is formed to receive a piece of iron or steel on the end secured by a rivet. The third (fig. 3,) is also renewable, and made of wrought or cast iron, with a V formed piece of iron or steel on the end fastened with a rivet. These can be renewed with little expense. The first share (fig. 4,) has two edges, and turns laterally. When the outer edge wears dull, the inner edge may be turned out. The second share, (fig. 5,) is self-sharpening, with one edge, which, when beveled below, can be turned end for end and thus throw the beveled side up. One metal point and share costing 25 cents, can plow 40 or 50 acres of good ground, to which fact hundreds can testify. 5th. The cutter, (fig. 5,) is made in a triangular form with three sharp edges; when the front edge wears dull, the under edge may be turned in front, then the third, until worn out. Thus the friction parts of the plow are renewed with little expense, as it is in detached pieces." These plows are manufactured by B. Woodcock & Co. Wheeling, Va.

INDUCEMENTS TO EMIGRATION TO VIRGINIA.

To THE EDITOR OF THE CULTIVATOR—Having observed in the newspapers that there is a growing disposition among our northern friends, who are inclined to emigrate, to turn their attention to Maryland and Virginia, I have thought it might be acceptable to some of your numerous readers, to have laid before them descriptions of locations in Virginia, that hold out inducements to emigrants. I shall therefore, in this communication, endeavor to lay before them a brief description of a region in Virginia, with which I am well acquainted, and also point out some of the inducements it offers to emigrants.

1st. *The region to be described.*—Its south-western boundary lies about five miles N. N. E. of Fredericksburg, Virginia; its north and north-eastern boundary, about fourteen miles from the same place, extending from Potomac Creek to Aquia Creek, about nine miles in a northern direction, and stretching westerly from Potomac river about twelve miles.

2d. *The inducements offered to emigrants.*—In this region are found nearly all the varieties of soil, that are commonly found in Virginia. Here are some ten to fifteen thousand acres of land that might be purchased, at prices varying from two to six dollars per acre, and some good situations that might be procured on *long*, and in other respects, very favorable leases. Near the middle of this district, as we proceed from the Potomac westerly, are found inexhaustible deposites of the best blue marl and green sand, the efficacy of which, as a manure, has been tested, and its fertilizing effects may be seen by any who would visit this region in the months of May and June. By the use of this marl and other resources for manure, that are found here in great abundance, directed by skill and industry, these lands might soon be restored to a high degree of fertility. Here also, are found never failing springs of excellent water, and many of the locations are as healthy as any in Virginia, and most of them more healthy than those usually selected by emigrants to the west.

The Richmond, Fredericksburg and Potomac Railroad, passes through the middle of this district, thus bringing it within easy and rapid communication, with the markets of Richmond, Fredericksburg, and the District of Columbia. To our northern friends, then, who contemplate emigrating to the west, we would say—"Come hither, and see!" A.

Fredericksburg, Va., Nov., 1844.

DISEASE OF THE POTATOE.

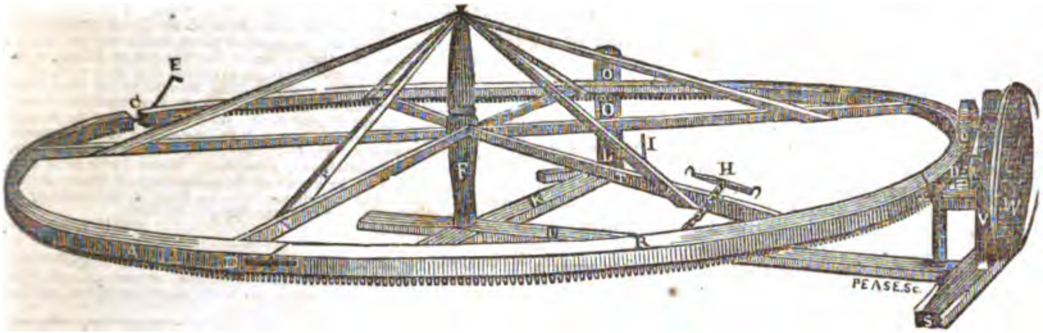
MR. L. TUCKER—Among the various speculations respecting the disease of the late potatoe crop, I have recently heard a cause assigned, which appears to me more satisfactory than any I have seen in print. It seems that on the night of the 15th of August last, there was a "honey dew," as it is called, a glutinous exhalation with a sweet taste, which settled on the herbage and leaves of the trees throughout this region of country.

A neighbor of mine informs me that a farmer of his acquaintance in Hartford county, on the afternoon before the falling of this dew, removed a carpet which his family had spread out on his grass, and spread it on a part of an adjoining potatoe patch, where it remained through the following night and morning, and that after the tops of the potatoes in the rest of the patch had entirely decayed, the tops which had been covered by the carpet, continued green until fall; and that while the rest of the crop almost wholly rotted, the part under the carpet gave a sound and abundant yield. Another neighbor informs me that on the morning when the "honey dew" appeared, he heard a farmer say that it would kill the potatoes.

Now this "honey dew" is a phenomenon of which I never before heard, but to you and most of your readers, it is probably familiar. It seems at all events, if it prevailed over the eastern and middle States at the time mentioned, to afford a rational and satisfactory solution of the much vexed question. A glutinous substance covering the potatoe tops at the period of their most luxuriant vegetation, would stop the pores and cause sudden death. The disease and death of the tops, would cause the tubers to decay in the precise manner they have done. Please give your views on this subject. and oblige

Yours, JOHN BOYD,

Winchester, Ct., Nov. 6, 1844.



TAPLIN'S HORSE POWER—(Fig. 100.)

It will be seen by the report of the Committee of the State Agricultural Society, that the above horse power, the patentee of which received the first premium at the Agricultural Fair at Poughkeepsie, can be propelled by two horses with sufficient power, and afford sufficient speed, for threshing under all ordinary circumstances. There are however, six spaces in which horses may operate; so that almost any amount of power may be generated, and this power is applied directly to the friction rollers, in the pinion which carries the speed wheel, without a complication of machinery. Another decided advantage which this horse power possesses over most others, is the ease with which it can be taken down and moved; it can be carried in a one horse wagon, and one man can set it up ready for operating in fifteen minutes; all repairs can be done with trifling expense, by any common blacksmith. These horse powers have been thoroughly tested, and good judges of machinery give it as their opinion that the principle is the best in operation. These horse powers are made by Hull & Co., Tribe's Hill, Montgomery Co. N. Y., who have purchased of the patentee the right of the Counties of Albany, Schenectady, Montgomery and Greene, and will manufacture to order, Horse Powers and Threshers on short notice. C. D.

QUEENS COUNTY AG. SOCIETY.

Mr. Tucker—Our third annual Fair and Cattle Show was held in the village of Jamaica on the 10th inst. A thrilling interest was evinced by the thousands of enlightened agriculturists assembled on the occasion, by a most admirable and gratifying display of fine stock, of which the show of brood mares and thorough bred cows, was most extensive—some of them were of superior symmetry and fineness, and highly creditable to the farmers of the county, equalling in many respects, the exhibition at the late Fair at Poughkeepsie, where, had they been exhibited, they would doubtless have taken the first premiums. A similar opportunity I trust will not be permitted again to pass unheeded, yet to overcome which, we have two obstacles to surmount—one is, many of our best agriculturists are Quakers, who hold to the belief that all competition for money, is gambling—another is, a happy consciousness, characteristic of the inhabitants of the county, that they are well content with their situation, and that they have the only or best place of existence within the bounds of their daily occupation. Such local feelings, I trust soon will give place to a desire to promote the general good, and all endeavor by their individual exertions to make future exhibitions as great as possible, where the young can view the best stock, agricultural products, &c., from the north, the south, the middle and the west, assembled at one common meeting. The result of which, must be to those having the best, a gratifying consolation to themselves, and afford to others the best opportunity for improvement. The show of choice fruits and agricultural products, surpassed every previous exhibition, and was all that could be desired to please the most fastidious. The show of flowers was most charming; and their arrangement called forth loud and hearty praises to the "Fair," among which was a Cornucopia, tastefully arranged of Dahlias, Roses, and other choice and beautiful flowers. The horn was well filled, out of which was pouring an abundant stream of Catawba and Isabella grapes, peaches, Seckel pears, strawberries, &c., reaching to the table.

The display of fancy productions was of exceeding taste and skill, conferring exalted credit on the lady contributors.

The Address, delivered by the Hon. Gabriel Furman, of Kings Co., was replete with interest. He spoke of Agriculture as of the most dignified, laudable, and important pursuit of man. The uniform harmony and good order which prevailed throughout the day, evinced an increasing prosperity for our County Society. The premiums awarded for the year will amount to about $300.

Oyster Bay, Oct. 19, 1844. S. Y.

BOOK FARMING—A FACT.

"I want to know if you believe in this book-farming," said a neighbor, as he walked into the room, where I sat reading the Cultivator.

"Be sure I do," was the reply.

"Well, I don't; I never took an agricultural paper in my life. There is B. S. of W——, who came into this country, fifteen years ago, and had to buy fifty acres of land on credit. He has cleared that up, and added from time to time, till he now owns two hundred acres—has good buildings, and money at interest. He always has good crops. He has averaged *twenty-five* bushels of wheat to the acre for several years; it is the same with all his other crops. While his neighbor E. W. has not raised more than *seven* bushels of wheat to the acre, and some of his other crops he never harvests. I would give more for the experience of B. S. than for all the book-farming and farming by rule in the world."

"Very well, sir, now let me have a word. This 'experience' of B. S. of which you speak, (i. e. the method he adopts to raise twenty-five where his neighbor raises seven bushels of wheat, and other crops in proportion,) if written out and published, would be the very *essence* of book-farming, which you so much despise, and might benefit others as well as you. And then, secondly, I know this B. S. also, and it gives me pleasure to inform you that he is a regular subscriber to, and constant reader of *three* standard agricultural papers—the 'Cultivator,' the 'New Genesee Farmer,' and the 'Western Farmer,' while this same E. W. will not have an agricultural paper in his house, partly because he does not '*believe in book-farming*,' and partly because he *cannot afford to take such a paper*."

Here the man suddenly remembered his errand, which was to borrow an improved harrow, a plan of which I had found in my paper, and which he was pleased to say, "did the work so much better than mine," (his)—so the subject was dropped. I intend to speak to him again, ere long. H.

Ohio, Oct. 1844.

Locked Jaw in Horses.—It is said that pouring water along the back from a watering-pot, for a considerable time without intermission, will effect a cure.

PEDIGREES OF COL. RANDALL'S SHEEP.

Mr. L. Tucker—I enclose you the pedigrees of the Merino sheep on which I drew the first premiums of the State Agricultural Society at the late Fair at Poughkeepsie.

My object is, incidentally, to save myself the trouble of answering almost daily inquiries on the subject, but, mainly, to throw light on an important, and among those who have not particularly investigated it, a mooted subject, viz. whether there are or are not now in the United States, pure blooded descendants of the early importations of Spanish Merinoes. Some have supposed there were none remaining; others, that the whole number remaining are confined to the flock of Hon. Wm. Jarvis. That Consul Jarvis has them, cannot be denied, unless we would put bare conjectures against the *direct testimony* of a man who concededly stands before the public unsullied in every relation of life. That others also have them, I will proceed to show by the positive testimony of various gentlemen, a portion of whom are well known to the public, and whose character and standing is not inferior to that of any in the United States.

I have, for brevity, confined myself to the representatives of but a single family in my flock; though I have other strains of blood, the purity of which is equally susceptible of proof, and which I know to be accompanied with equal value in the individual.

Andrew Cock of Flushing, Long Island, purchased imported Merino sheep of Richard Crowninshield, and various other importers. In 1823, he sold his flock to Hon. Charles Rich, whom many will recollect as a former member of Congress, from Vermont, and Leonard Bedell, both of Shoreham of that State. John T. and Charles Rich, sons of Charles Rich, senior, inherited their father's flock. John T. has kept his portion of it pure to the present day. Charles kept his pure for a period, but whether he has to the present day, or whether he retains them at all, I am not informed. Bedell kept his flock pure to the time of his death, at and shortly previous to which time, portions of it fell into the hands of various breeders, several of whom have preserved it pure to the present time. John T. Rich, S. W. Jewett, Gen. Jasper Barnum, M. C. W. Wright, and some other individuals own descendants of the Cock flock, which have been preserved pure and unmixed, a portion of them from *any other blood*—a portion of them from any other blood excepting that of Consul Jarvis's importation, by the use of rams regularly attested by Consul Jarvis to be pure descendants of his imported Spanish sheep. The ewes of mine which received the State Society's first and second premiums at Poughkeepsie, were got by "Fortune," dams pure bred ewes of the Rich or Cock stock, owned by S. W. Jewett.

The following statement by the Hon. Effingham Lawrence, of Long Island, (who acted as Chairman of the fine wooled sheep committee at the 2d State Fair at Albany—who has owned, bred and sold more pure bred Merinoes, and possesses a greater knowledge of the early importation of them, than almost any other individual in the United States,) shows the kind of sheep possessed by Andrew Cock, his skill as a breeder, and his integrity as a man.

Judge Lawrence's Statement.

Yours is duly received, in which you refer to a conversation we had, on the subject of Merino sheep, and particularly of the quality and purity of the flock of Andrew Cock, who was my near neighbor. We were intimate and commenced laying the foundations of our Merino flocks about the same time. I was present when he purchased most of his sheep, which was in 1811. He first purchased two ewes at $1,100 per head. They were very fine, and of the Escurial flock imported by Richard Crowninshield.

His next purchase was 30 of the Paular breed at from $50 to $100 per head. He continued to purchase of the different importations until he run them up to about eighty, always selecting them with great care. This was the foundation of A. Cock's flock, nor did he ever purchase any but pure blooded sheep to my knowledge or belief. Andrew Cock was an attentive breeder; saw well to his business, and was of unimpeachable character. His certificate of the kind and purity of blood I should implicitly rely on. I recollect of his selling sheep to Leonard Bedell of Vermont. EFFINGHAM LAWRENCE.

Flushing, 1944.

Statement of John T. Rich, Esq.

I certify that my father, Charles Rich, and Leonard Bedell, former residents of this town, (now deceased,) did on or about the year 1823, purchase the entire flock of sheep owned by Andrew Cock of Flushing, Long Island. Accompanying said sheep, Mr. Bedell brought a certificate that came with the sheep from Spain. I have read said certificate, which gave a full description of the sheep purchased in Spain, with guaranties of their purity of blood, which was regularly attested by the American Consul then in the Spanish or Portugese dominions. I thereby had satisfactory evidence that they were all of this importation, and that many of them brought to this town, were the identical sheep imported. The certificate, I am confident, described them as from the Paular flock. The ewe that was the dam of Mr. Jewett's buck Fortune, was a pure descendant of this imported flock above described. I have preserved this flock pure to this day, which amounts to more than five hundred. Some of the flock have been recently crossed by bucks of the importation of Consul Jarvis, which said bucks were purchased from the flock of, and regularly attested by said Jarvis, as being pure Spanish Merinoes.

Shoreham, 1844. JOHN T. RICH.

Statement of Hon. S. H. Jennison, (late Governor of Vermont.)

I certify that I am personally and intimately acquainted with John T. Rich of Shoreham, Vt., the signer of the above certificate, and that his statements are entitled to full credit.

I further certify that Leonard Bedell, late of Shoreham, deceased, was a near neighbor to me, and I recollect learning from him many years since of his purchase of the flock of merino sheep, on Long Island, as stated by Mr. Rich. I have several times seen the certificate mentioned by Rich in the possession of said Bedell. I have reason to believe the portion of the Long Island flock, purchased by the late Hon. Charles Rich, and now kept by John T. Rich, have been pure as he states. I was well acquainted with the portion of the flock kept by Bedell, having handled them on several occasions between 1824 and 1830. Some of the ewes in the flock were pointed out to me as imported ones, which were toothless and very old, between the dates above named. I have several times had bucks from the flock, and never entertained a doubt of their being pure bred Spanish Merinos. Mr. Bedell called them, and I think the certificate named them, as of the Paular Breed. S. H. JENNISON.

Shoreham, 1844.

Charles A. Hurlbert's Statement.

I certify that I lived near neighbor to Leonard Bedell, in the town of Shoreham, Vt., in the year 1823, and that during that year Mr. Bedell drove a lot of sheep from Long Island, purchased of Andrew Cock.

From 1823, until the decease of Mr. Bedell, a period of fifteen years, I lived in his family, and had the charge of his sheep. Mr. Bedell kept none other but full blooded sheep of the Cock flock, and I was perfectly familiar with a number of them always asserted by him to have been originally imported. They had a distinctive mark as such, had attested marks and ring of copper in their ears, and were very old.

Mr. Bedell also had the original Spanish certificate of their purity of blood, attested by the American Consul. These sheep were preserved by Mr. Bedell, entirely free from admixture with any other blood. Previous to his decease, I selected about eighty of his ewes, which I afterwards drove to Monkton, and finally disposed of to S. W. Jewett of Weybridge. CHARLES A. HURLBERT

Monkton, 1344.

Gen. Barnum's Statement.

I hereby certify that I was born, and lived in the neighborhood of Mr. Leonard Bedell, during his residence in this town; that I well remember the flock of Spanish Merino sheep which he drove from Long Island 21 or 22 years ago; that I was familiarly acquainted with this flock of sheep until his decease in 1838, having assisted in shearing them every year during that time with the exception of three or four. Mr. Bedell had a certificate of the lineage of the sheep from Spain, certifying their purity of blood, which I have several times read; and I am *confident* that it described them to be Paular, from the flock of "Don Manuel de Godoy, Prince of Peace," &c. Mr. Bedell, though repeatedly urged to sell ewes, utterly refused, though repeatedly offered high prices by myself and others; nor did he part with any until the last years of his life. I now live on the farm formerly owned and occupied by him, and possess a large portion of the above described flock. I am confident that it has not been crossed with Saxons, or any other breeds of sheep in this country. JASPER BARNUM.

Shoreham, 1444.

Levi Rockwood's Statement.

I moved into the neighborhood of Leonard Bedell, late of Shoreham, Vt., in the spring of 1430, and soon became acquainted with his flock of Merino sheep. I have frequently heard him relate the history of his sheep. He said he purchased them of Andrew Cock, of Long Island, and that they were imported from the flock of Godoy, the Prince of Peace, in Spain, as their Spanish pedigree, in his possession, would show. He always called them Paular Merinoes, and frequently boasted of this as being the best stock ever imported. I have heard him advised to cross the blood of his flock by using bucks from other Spanish flocks, but he insisted on keeping his pure, preferring as he had done, to breed them in and in. I have seen the Spanish certificate which accompanied the sheep, but never read it.

Monkton, 1814. LEVI ROCKWOOD.

Statement of Hon. Harvey Munsill, Judge of Probate.

I hereby certify that I am personally acquainted with the above named Levi Rockwood, and have been for a great number of years. I consider him a man of truth and veracity, and believe him to be so, considered by the community at large. HARVEY MUNSILL.

Bristol, 1814.

Certificates to the same general effect with the above, might be indefinitely multiplied, and the above would be promptly *turned into affidavits,* were there any occasion for such a step.

It will be observed that the sheep sold by Cock to Messrs. Rich and Bedell, were imported with a Spanish pedigree, attested to be genuine by one of our Consuls in the Spanish or Portuguese dominions.[*] This is distinctly asserted or confirmed in *every one* of the above certificates. This Spanish pedigree named them as Paulars, as appears by the testimony of all the witnesses save one, whose omission to mention the fact was doubtless casual or accidental, and Gen. Barnum distinctly recollects that they were stated to be from the flock of Manuel Godoy, Prince of Peace. Rockwood recollects with equal distinctness, that Bedell was in the habit of asserting that the Spanish pedigree described them as from the flock of Godoy, at a time when that pedigree was in existence, and open to the inspection of any one. This personage was, until his effects were confiscated, the proprietor of the Paular flock. Gov. Jennison and Mr. Rockwood mention that Mr. Bedell was in the uniform habit of calling his sheep Paulars, and this was at a time when this name would probably have attached little, if any additional value to them, in the minds of sheep breeders. Judge Lawrence distinctly recollects that Cock purchased *thirty* Paulars, at one time, of the importer—more than one-third of all the imported sheep ever purchased by him.

The original Spanish pedigree was delivered by Cock to Rich and Bedell, *as the pedigree of the sheep purchased by them*. That certificate described marks and certain rings in the ears, &c., which *corresponded with those borne by the sheep delivered*. Now if the sheep so delivered, were not the identical sheep described in the Spanish pedigree, and their descendants, Andrew Cock must have *forged* their distinctive marks, in imitation of the genuine Spanish marks, and thus been guilty not only of gross fraud, but of what would clearly constitute the *crime of swindling*. Judge Lawrence's statement shows how far such a supposition is reconcilable to his character. We have it then proved by the best testimony which the case admits of, testimony which is entirely conclusive, that Cock sold and delivered to Messrs. Rich and Bedell, not only pure Merino sheep, but pure *Paular* Merino sheep.

The certificate of John T. Rich shows that the part of the flock inherited by him, has been preserved pure from its purchase of Cock down to the present day, (a few of them latterly having been crossed with rams of Consul Jarvis's importation,) and now amounts to 500. It would have been an *insult* to this gentleman's high and unexceptionable character to have published the endorsement of it, contained in the certificate of his intimate friend Governor Jennison, were it not that his statements were to be read far from his native state and the circle of his acquaintance. That Bedell also preserved his flock pure from the time of its purchase to the time of his death, is proved by the individual who had charge of it during that entire period; by Bedell's successor on the farm, who was constantly acquainted with that flock, and assisted in shearing it 12 out of the 15 years during which Bedell lived after he purchased it; by Rockwood, and finally by his near neighbor Gov. Jennison, who fully confirms the testimony, on this point, of all the other witnesses.

Besides the purchase of 80 ewes of the Cock stock by S. W. Jewett, alluded to in C. A. Hurlbert's certificate, I have lying before me the statements of various other purchases, by the same gentleman, from both the Bedell and Rich branch of the same stock, which it is not necessary to publish. Mr. Jewett's certificate of the pedigree, &c., of the ewes exhibited by me, is as follows:

WEYBRIDGE, ——, 1844.

I have this day sold Henry S. Randall, of Cortlandville, N. Y., for the sum of $200, eight yearling pure bred Spanish Merino ewes, being the choice of my entire flock. Said ewes were got by my buck Fortune, dams ewes of the Rich stock, and they have a half penny taken from the under side of the right ear. Their fleeces averaged 5 pounds of washed wool, and the four accompanying samples[†] were taken from four of them.

S. W. JEWETT.

The pedigree of Fortune's dam has been given in Mr. Rich's statement above; that of his sire is thus stated by his breeder:[‡]

Statement of Tyler Stickney, Esq.

The ram which was the sire of Mr. Jewett's buck Fortune, I purchased of Consul Jarvis, of Weathersfield, in the year 1835. He sold the same to me for a pure Spanish Merino ram—ear mark, a notch under each ear.

TYLER STICKNEY.

Middlebury, 1844.

No authentication of this statement is deemed necessary, as probably there is not a sheep breeder within fifty miles of Middlebury, who is not perfectly conversant with the history of this wonderful ram.

The history of Consul Jarvis' importation, and his formal attestations of the purity of the rams sold by him, would unreasonably extend the limits of this communication, and probably they are not necessary, to the full substantiation of the pedigrees. He is yet alive; and the history of his importations will be found in a letter addressed to me in the first vol. of the Transactions of the N. Y. State Agricultural Society, page 320.

As I have already remarked, I have other strains of blood in my flock, some entirely distinct from the above, some a mixture between the above and other distinct strains. Their pedigrees are equally susceptible of proof with the above, and are *always open to inspection*.

Yours respectfully, HENRY S. RANDALL.

Cortland Village, Nov. 1844.

ORIGIN OF GUANO.

Concerning the extraordinary fertilizer which is now exciting wide-spread interest in the agricultural world, (and we may add, in the commercial world also, seeing that so many vessels are employed in the traffic,) we are indebted to Dr. James Eights of Albany, for the following memoranda. The opportunities for observation presented by the Expedition—the *first* American Exploring Expedition—in which he was employed as Naturalist, certainly furnished ample scope for judgment on the subject to which Dr. Eights refers:

"Much has recently been said," observes Dr. Eights, "and various have been the conjectures respecting the origin of the justly popular manure termed 'Guano,' brought in such vast quantities from the numerous Islands and headlands of the African and South American coasts; but little or nothing of a definite nature has as yet I believe, appeared in print. All writers on the subject, however, seem to agree in considering it to be the production of some piscivorous birds.

As much uncertainty seems yet to prevail, permit me to cast my faggot on the pile, by offering to such of your readers whom it may concern, the substance of some extracts taken from my notes of a voyage, made several years since to the South Atlantic, Antartic and Pacific Oceans; and likewise, some remarks from personal observations of at least one of the birds that largely contribute to its formation.

Being moored at the Island of St. Mary's on the coast of Chili, (latitude 37 south,) I was at an early hour in the morning, called on deck to witness the flight of "Shags," (*Phalacrocorax graculus*) on one of their fishing excursions to the sea; they appeared in such prodigious numbers, that the whole surface of the heavens was almost entirely obliterated from the sight; flying in irregularly formed streams from the main land, from the breadth of but a few feet to that of more than a mile the whole way, extending in a north and south direction along the coast as far as the eye had vision, strikingly bringing to my recollection the highly interesting descriptions of Wilson and Audubon, of the multitude of wild pigeons in some of our western States. They continued in an almost unceasing flight from the time they were first observed, until we were summoned to our mid-day meal, after which time I paid no further attention to their progress.

The favorite resting places of these birds, were the southern headland of the Island, which arose in a precipitious manner from the waters of the sea to an elevation of about ninety feet above its surface, and likewise on the summits of the numerous rocky islets which were every where scattered about in its vicinity. Upon examination, these resting places were found to be entirely covered by well characterized Guano, but so firmly compact, and the surface of the rock so completely besmeared with the substance at their uniting edges, that it was next to an impossibility to determine with any degree of accuracy, its relative thickness.

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[*] This original certificate is not now probably in existence. Bedell was in the habit of carrying it much about with him, and frequently exhibiting it. It was probably worn out, or lost.

[†] These were shown with the sheep at the State Fair, and I should now forward them, accompanying this, had they not been accidentally mislaid.

[‡] I erroneously stated in the Jan. Cultivator that Fortune was bred by Mr. Jewett.

These birds are esteemed as a palatable food, and for the period of three weeks that we remained at this Island, they were daily served at mess for both officers and crew of the ship. Upon examining the contents of the stomachs of several of these birds, we almost invariably found them distended with the bones and partially decomposed relics of a small species of Clupea (Herring,) which range along this coast in immense shoals from the cold waters in the regions about Cape Horn to the immediate vicinity of the tropical line. These cormorants dive and swim well, pursuing and securing their prey while in the water; ascending in the air to devour it, which they do with the greatest facility, tossing it up and catching it again as it descends, they swallow it almost instantaneously in a head foremost direction. From their prodigious numbers, their voracious appetite, and exceedingly rapid digestion, a very large amount of these fishes are daily consumed by them. After having thus gorged themselves with food, they retire to their usual resting places on some projecting headland or rocky islet in the sea, where they remain for hours together, with outspread wings, until digestion has completed its course, when they again proceed to sea to renew the process. It is at such times that the Guano is so copiously deposited.

This species of cormorant has a great geographical range, being found along both continents, from the frozen regions of the north, to the antartic sea, and of course are not uncommon along our whole Atlantic board, but in consequence of the frequent and copious rains which fall in these latitudes, the guano is unable to accumulate, being dissolved and washed away almost as rapidly as it can be produced.

Penguins likewise, have frequently been mentioned as contributing largely to the formation of guano, but from the peculiar habits of the various species of these birds it will be readily seen that but a comparatively small portion of this substance can justly be attributed to them. In the warm climate of the Peruvian coast where this manure chiefly abounds and where rains are seldom, if ever known to fall, these birds are relatively of rare occurrence, but gradually increase in number in proceeding to the south, until the antartic seas are reached, in the cold waters of which, they in the greatest profusion are found, being not unfrequently observed, covering the surfaces of its numerous icebergs which are every where to be seen drifting along at a rapid rate by the power of the winds and the velocity of the currents.

These birds are also of an aquatic nature, spending the greater portion of their existence in the open sea, visiting the land only for the purposes of molting, hatching and rearing their young, which certainly does not exceed three months in the year. In the high latitudes where Penguins most abound, guano is exceedingly scarce.

From the facts here stated, and the circumstance that no piscivorous birds are so numerous in the regions where guano is found in the greatest profusion, as the *Phalacrocorax graculus*, I consider myself fully justified in the conclusion, that it is by these birds that this truly valuable manure is almost altogether produced.

DISEASE IN CATTLE.

MR. TUCKER—I would like to inquire of you or some of your correspondents respecting a disease by which I lost a cow last winter, and also of another by which I lost a heifer this summer.

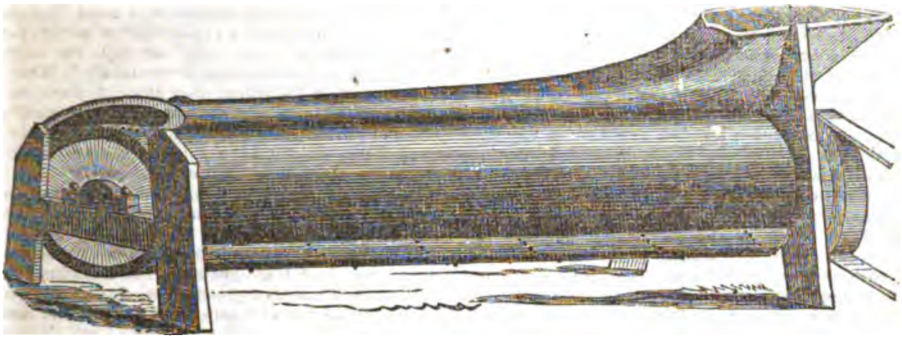
The cow at the time she was taken sick was nearly fat enough for the knife; she had been fed from the commencement of winter, (say almost the middle of Nov.) with barley meal, at the rate of about three quarts per day, the remainder of the time, (one month,) with plenty of hay, and water once a day as much as she would drink. She was kept in a close stable, (excepting when out to water,) and well bedded with clean dry straw. The first symptom of disease manifested, was about the middle of January. She first refused to eat her usual meal; her food was withdrawn, excepting hay, for one day; she was then fed lightly, and appeared to be fully recovered; in about twelve hours after, she was as usual turned out to water, when she refused to drink and appeared to be cold; trembled very much, manifested a desire to go into the stable, frothed a little, and discharged a good deal from the nose; her eyes, and the inside of her mouth were red. She was immediately housed, and having the appearance of suffering from a cold, she was kept warm, and treated as follows: first, about half a pound of Epsom salts was given, followed by a strong decoction of Cayenne pepper and ginger, well sweetened with molasses. This failing to open her bowels, about one quart of melted lard with one pint of molasses, were given; no effect; two quarts of soft soap were then given; the above were all given as drenches, as also one half pint of castor oil, all within two days; at the same time, the syrenge was freely used with warm water and melted lard, and also soap-suds, but all with very little effect. She passed but little dung, and that little of a natural appearance; passed water freely; the slabbering, the discharge at the nose, the redness of the eyes and mouth constantly increasing, and also a great difficulty of respiration, with an uncommonly offensive breath. She refused to eat anything during the whole time, excepting a little bran mash well salted, and drank but little; as no effect was produced, but little was done after the third day: at the end of the fourth day she died; when she was opened, her lights were of nearly as dark a color as her liver, and entirely filled with a bloody froth; the maw was quite hard, not having been passed by any of the cathartics administered.

The heifer which I lost, was taken sick about the 20th of July when she was in very good condition; her pasture was bottom land partly inclined to be boggy, with a stream of good water passing through. Her first symptom was an attempt (as I thought,) to pass fæces, attended with straining and great pain; about a quarter of a pound of Epsom salts was administered in gruel; no effect; in three hours, half a pound more; the next morning appeared rather better; the straining continued through the day, when half a pound more of salts was administered; no effect; the heifer appeared lively, continued to feed well and drank freely for four days, when she died. When she was opened, her maw was very hard, and to appearance had passed nothing for several days; the bladder contained no water, but was very much swollen and the inside was quite rotten, as also were the passages connected with it. Now I would like to know what would have been a proper course of treatment in these cases, so that I may be prepared for similar ones in future. Yours, &c. L. HARTMAN.

SORE TEATS.

MR. TUCKER—During the past summer, a friend of mine in this place, who by the way is a practical and observing farmer, received reports that his cow's teats were very sore, to which he applied lard, cream, and other softening applications, none of which afforded relief; on the contrary, the soreness increased. He then directed his laborers to mow all the bushes, weeds, and grass, in and about the fields and fences of his pasture grounds, that were high enough to reach the cow's teats, premising they might be scratched by thorns, or poisoned by noxious weeds. Still no success. The teats growing more inflamed, and becoming nearly covered with raw sores, he then went through his fields personally to see if the bushes and weeds were all cut, which he found done to his satisfaction. He then gave up the case as beyond his knowledge. Some of the cows he was compelled to desist milking. Subsequently, in walking through his fields during a warm afternoon, he observed his cows quietly standing in a pond, wisping their tails at the flies, with their teats reaching the water, upon which he discovered a large number of leeches, (Hirudo,) such as are found in most ponds of standing water. The mystery was at once solved, and the pond lowered by draining; since which, there have been no complaints of sore teats. S. Y.

Oyster Bay, Queens Co., October 12, 1844.



SMITH'S HORSE POWER CORN SHELLER AND SEPARATOR—(Fig. 101.)

This machine, patented by F. N. Smith, is recommended as possessing the following advantages:

"1. It is simple in construction and capable (with ordinary team for threshing) of shelling and separating effectually from one to three hundred bushels of ears per hour, depositing the cobs a reasonable distance from the shelled corn, which are perfectly clean from corn silks, husks, &c., and neither the corn or cobs are broken, so as to be injured by the operation. 2. It may be fed from the shovel or basket, or feed itself by drawing the corn from the crib, in either case operating equally well. 3. It is durable to almost any extent, as it improves by use. 4. It is safe in its operation against accidents of any kind whatsoever. 5. It may be readily attached to any horse or other power, taking the place of grain thresher, and is equally portable with the same. 6. It will shell large, small, and deformed ears with the same facility, also green or damp corn with the same perfection as when dry. 7. Corn shelled after this manner, is allowed by those having tried the experiment, to look better, and measure from 5 to 10 per cent more than horse treading or flailing, as the corn leaves the operation as soon as it leaves the cob, the cob remaining until clean." The above machines are kept constantly on hand and for sale at the foundry of HANNA & PEASLEE, Kinderhook, Columbia county, N. Y. Price $40—warranted.

INQUIRIES ABOUT CHARCOAL, &c.

To Za. Drummond, Esq. of Amherst Co., Va.:

MY DEAR SIR—As I find your name in the pages of the Cultivator, I take the liberty of addressing you through this medium. And I feel gratified that the friends of agriculture, notwithstanding their living thousands of miles apart, can thus interchange sentiments, and be benefited by each other's experience, although not personally acquainted. Thanks to the Cultivator, I have been benefited by the communications of yourself, neighbor Robinson, and other valued correspondents of this useful agricultural journal. While I am combatting with the various incidents of a pioneer life, enjoying its sweets as well as occasionally tasting its bitter, you, hundreds of miles distant, are setting under your own vine and fig tree in the sunny fields of the south.

What I desire, is, to be further informed of the fertilizing effects of charcoal as a manure—its best method of application, and to what soil it is best adapted: whether clayey or sandy. I am particularly desirous of knowing what was the result of the experiment you made (as mentioned on the 48th page of the Cultivator, vol. 10,) of scattering it, after being pounded, over the litter of your cattle yard. Does it answer your expectations as a manure? Will it pay the expense of burning, if the wood costs nothing more than the cutting?

My attention has been more particularly called to your communications, by reading an article in the last number of the Cultivator, from A. J. P. of Newburgh, N. Y., who says it is "in itself, almost or quite valueless;" and "it is at any rate doubtful if it is ever converted into earth, or of itself, furnishes any food for plants." He further says that "when used in the compost heap, or when saturated with urine, all the substances it comes in contact with, are brought under its influence, and when applied to the soil, are gradually separated by the rains which fall upon them, and undergo in the earth the decay which fits them to become food for plants. Used in this way, charcoal will undoubtedly be found very useful, much more than when applied alone." In your letter of Jan. 15th, 1843, as referred to above, you asked the opinion of the editors on this subject. As we may benefit by their opinion, as well as by the theory of A. J. P., the readers of the Cultivator, (one in particular,) would like to avail themselves of your *experience* on this subject.

On the 80th page of the same volume in the following March, you stated that you should "try it on corn, wheat, cabbage, meadow and grazing lands, and report the result." We hope, friend Drummond, that you will give us a report of your experiments, whether they are favorable, or the contrary. And whether the application of charcoal alone or in the compost heap, is the most advantageous.

I suppose you and the readers of the Cultivator, think it strange that a western man should think of manuring his land—that the fertile fields of the west need no manure, and that there is no possibility of their repaying the least outlay for manure, or anything farther than getting in the seed, and inclosing the whole farm, however large, with the fewest number of miles fencing possible. But we hope to see this idea scouted some day or other. Should this idea continue to prevail, and our farmers act accordingly, we must soon abandon the raising of wheat and see our eastern neighbors, on their old fields, beating us in bountiful crops. Do not call me an ill omened bird; but it is true. Where nature yields so abundantly, if we do not return something to recruit her exhausting energies, we shall soon be doomed to the sad disappointment of seeing a yearly diminution of her products, though small at first, but a diminution as sure and steady as the sands of the hour glass. Our farmers act like the "horse leech's two daughters, crying give, give;" but they make no return. There is as much reason in working our horses and oxen without feeding, as thus tasking our farms without giving them their requisite food; and the man who should refuse to feed his working team because it was already fat and sleek, would act as rational as the farmer who should continue to work the domain God has given him, without feeding it with those fertilizing agents and manures which are so necessary for maintaining it in a fat and luxuriant condition. These things will not always last. The improved system of husbandry, with rotation of crops, and a liberal use of fertilizing agents, will be adopted here. From fifteen to thirty bushels of wheat, to our eastern farmers, looks like a liberal yield. These are our common crops. But forty and fifty bushels to the acre, is as common in England, as thirty to thirty-five is with us. And even sixty bushels of wheat is sometimes produced from a single acre of ground. Now the question is, ought western farmers to sit down and content themselves with from fifteen to thirty bushels of wheat from an acre of ground? Assuredly not. But some say when wheat is but fifty cents per bushel, it will not pay the outlay of a thorough system of manuring. Our crops, I do not mean all of them, but the average, might be doubled by thorough tillage, a judicious application of manures and fertilizing agents. If fifteen bushels can be added to our crops, and I know of no reason why it cannot, I do know that the last fifteen can be produced with as little expense as the first. For our swamps are full of muck, our forests full of leaves, and many of our barn-yards, (I shame to say it,) unless we move our barns and yards, are full from year to year; and our straw, huge piles, sometimes covering acres, is left to lie and bleach and blow away by the winds of Heaven, if it does not suffer a more speedy destruction by fire. We have also forests that must be felled before we can cultivate the soil; these furnish ashes and coal to our heart's content. We have materials enough for manure; all we want is a little extra labor, and time to make a proper use of them, and our soil, as well as producing as good soldiers and as eminent statesmen, would produce as good crops as the broad domains of our transatlantic brethren.

Yours, my dear Sir, with much respect,

LEVI H. HARE.

Centreville, St. Joseph Co., Mich., Oct. 7, 1844.

CULTURE OF FRUIT TREES, &c.

LUTHER TUCKER, Esq.—In your very interesting paper, The Cultivator, Jan. 1844, page 37, is the commencement of some very judicious remarks, by J. J. Thomas, on the culture of fruit trees. When farmers transplant fruit trees, they have a desire to seem them "bring forth much fruit." I will say to them, follow the directions of Mr. Thomas, and with a little care of the trees after they are set out, they will be sure to have an ample supply of fruit. I hear one say, "I have so much corn to plant and other work to do, I cannot spare time, neither do I think it will make a very great difference. My grandfather and father, never took so much pains, and their trees bear well." I reply—"If you follow the directions of Mr. Thomas, you will have much better fruit than your father ever had, and double the quantity. If you wish to receive the greatest possible benefit from your labor, plant less corn, and take more time to set out your trees."

In the N. E. Farmer of May 11, 1842, page 355, there is a letter I wrote, which differs a trifle from the following statement.

Our island is surrounded by the ocean; it is 21 miles long and 5 wide. But little fruit has ever been raised on it, and that little, very inferior. It has often been said, "it is impossible to raise good fruit on this island." Eleven years ago, I hired a man to set out 17 apple trees. He dug very small holes, and set them out in a very short time. The spring following, I set out one apple tree. I dug the hole 10 feet in diameter and 3 feet deep. The subsoil (yellow earth,) was carried away, and the hole filled with sods inverted, and rich earth. *That tree has borne more apples than all the others.* This spring it measured 34¾ inches in circumference near the ground. The largest of the others, is 23¼ inches. Had I given ten dollars a piece to have had them set out as they should have been, instead of having them set out as they were, I believe it would have been money well laid out.

One of my trees has borne no fruit. This spring, I examined it, and instead of having the roots to extend horizontally, or nearly so, they turned directly down. I have thought of transplanting it this fall. Will that be best? If not, what shall I do with it?

In whip grafting, I cannot see the use of tongueing. I never practice it, and seldom lose one. It appears to me to be labor lost. I never have more than two buds on the scion. I cover the ends with composition. If both buds sprout, I cut off the weakest. If the scion should need support, I tie a small stick to the stock, and let it extend high enough to tie the scion to. In budding, I support the scion the same way. In the spring, if the bud has taken, I cut off the stock as smooth as possible, the healing process commences immediately, and the wound soon closes.

Peach trees do not thrive with us. I have whitewashed them and washed them with soft soap. Around their trunks, I have put ashes, lime, barn manure, chip dirt, charcoal, &c. But they seldom live more than three or four years. Their leaves expand in the spring, and for a few weeks the trees look well, but soon the leaves turn red, become very thick, double up and die. Many of the limbs, and often the whole tree dies. I have carefully examined the leaves, and I have pulled up many of the trees, and examined the roots, to see if the worm had attacked them, but found nothing. I therefore think it must be the atmosphere that effects them.

The Canker Worm and Borer have not troubled me, but we have a plenty of worms that do their work quite as well.

I know of nothing that is so poisonous to insects as diluted oil soap. A few days ago I had a bucket of diluted soft soap, into which a grasshopper flew, he swam about for a long time before he died. I had another bucket of diluted oil soap, a grasshopper hopped into it, and very soon (almost instantaneously,) expired. My gooseberry bushes have been attacked by small green worms. I sprinkled some diluted oil soap on the bushes, which immediately checked their ravages. When Canker Worms are discovered on apple trees, would it not be well, (if it has not been tried,) with a good syrenge, to sprinkle your trees with diluted oil soap?

Will whip grafting do for the grape vine? If so, at what time must it be done?

An answer to the above questions, will oblige some of your constant readers. Yours, respectfully,

Edgartown, Oct. 16, 1844. ALLEN COFFIN.

LABELS FOR FRUIT TREES.

EDITOR OF THE CULTIVATOR—I noticed in a recent number of your paper, a mode for preparing labels for fruit trees, &c. from wood; I send you another, and think far better label. Take slips of zinc, of size suitable, say 3 inches long, by half an inch in width, (any tin plate worker will cut them out of the size desired) drill or punch a hole near the end of each slip; then write upon them the name of the fruit, &c., or its number in your fruit list, with the following composition:

COMPOSITION FOR WRITING ON ZINC LABELS:

Take verdigris in powder, one part.
sal ammoniac, one part.
lamp black, half a part.
water, ten parts.

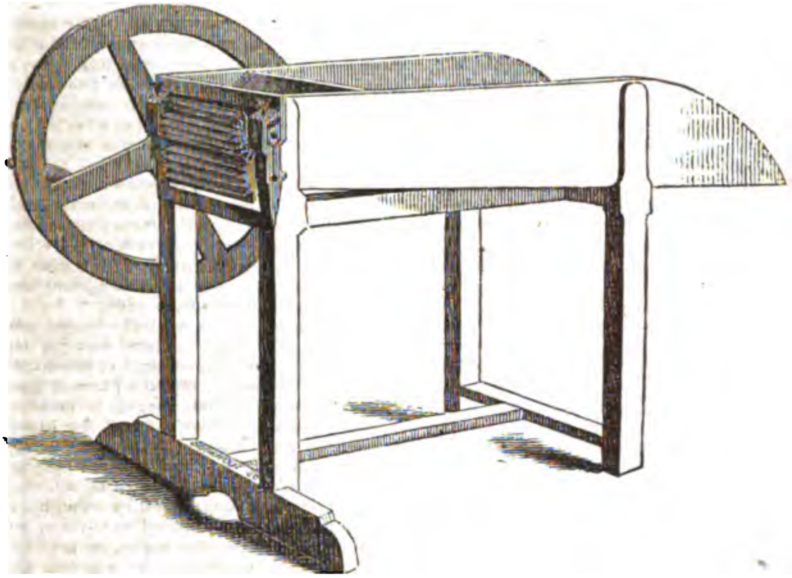
Mix them in a glass or wedgewood mortar, at first adding as much water as will mix the ingredients well together, then add the remainder of the water; when placed in a vessel, let it be well shaken up from time to time, and in a few days it will be ready for use. Shake well before using it. The mixture writes about as easily as common writing ink, and makes a permanent black mark upon the zinc. I have used this composition for labels on my trees for a number of years past, and I do not find that the exposure to the weather has obliterated a single mark; the names are as legible now as on the day they were written; painted cedar labels marked with a black lead pencil, put on at the same time with the zinc labels, have ceased to be of any use, the wood being mostly worn out, and the writing illegible.

The foregoing recipe was furnished me by a gentleman some years since; he said he believed it had been published in some agricultural paper. The labels are to be attached to a limb of the tree by copper wire.

My plan is to write the name of the fruit, &c. on one side of the label, and on the opposite side I place the number which I have affixed to that variety in my fruit book; thus on one side, "*Broca's Bergamot*," on the opposite side of the label "*No.* 100," No. 100 being Broca's Bergamot, in my list. Yours, &c. W. N. GREEN.

Worcester, Mass., Nov. 8, 1844.

NATIVE GRAPE.—A correspondent of the Boston Cultivator speaks in high terms of a seedling grape, purchased of G. B. Emerson, Esq. of Boston. The size of the berry is said to be about that of an ounce bullet, or that of the Sweetwater grape. The flavor is rich, much more so than the Isabella. It has no pulp or foxy taste. It is not likely to be injured by frost, as it puts out about ten days later than the Isabella, and ripens a month earlier. It was in eating the latter part of August. The vine is perfectly hardy.



SANFORD'S STRAW CUTTER—(Fig. 102.)

Luther Tucker, Esq.—The block accompanying this, represents a machine for cutting hay, straw and stalks, patented by Mr. Sanford of Connecticut. Judging from its simplicity, and the ready sale with which the machine has met, it is admirably calculated to meet the wants of farmers. It consists, as will be seen by reference to the engraving, of two cylinders, armed with knives, revolving together in a cast iron frame, by means of cogs. This iron frame is firmly bolted to the wooden frame and feeding box by means of two screw bolts. It is propelled by a handle fastened to the driving wheel. For durability and ease of performance, it is said to equal any other machine. Mr. Sanford sells them, made of good castings and wrought knives, for $15. They can be examined at the Agricultural Ware House of Henry Warren, River-street, Troy. A Subscriber.

THE LATE STATE FAIR.

A friend, who thinks that we did not do justice, in our account of the State Fair at Poughkeepsie, to the Horticultural Exhibition, requests the insertion of the following more detailed account of Floral Hall and its contents:

One of the principal attractions at the late State Fair at Poughkeepsie, was the Floral Hall, under the supervision of **Alex. Walsh**, Esq. of Lansingburgh. The following will give some idea of the arrangement.

Festoons of evergreens were hung in various directions and in such good taste, that the roughness of the temporary building was lost sight of, and you looked, as you entered, into a bower where the fresh green relieved the brightness of the fruits and flowers, and your senses were regaled by their united fragrance. Along the walls were arranged paintings, drawings and engravings, of animals, fruit and flowers.

Its appropriate sign, over the entrance, made from the leaves of the evergreen, and sprinkled with flowers, was an index not only of the exhibition within the building, but of the good taste in which the arrangements were made. Art giving her hand to Nature, and the products of both so commingled as to present a beautiful whole, while each was represented and neither lost, though neither was made pre-eminent. The place did not look like a well filled barn, or even a fruit shop, as such places sometimes do on such occasions; but attention was given to arrangement and effect, and to the thousands who went through the building, a scene was presented which delighted every one, in a way that mere heaps of fruits and bouquets of flowers alone could not do. And yet perhaps a finer display of fruits, flowers and vegetables has not been witnessed in this country—not even in the Boston Horticultural Exhibitions, so deservedly celebrated for their excellence. The peaches were of the largest size, most lusciously ripe and in great variety; plums and nectarines of unblemished skins; pears the most delicate and the most hardy looking, of the deepest green and the most golden hues, of every possible variety—the Beurrées, the Bergamots, the Frederick of Wirtemburg, the St. Michael, the Bartlett, the Seckle, and many others, all bearing unquestionable marks, without tasting, that they possessed in a high degree the peculiar excellences for which each is remarkable. Throughout the whole collection nothing dazzling or glowing. That happy combination was produced—the triumph of Art—which creates at once the sensation of the beautiful, and soothes rather than excites by the exquisite taste which has placed every thing where neither thought or instinct detects the falseness of its position, and which, the longer it is beheld, the greater is the satisfaction, for strict and minute examination, discovering the shades of arrangement and coloring which give so beautiful an effect to the whole.

One of the most prominent and interesting objects in this assemblage of the products of the American soil and brain, was a Temple dedicated to Agriculture and the Arts, under Mr. **Walsh**'s special direction, to whom the society is indebted for this unique ornament, consisting of three arches dedicated to three of the most productive classes of our wide spread population.

The central arch was dedicated to Agriculture, the one on the right to Horticulture, and the one on the left to Manufactures. They are severally denominated coats of arms, the new and better heraldry—*better*, well may we say, since their end and object is the happiness of man; while the old and blood-thirsty heraldry clearly prefigures its origin and aim by the devices it has chosen. We trust, however, that the day is not far distant when the heraldric device of the brawny arm and hammer will be greeted with becoming respect, while that of the bloody hand and sword will meet with merited contempt.

The shortness of our stay and the crowd of visiters pressing around this Lion of the Fair, prevented the possibility of our giving more than a faint impression of the effects it left upon our mind. It afforded us the greatest pleasure however to observe in the central arch a beautiful engraving of the late Judge Buel, one of the early advocates of agricultural improvements, and an esteemed friend of the originator of this structure. Near this was to be seen specimens of wool raised by the late H. D.

Grove, Esq., the introducer of Electoral Saxon Sheep into our country. Stretched across the Agricultural arch are beautiful festoons of wheat, rye, broom corn, oats, &c. &c., partially shading beautifully executed paintings of the improved breeds of cattle, while the following motto suspended from the festoons, showed what pleasing results may be expected from attention to improving our Agriculture:

"Those nations which have been most distinguished for their love of husbandry, whether of the garden or the farm, have been the most prosperous."

There were also specimens of rice, hemp, madder, cotton, &c.; products of the east, west, north and south. In the same arch are to be seen drawings of the plow used in Egypt, a clumsy wooden instrument, drawn by an ass and a mule, in juxtaposition with the plow of our country, combining the latest improvements and drawn by oxen, clearly showing the truth of the motto:

"The improved plow and its accompaniments—the only true sources of wealth and evidences of civilization."

The *Cornucopia* was not forgotten, being placed on the column between the arches dedicated to Agriculture and Horticulture; on the side next the Agricultural arch, were ears of corn, highly ornamented with vegetables; and on the opposite side, various fruits and flowers, near a diminutive but highly decorated plow, teeming with the rich products of the earth, as a token of the bountiful harvest vouchsafed to us by the Giver of all good. It seemed to say to the beholder, "Be grateful for Divine goodness," and for all the calm delights of rural life. Near by was the motto:—"The Farmer *who converts "the sword into a plowshare,"* believes with John Quincy Adams, that "Universal and permanent Peace belongs to the laws of Nature and of Nature's God."

In a conspicuous place of this same central arch was displayed to view the motto:—"We love nature, fields, flocks, the grain gathering, the hay making, the flowers, and all that blooms and grows."

This was surmounted by a beautiful engraving, in its figure and scenery most appropriately accordant with the sentiments of the motto, and as it were embodying them to the sight, and also surrounded by the richest and rarest products of our soil.

On the base of this arch was a collection of books appropriate to the farmer and gardener. Among these books were some recent volumes of the Cultivator and other works, the last works of the gifted mind of Willis Gaylord, Esq., whose writings have conferred lasting benefits upon the farmer. The motto is in keeping:—

"The rich fruits of the husbandman's toil are to become yet richer and more abundant!

"The New York State Agricultural Society are preparing for this result by their recent efforts to introduce agricultural and horticultural works into the common schools and district libraries throughout the Union."

We now pass to the Horticultural arch—a most fitting ornament to grace Flora's Hall. Tastefully stretched across this portion of the temple were festoons of silk cocoons, flowers, fruits, &c. Its right column was wreathed and encased with gorgeous displays of Dahlias and the body of the arch decked with ornamental and classic figures, vases, &c., which could not be looked upon without enkindling the desire of adding to our literary attainments a knowledge of botany, a study hitherto too much neglected—the whole forming an array that could not fail to strike every beholder with admiration of the useful and beautiful. In the midst of the flowers was the following charming and appropriate motto:—

"Not useless are ye, flowers, tho' made for pleasure
Blooming o'er fields and wood by day and night,
From every source your presence bids me treasure
Harmless delight.'

surrounded by an engraving representing a beautiful female, herself adorned as to her head and form with clusters and wreaths of native and exotic flowers.

On the left of the column was appropriately placed the motto:—

"When the inspired writer sets forth the ground upon which the title of King Solomon to pre-eminent wisdom was founded, he placed the knowledge of plants foremost and most conspicuous among natural objects."

On the other side of the Agricultural arch, as has already been mentioned, stood the structure in honor of Manufactures, entwining the products of human art with those of nature—a conception alike happy and ingenious. The arch over the manufactures was neatly plated or cased with variegated beautiful specimens of American prints, silks, &c. Many of the silks were very attractive—some of them spun on the common wheel and wove on the old hand loom.

While looking upon the substantial cottons and fabrics of wool, the sources of comfort to the laboring man, and the various beautiful silk articles before us, we were led to anticipate that our silk *youth* will ere long attain to *giant* manhood. In the midst of the silks was the motto:

"Silk, soon to become an important branch of American industry and national wealth."

The former importers of the coarse cottons of India, the baftas, gurraws, &c., would scarcely have credited the tale of the astonishing change in the quality and price of the goods destined to take the place of the coarse article, and that American cotton would be valued and sought for, even in India and other parts of the eastern continent—a change now witnessed by us, and so speedily brought about by the magic power of machinery and the ingenuity and perséverance of American workmen. The time was when our Dutch ancestors thought that brick must be imported from Germany for building houses and paving side walks, our clay being, as they thought, an inferior article; but "truth is the daughter of time" that dissipates delusions. It is found that our clay will make good brick, and that our workmen with them can form magnificent structures; and so it is found that American cottons are quite equal, if not superior, to foreign fabrics in quality, while they are furnished at so moderate prices that the laborer who now earns his six shillings per diem can dress with greater neatness and comfort than many who in former days were reputed wealthy.

The great variety and beauty of the American prints here exhibited could not fail to impress the beholder most favorably in regard to American skill, and the former importers just referred to, to whom the story of our cotton goods seemed as a dream, must, on looking at these prints, be almost ready to think themselves transported to some fairy land. The beautiful array of surgical instruments, penknives, &c. reminded us that we have now a Sheffield of our own, and need not run across the ocean for articles of hardware.

In the judicious arrangement of his arches Mr. W. must have had fresh in mind the well known sentiment of Jefferson, who inculcated the propriety of placing the manufacturer by the side of the agriculturist.

Leaving a description of the *tout ensemble* to those whose longer stay gives them ampler means of doing it justice, we conclude our hasty notice of this portion of it by giving the appropriate motto:

"Few things are more cheering to the real friends of agriculture than the reports which are thronging in upon us from the different parts of our wide country—the success which has attended the numerous Agricultural Fairs, the enthusiasm which they exhibit in the great cause of Agriculture and domestic industry, must be considered as among the most favorable indications that the cause is progressive, and the course of the friends of improvement still onward. The county societies generally, and in particular the State Agricultural Society, have made evident advances in the public favor, and consequently in their wide spread usefulness."

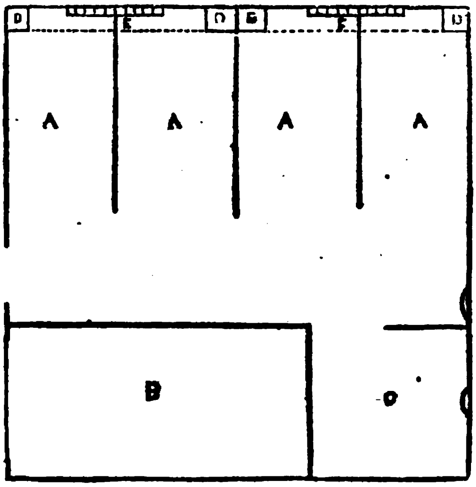
But without extending further this hasty notice of the Agricultural Temple and the delightful scenes of OUR Agricultural festival we close, availing ourselves of certain lines of Dean Swift altered to suit our purpose:

The Poughkeepsie FAIR
Will ne'er be forgot,
By those who were there,
Or those who were not.

LUSUS NATURÆ.—There was born on Wednesday last, in the cow-yard of his Grace the Duke of Cleveland, a calf with two distinct heads and necks, only two shoulders, and two hind legs, but two distinct tails. It died immediately after being calved, and on opening it, it was found to contain one pair of lungs, one heart, one liver, and the intestines of one beast only.

PLANS FOR HORSE BARNS.

MR. TUCKER—One of your correspondents wishes the plan of a *horse barn*—stable, I suppose, with carriage house, &c. He calls for a cheap one. Opinions on economy are so various, I scarcely know how to suit him. Had he said log, frame, or brick, we might have come nearer pleasing him. I have supposed it frame, to strike a medium, and have supplied two plans, a square and a long building, to choose from. The square one, 24 by 24 feet, main building; and have added a saddle and harness house; knowing it to be of great importance. It should be ceiled inside, and have a glass window, if it is only four panes, and door, which opens out of the stable, always kept shut. It may be further improved by making a closet inside to lock up fine bridles, side saddles, &c., that are not required for every day use.



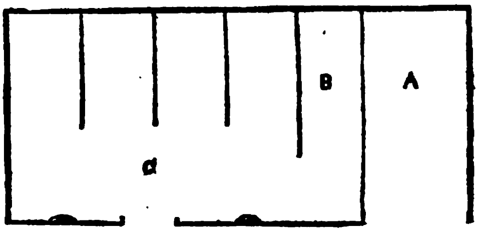
Horse Barn, 24 by 24 feet.

Stable, 16 by 24 feet—A. Stalls—E. Racks—D. Boxes—B. Carriage house, 8 by 16—C. Saddle room, 8 by 8.

The building is supposed to be 24 feet inside; the stall posts 3 by 6, if it is intended to nail the plank on; the plank at least 1½ inch thick, with upright pieces across the ends, nailed with 20 penny nails; the plank 9 feet feet long, (if it is intended to tie the horses) and 6 feet 6 inches high at the horse's heads, and 5 feet 6 at the hind posts. If it is intended to gutter the posts and drop the plank in, they must be 5 inches square; the last is the best, if well done. If a common manger is wanted, it should be made out of plank 14 inches wide, and 1¼ thick, and should be at least 4 inches wider at the top than bottom when finished. If that proves any too large when in use, I will pay for the lumber, if the gentleman will call on me. The upper edge of the manger should be 3 feet 6 inches high, that the horse may eat with ease.

The rack should be placed 2 feet above the manger, and be strongly secured; the staves put in with an inch and a quarter or an inch and a half auger, and be 3½ inches in the clear between each. There is another plan, however, which I like better—that is to make a long large box in place of a manger, say 2 feet across the top, and near 3 deep, to catch the hay or fodder that falls from the racks; a small box made for the corn inside the large one, and so arranged that hay will not fall in the grain boxes. No. 1 and 3 on the left of the stalls, and Nos. 2 and 4 on the right sides. Two short racks to be made about 7 feet long, one to be divided between stalls Nos. 1 and 2, and the other between Nos. 3 and 4, giving to each stall about 3½ feet of rack. The box underneath will save your hay from waste, and your corn boxes are always free from trash. I prefer a dirt floor (every one can suit themselves,) 9 or 10 feet between stable and loft floors, a good joist over each stall, and the stall posts morticed into the joists at top; joists 6 feet apart from center to center is quite sufficient; if the loft is laid with thick plank, say 1¼ inch, your stalls will be about 5 feet 6 inches in the clear, a large horse can lay down in them comfortably. The door of a stable should always be strong, and open outside; the smallest size for a door should be 4 feet wide and 7 feet high, and with little or no sill to step over. If a dirt floor is preferred, it should be 9 inches higher inside than the ground outside, and always kept clean and level. If the second story is 3 feet above the joists, there will be ample room for hay, &c. under so large a roof. I prefer all doors in the end of the stable, to avoid eave dripping in going in and out. A simple platform over the door is perhaps best to unload on, and to ascend to the loft by. A window or door should be placed at the opposite end to the entrance for ventilation and throwing out manure, and two narrow cracks may be left over the manger, to be closed in winter. A row of strong wooden pins 18 inches long, in the wall behind the horses, to hang harness, &c. on; harness should not be hung to the stall posts if it can be avoided. I have known frequent instances of horses getting their hind legs entangled and remaining so all night.

The same remarks will apply to finishing inside of the long plan, except that of the window. The windows are indicated by a double mark; they should never be made so large that a horse if alarmed, would attempt to jump through.



Horse Barn, 16 by 25 feet.

C. Stable, 16 by 24—B. Saddle room, 5 by 16—A. Carriage house, 9 by 16.

I wish Mr. Mott would make some alteration in his Agricultural furnace. They take too long to boil; I take out the boiler and place it between two logs and boil it in one-third of the time it can be done in the furnace The stove should be as large again. Time is the most precious with us—wood no object. R. W.

Greenville C. H., S. C., 1844.

HOUSEHOLD ECONOMY.

TRIPE.—Take the tripe as soon as practicable after it comes from the animal, rinse it well in cold water, and immediately sprinkle a thick coating of air-slacked lime over the inside—roll it up, and let it lie till the next day. Then cut it in pieces eight or ten inches square, scrape it and put it in soak in salt and water, where it should remain seven or eight days, or till the strong smell is entirely gone, changing the salt and water every day. Then boil it tender. It may be soused like pig's feet, or it may be broiled, fried with sausages, or dipped in butter and fried alone.

SOUSE.—Take pig's feet, the head, &c., and after being well cleansed, boil them in water with a little salt, till the meat begins to drop off. Then slip out the largest bones, and put the meat in a stone jar, or well-seasoned wood firkin. Make a liquor sufficient to cover them, as follows: Take one quart of the liquor they were boiled in, two quarts of vinegar, spiced with cloves, allspice, pepper, and cinnamon. While the meat is still warm, pour the liquor, boiling hot, upon it. In a few days it is fit for use, and may be either rolled in flour and fried in lard or sausage-fat, or warmed in a little of the liquor, or eaten cold.

The feet and shanks of *cattle*, cleansed in the same manner as pigs feet, are excellent. When sufficiently boiled, all the bones should be taken out, and the meat immediately chopped fine, and seasoned with salt, pepper, allspice, summer savory, and sage. When wanted for use, they may be warmed over in a little butter, and are nice, delicate eating—scarcely inferior to oysters, which they somewhat resemble. They make equally as good souse as pig's feet. The jelly which is left after they are boiled, makes excellent *blanc mange*. All these articles are frequently thrown away in families. With a little labor, they constitute the most favorite dishes—fit for a king, or *even* a farmer. A HOUSE KEEPER.

HUSSEY'S REAPING MACHINE.

TO THE EDITOR OF THE CULTIVATOR—Several notices of my Reaping Machine have already appeared in the Cultivator, and I would not now intrude on your valuable pages, did I not believe that a large number of your readers are much interested on the subject of cutting wheat by machinery.

It is now ten years since my invention of the Reaper. I have been constantly engaged since that time in its improvement. Although the grand principle has never been departed from, it has undergone several changes in its general construction, with a view to convenience and durability. It cannot appear strange if some of these changes may have been for the worse, and thereby endangered its good name. With this hazzard in full view, I have followed every idea which promised any improvement; the result has been the production of an implement as near perfection, I apprehend, as any thing of the kind can well be. The improved Machine has been in use three years, with increasing reputation.

The following letter is from Mr. Washington of Jefferson county, Virginia, who has cut three harvests with one of my Machines:

Bell Air, July 8, 1844.

Mr. Obed Hussey—Our harvest is over, and has afforded another opportunity of testing the Reapers of your construction. Unlike most patent farming implements, they manifest their utility more evidently with each successive trial. Owing to rust, the straw this year was spongy and difficult to cut with any tool; it was also much fallen. Those farmers who witnessed the operation of my machine admitted that cradles could not have done the work so effectually. L. W. WASHINGTON.

Cautious farmers at the present day place little confidence in certificates. I will only add the following extract of a letter from Mr. Watkins of Va.

Chesterfield co., Va., July, 1844.

Mr. Obed Hussey—Having never seen you since receiving the wheat cutting machine, I with the greatest pleasure make known to you the result of its performance, in cutting my wheat. It surpassed my expectation. In cutting wheat or oats, no reaper can surpass it as to quantity, neatness in cutting, and the laying of the grain to the greatest nicety, and to advantage for the binders. The having to pick it up as fast as it is cut, is in my opinion one great recommendation, because every operation is immediately under the manager's eye, consequently much more work will be done, and at night when the cutting is done, the picking is of course. Numbers have been to see its performance, and all left with delight. One old gentleman, a James river farmer, remarked, had he such a farm as mine he would not be without your reaper for five hundred dollars. JOHN WATKINS, *of Ampthill*.

Last summer I visited the Mississippi Valley to introduce the Reaper there in places where it had not been known. Four machines were sent on before me to places distant from each other. Every machine without exception gave the highest satisfaction. One was used in Kentucky for cutting hemp as well as wheat. Although the hemp was cut and laid completely, yet a great improvement is in contemplation for expediting the work, and saving the labor of hands. I refer for information to James Anderson & Co. of Louisville, Ky. Another machine was sent to Lafayette, Indiana. For an account of its performance I refer to Henry W. Ellsworth, Esq., of that place. Another machine went to Pekin, Illinois, where its performance was equally satisfactory. I refer to John Bennet, John Carmichael, and Matthew Brewer of Pekin. Another machine was sent to Mount Morris, near Rock River, Illinois. For a disinterested account of its performance I refer to Sam'l L. Hitt, of Mount Morris, and to Emmert, Halderman & Co. of Savannah, Ill.

My large machine requires four horses, and is warranted to cut from 15 to 20 acres per day—price 170 dollars. My light two horse machine is warranted to cut from 12 to 15 acres per day—price $100. Either of the machines is capable of cutting much more by a change of horses, and driving on a trot a portion of the time. Machines of medium size will be furnished at $140. The small machine is well adapted to ground cultivated in corn lands such as is usual on the eastern shore of Maryland and the counties of Va. bordering on the Chesapeake Bay.

No farther improvement is contemplated which can make the Reaper materially better than it now is. Farmers who are not acquainted with it may rest assured it is no humbug. To the references already given I will add the names of the Hon. Wm. H. Roane of Richmond, Va., the Hon. H. L. Ellsworth, Commissioner of Patents who witnessed its operation last summer in Indiana.

Baltimore, Md., Nov. 18, 1844. OBED HUSSEY.

TREES GNAWED BY MICE.

I am reminded by an article which lately met my eyes in the last number of the Cultivator, that now is the season for guarding against the attacks of mice on young fruit trees. I have accordingly just had my trees embanked slightly by inverting the sod in a circle about them by the spade. If young trees stand in grass ground, as is sometimes unavoidable but not desirable, they are in the greatest danger from these attacks. But by turning up a circular portion of the ground around them, as represented in the annexed figure, (fig. 1,) and raising it at the same time a few inches towards the tree above the common surface, the danger is greatly lessened if not wholly removed. The grass about the trunk no longer furnishes a hiding place for the mice; and the earth, by being raised, prevents the snow collecting at much depth about it, being blown away by the wind. By elevating a circular bank of earth ten inches or a foot around each tree, all danger is wholly removed.

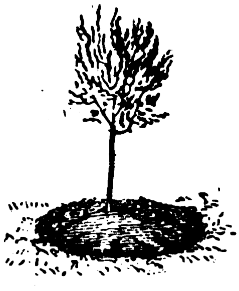


Fig. 1:

Another, and the chief reason for thus inverting the sod, is to promote the growth of the tree, as a few spadings during the course of the season will in many cases triple the growth of a young tree in grass ground; indeed, we may about as well throw away our trees, as to plant them in grass, without keeping the soil for some feet about them, well cultivated for several years.

When trees become actually girdled by mice, I save them without difficulty, if they are not peach or nectarine, by a mode sometimes described in the papers, represented by the annexed cut, (fig. 2,) and which consists merely in connecting the bark above to the bark below the girdle, by an inserted piece. If the tree is small, portions of the wood and bark, at the upper and lower extremeties of the girdled part, are cut away with a knife, so as to leave smooth horizontal faces, as shown at *a. a.* If the tree is large, these are best cut in with a mallet and chisel. The limb of a tree is then made just long enough to fit in and connect these two cut faces together, taking care that the line of separation between the bark and wood of the tree and inserted piece, exactly coincide as in grafting. This inserted portion may be a small round piece with the bark on, or a larger piece, split, leaving the bark on the outer side. The whole may then be covered with grafting wax or other suitable composition, and, if low enough, embanked with earth. In small trees, a piece may be thus inserted on each side—in large ones, several should be employe

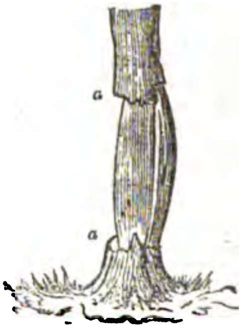


Fig. 2

Trees several inches in diameter, may be saved by this means, if the work is carefully done; and the whole will grow over in a few years. J. J. T.

10th mo. 1844.

SALT IN CURING CLOVER.

Analysis of the experiments of S. W. Pomery, Esq., by F. MORTIMER BUTLER.

These experiments, made in 1804, are recorded in Transactions of the Mass. Ag. Society, vol. I, p. 105.

Experiment "No. 8, July 13.—Cut 9 tons clover, *one third of tops turned brown,* [cut] by 2 o'clock, spread, turned, cocked by 6 o'clock.—14th. Cocks turned bottom upwards, began to cart at 10 o'clock, packed in a bay with *one peck of salt per ton, very little heat.* Result, color completely preserved."

No. 7, July 12.—[Is a similar experiment,] "one fourth of the tops turned brown."—13th. Taken in at 11 o'clock, "*half a bushel of salt, small degree of heat.* Result, very excellent hay."

No. 6, July 11.—"Weather intensely hot, and scorching sun; cut 4 tons clover by 1 o'clock; *tops begun to turn brown;* spread, turned, cocked by 5 o'clock.—12th. Cocks turned bottom up; carted before 4 o'clock, packed in a bay with *half a bushel of salt per ton.*—13th. Considerable heat, none after. Result, well cured."

From the remarks of Mr. Pomeroy, it is understood that July 11th, 12th and 13th, were good hay days. This might have been realized from the fact that the natural ripening of the grass was progressing rapidly, inasmuch as the tops on the 11th "began to turn brown," on the 12th were "one-fourth brown," and on the 13th were "one-third brown." In the same ratio, a few days more would have converted the grass into standing hay.

Please observe No. 8. In this experiment, after one-third of the tops had turned brown, there has been some wilting in the swath; some ripening, through exposure to the sun; and some sweating in the cock. Can it then be said, that the curing of the grass was effected by the one peck of salt per ton, or are we to be surprised at the very little heat. But little reflection is needed to settle these points. The grass had in reality become changed into hay before being carried in. But one thing, therefore, in the absence of salt, was needed for its preservation, viz. thorough drying. Our farmers are aware of the fact, that when the heating action is nearly over, that is when the sap is nearly ripe, hay may be carried in damp, and be preserved, provided that salt is used to take up the loose moisture. In this experiment, the cocks were turned bottom upwards, but not opened to become thoroughly dry. Salt then served to take up the loose moisture.

No. 6 was cut in a greener state, received similar treatment, and was carried in at 4 o'clock, consequently remained in cock five hours longer than No. 7; this extra time in sweating was not sufficient, at this stage of growth, to effect the ripening of the sap to the same degree as that occurring in the grass left standing that day; consequently, we notice "considerable heat." Our farmers say that it is best for hay to heat a little in the mow. In this experiment, the curing not being sufficiently completed in the field, was finished by sweating in the mow or bay. This sweating, however, was too great, and the hay would in all probability have been mow-burnt, had not salt been used to take up the loose moisture. Had the hay been less ripe, neither salt nor salt-petre would have saved it.

Please observe the progress of natural ripening from the 11th to the 13th of July (in No. 6, 7, 8,) as "begun," "one-fourth," and "one-third turned brown." Compare it with the artificial ripening effected in about one day's curing, as indicated by the degrees of heat, "considerable," "small degree," "very little heat." Do they not contrast well, even after allowing for the five hours extra sweating in No. 6, and setting aside the supposed agency of salt in the curing.

"No. 5, July 10. Four tons clover cut and managed as No. 4; [*clover in full bloom,* cut by 1 o'clock, spread, turned, cocked by 5 o'clock.] *11th, remained in cock.* 12th, cocks turned bottom upwards, carted middle of the day, and packed in a bay with *half a bushel of salt* per ton; small degree of heat. Result, well cured."

Between Nos. 6 and 7, there is a difference of one day's time in cutting, consequently one day's natural ripening. Only 5 hours extra time is allowed in curing that earliest cut. This I have stated to have been too small an allowance. Please observe that between Nos. 5 and 7 there is a difference of two days standing, and that in No. 5 there is two days curing, *one day being by sweating in cock.* Compare the degrees of heat and they will be found to correspond, viz: "small degree of heat." Had No. 5 been thrown open and thoroughly dried, and then packed away with one peck of salt per ton, we would in all probability, had the return, very little heat, color completely preserved. At all events, it is curing by wilting and sweating.

No. 3, is four tons clover, cut on the 9th July, "*remained in cock the 10th;*" carried in on the 11th; "half a bushel of salt." Result, well cured, of a good color. This is another specimen of wilting and sweating, and as such, speaks for itself. We will pass to other experiments, showing the matter more clearly.

"No. 4. July 10th.—Cut two tons clover *in full bloom,* by 1 o'clock; spread, turned, cocked by 5 o'clock. 11th, cocks turned upside down; carted in forenoon, very green, packed on a scaffold with *thcee pecks of salt* per ton, *heat some days.* Result, '*black, some of it mouldy, smoked when removed,* but eaten freely by horses.' " That is to say, the horses ate a black carbonaceous mass, to obtain the salt contained in it. In this experiment we have green grass, it being only in full bloom; with one day's curing, and yet the salt could not save it. The green state of the grass called for longer time in sweating, as will be seen.

"No. 2, July 9th.—Clover *in full bloom,* second year's cutting, with a small portion of herds grass, very rank; mown between 7 and 1 o'clock, spread, turned and cocked up by 5 o'clock. 10th, cocks turned bottom upwards; afternoon, three tons carted to the barn, *found too green;* remained on carts till the 11th; spread very thick on an adjoining field, turned, exposed three hours; carried in without loss of head or leaves; *supposed half made;* packed in a bay with *half a bushel* of salt per ton; next day a little heat. Result, well cured, of a good color."

This experiment speaks for itself; wilting and sweating had been resorted to. The remark, "supposed half made," seems to rob it however, of its true merit. There can be green hay, as well as green grass. In the former, the word green applies to the color; in the latter, to the succulent state. Well cured hay, by the wilting and sweating process, carries a pea green color, and thus is liable to deceive our farmers, who are more accustomed to a greenish hazel or chocolate tint. Any one familiar with the wilting and sweating method, would say that in No. 2, is presented a fair though not perfect specimen of curing by that method. The grass having been dried and wilted on the 9th, retained in cock and in mass (as on the carts) on the 10th then thickly spread out for 3 hours on the 11th, with the weather intensely hot and a scorching sun on that day, would naturally look for but little after heat in the bay. The remark, "next day a little heat," is sufficient to show that it was cured before it went in. The good color must have led to the supposition that it was but half cured.

No. 1, July 7th. Is "three tons fine English hay, *supposed to require one good hay day to make it;* packed 4 feet thick on a scaffold, with one peck of salt per ton; no heat; very damp some days after. Result, came out bright, sweet, and very heavy; cattle fond of it. This needs no remark. [The hay weather previous to the 11th of July, was by no means good.]

Permit me to remark that the science of agriculture is deeply indebted to Mr. Pomery for the precise detail of these experiments; they are a good pattern for those seeking improvement in agriculture. Respectfully,

F. MORTIMER BUTLER.

P. S. I make the following extract from the same work, page 106:

"My clover, which covered two acres, was beat down by a severe storm of wind and rain, preceding the 22d of June. The 25th, I gave directions to cut, and dry the water from it as soon as possible; to cart it into my barn the same day, if sufficiently dried, and to sprinkle from three pecks to one bushel of salt on what might be considered a ton, when cured, in three layers.

These directions were executed with care; the salt was coarse Liverpool. Four heavy loads were put into the barn before night; the remainder before the morning of the 26th. It was perfectly green, and in a perfect blow of flowers. It was packed on a scaffold 20 feet by 10. *I believe not a stalk or leaf was wilted.* The weather appeared unsettled, which induced me to have it housed as soon as it was dried.

The third and fourth days succeeding, every appearance was favorable to its preservation. It continued green, and the flowers as fresh as when first cut. From this period it changed color rapidly to black, with a considerable degree of heat and moisture, from a solution of the salt and the succulent state of the leaves and stalks. It wet the floor, and in many places dropped a salt colored liquor. It discharged very offensive effluvia for several days, after which the hay changed to a dirty white, and appeared rotten. The heat subsided, as is usual, after a completion of the putrid process. In the last described state it remained, and I presume is of no value except for manure.

A Friend to Experiment in Agriculture.

GRASSES FROM BERMUDA.

Editor of the Cultivator—I send you herewith some samples of grass forwarded by Gov. Reid from Bermuda, with a view to its comparison and identification with the so called "Bermuda grass" of the southern States, samples of which he supposes you have in your possession. The laudable zeal and enterprise which Col. Reid has shown in promoting the agricultural and other interests of the colony over which he presides, and his generous devotion to the cause of science, and the general interests of our race, entitle him to any information which it may be in your power to impart. You have annexed an extract from his letter to me, which accompanied the grasses. Very truly yours,

Wm. C. Redfield.

Gov. Reid says: "In the Cultivator I have more than once observed allusion made to Bermuda grass as a grass highly prized in the Southern States. As specimens have been sent from Louisiana to the Editor, I have thought that he or others might like to compare them with Bermuda specimens. I have therefore sent three specimens for him, and although we suppose that No. 1 is what is called Bermuda grass in Louisiana, we are not quite certain of it. If the editors wish to identify this grass with any one of our native grasses here, I shall with great pleasure assist them farther.

"I also enclose a fourth grass, which we call Fox-tail grass. I have watched it ever since I have been here, and think it a valuable grass. It had previously been neglected and almost unknown. The Timothy grass of the United States is said to have been brought from Carolina to England in 1780, by Timothy Hudson, and from him derived its name. But what I now send you is not Timothy. Yet it may really be what Timothy Hudson took to England; for it agrees better with the soil and climate of Bermuda than the imported Timothy grass."

Description accompanying the grasses.—"No. 1, called in Bermuda, *Pond grass*, from liking moist soil. This is supposed to be what is called Bermuda grass in the southern States of America. It is a very valuable grass."

"No. 2. This resembles the other in general form and habits, but looks to the eye much coarser, and seems to like the spray of the sea and swampy ground. It has been but little noticed in Bermuda, and is probably much inferior to No. 1."

"No. 3. This is called the *Crab grass* in Bermuda. It is prized by the inhabitants; and as it mats the ground, and subdues almost all the others, it has hitherto received the most attention; though No. 1 will probably be found to be the most valuable."

"No. 4. A specimen of the Fox-tail grass of Bermuda."

Remarks.—We are much obliged to Gov. Reid and Mr. Redfield, for the pains they have taken in forwarding the above described specimens of grasses. Nos. 1 and 2 evidently belong to the same genus as the "Bermuda grass" sent us from Mississippi by Mr. Affleck, and the first, which Mr. Redfield thinks is *Paspalum vaginatum*, bears a strong resemblance to it, though it is not identical. We have several species here of similar character, but they are all *annuals*. Loudon enumerates twenty-six species. No. 3, marked (we suppose by Mr. Redfield,) as *Rottbœllia dimidiata*, is somewhat different from the others, though still resembling them in several general characters, such as the division of the head, the manner of producing seed, and striking root. The specimen marked "Fox-tail," is apparently the same as the annual Fox-tail, *Alopecurus agrestis*, and is frequently troublesome by growing among corn and other cultivated crops on light warm soils, near barns, &c., and is often called "*barn-grass.*" It will be observed that it is quite different from Timothy, *Phleum pratense*, the latter being a perrennial grass of a different genus. Though none of the tribes of grasses to which the specimens sent belong, are considered of much value with us, yet the difference is so great in our location and climate from that of Bermuda or the West India Islands, that they may be there highly valuable.

We may be permitted to remark here, that the deep interest which we have repeatedly seen manifested by Gov. Reid, in the cause of agricultural improvement, cannot fail to be of essential benefit to the people of the Island under his government.—Eds.

APPLES FROM NOVA SCOTIA.

Mr. L. Tucker—I send accompanying this letter, a box containing the following varieties of Nova Scotia apples, and a newspaper containing a report of our County Cattle Show and Fair:

No. 1. Name unknown—Great bearer; good for eating

No. 2. Fall Pippin—Middling keeper, and good for cooking.

No. 3. Cat Head—Good for cooking.

No. 4. Unknown—Good apple.

No. 5. Calkins—Good for eating; may be used in December.

No. 6. Gravenstein—Lately introduced from England; one of the best apples raised; good bearer.

No. 7. Unknown—Supposed to be the U. S. Spitzenberg.

No. 8. Unknown—But good bearer.

No. 9. Nova Scotia Spitzenberg—Good keeper and shy bearer.

No. 10. Scotch (called the,)—Good keeper and bearer; of good flavor.

No. 11. Ribston Pippin—Good flavor; good bearer

No. 12. Long or Bishop Pippin—First rate apple.

No. 13. Sheep Nose—Good bearer; good eating in December.

No. 14—Fall Pippin (called)—Good for cooking; good bearer.

No. 15. Greening—Superb keeper; good flavor.

No. 16. Pomme de Gras—Fine flavor.

No. 17. Iron Apple—Good keeper.

No. 18. Native or Wine—Good bearer; good flavor in November and December.

No. 19. Unknown—Good flavor.

No. 20. Nonpariel—The best keeper we have. I have kept them for one year, and I have known them to be kept two, although the flavor "absquatulates."

I could not make a general selection as I intended, in consequence of the vessel sailing sooner than I expected, All that I send, with the exception of the *Wine Apple*, are varieties introduced from the United States and England, principally by the Hon. C. R. Prescott, who must be acknowledged the father of horticulture in Kings County. The Wine Apple, so named, was planted by the French before the colony became a British Province. There are many good varieties of native fruit, but the imported are so much better, that in planting an orchard or grafting, they are mostly selected. I hope you will not think I send them presuming them superior to productions of your fine country, but simply to show you that we can raise fruit and of a fine quality.

Yours, &c. CHARLES C. HAMILTON.

Cornwallis, Oct. 14, 1844.

The box of apples spoken of above, came safely to hand. Several of the specimens are quite large—all are of fine shape, and some of them of superior flavor. In point of quality, we think the *Gravenstein*, No. 6, stands at the head. The sample sent is the first of this noted variety we have seen. It is in all respects a very superior apple—excellent in flavor, and beautiful in appearance. The sample marked No. 10, *Scotch Apple*, is likewise a highly flavored and fine apple. The *Ribston Pippin*, No. 11, which in former years has been a favorite apple with us, is a good sample, and fully sustains the character of the variety. The same may be said of the *Nonpareil*, No. 20. The *Native* or *Wine*, No. 18, is a good flavored apple, and would probably make superior cider. The *Pomme de Gras*, No. 16, we should think a fine fruit. The sample marked *Greening*, No. 15, is not the apple commonly known by that name in the United States. The sample marked No. 7, "supposed to be the *U. S. Spitzenburg*," is not that apple. The Spitzenburg here cultivated, has a yellowish flesh color, is crisp, and is of a brighter red color than the sample sent. The *Long*, or *Bishop's Pippin*, No. 12, we think is identical with our *Bell-flower*.

Considered in all respects, the lot of apples sent by Mr. Hamilton, shows that the people of Nova Scotia have no need to send abroad for that description of fruit, but that on the contrary, the soil and climate of that country, will admit of their producing fine qualities for their own consumption and exportation.—EDS.

SHADE AND TIMBER TREES.

I was glad to see the remarks in a late No. of the Cult. on "Trees for Shelter and Ornament," with which I entirely agreed, with one exception. This is in attributing great benefit to shade for cattle in pastures. In saying this, I would be the last to foster the spirit of vandalism which unrelentingly sweeps from the farm, those beautiful and magnificent and refreshing objects of creation, ornamental trees. There are reasons enough to induce any man who has any refinement or civilization about him, to preserve a sufficient plantation of trees about his dwelling and farm yard, without urging what he may doubt as fact, and which indeed may be incorrect. We often lose as much by urging too many or untenable reasons, as by saying too little.

I very much question the propriety of allowing trees to stand along the borders of cultivated fields, or in pastures where the land is smooth, fertile, and dry for culture. The difficulty they cause in even and neat cultivation, is obvious to most farmers; and the loss of crops they occasion beneath their shade is much greater than many suppose. But besides these, it may be questioned if they do not often prove detrimental to the comfort and thrift of cattle, rather than otherwise. "But the cattle dread the scorching rays of the sun!" So do the horse-flies, and blood-suckers, and musquetoes. Hence they all seek the shade together; and there the cattle stand, for the comfort of the shade, and fight flies, till gnawing hunger compels them to seek for pasturage in the sun.

Experiment, of course, ought to settle this point; I know of but one, however, correctly performed, which permit me to state, as it first appeared in the New Genesee Farmer. Arthur F. Bill of Indiana, who milked fifty-five cows, had two pastures, of seventy-five acres each, both seeded with the same kind of grass, the feed equally good and both well watered. One had no shade in it; the other had scattered trees, and a small piece of woodland. The cows were confined to each pasture, each alternate week. When the hot weather of summer came on, the proprietor noticed that when the cows were in the shady pasture, the weight of the daily cheese was from 15 to 20 lbs. less than during the week they were in the other pasture. Such was the eagerness with which they sought the shade, that they were noticed to feed only half as many hours during the day when they could find it, as when wholly in the sun.

But if trees are not allowed in arable fields, where then shall we have them? I answer, first, about your houses. Every man who has a wife, or children, is bound by every reason, selfish, humane, moral, and religious, to render home pleasant to the former, and attractive to the latter. How many young men might thus have been preserved from bad company and dissipation and ruin.

Secondly, along hill-sides, gulleys, and other uneven pieces of ground, according to the excellent directions in the article just alluded to, and where the growth of valuable and well selected timber might in a few years prove of great value.

And with the hope of answering, in part, some of the inquiries of that article, permit me to say a few words on the Larch.

The European Larch has been very extensively planted in some parts of Scotland as a timber tree, its great excellence having been thoroughly proved. The rapidity of its growth is remarkable. Some trees planted on the fertile grounds of the Duke of Argyle, grew to a height of 120 feet in fifty years, averaging nearly two feet and a half each year. Other trees, eighty years old, produced six loads (300 feet) of timber, each. The Duke of Athol had the satisfaction of seeing a British frigate built at Woolwich in 1819 and 1820, of timber planted by himself and his predecessor. The durability of this species is very great. Posts of oak, on the river Thames, which were placed so as to be alternately covered by water, and left dry, by the rise and fall of the tide, were twice renewed from decay in the course of a few years; while those made of larch, in precisely similar circumstances, remained wholly unchanged.

In speaking of its value and rapidity of growth, the Duke of Athol said, "It may vie in growth and profit with the Huntington willow, which has deen said to buy the horse, before any other tree could buy the saddle."

It has been remarked, in connexion with its durability, that while the heart wood is not formed in other resinous trees till after many years,—the larch begins to make it soon after it is planted; branches only an inch in diameter containing as great a proportion of heart wood as the largest trees of the forest.

This is not the case with the American larch, a considerable portion of sap wood existing in small trees, which soon decays. The heart wood however is durable; but to what degree I do not know.

The European larch appears to be a native of mountainous districts, and of course succeeds well on poor and hilly regions. It grows well when planted in common soils in western New-York, but to what size or with what degree of rapidity, more and longer experiments are required to determine. There can, however, be scarcely a question of the propriety of its introduction as a timber tree, provided the young plants can be easily obtained, which is not now the case. For ornamental beauty, it has scarcely a rival of its kind.

The American larch exists in great abundance in many swamps in the northern portion of western New-York, where it is commonly called *Tamarack*, perhaps corrupted from *Tamarix*, which it slightly resembles externally, but to which it has no affinity. It may be easily transplanted to dry upland when small, where it flourishes, especially if care is taken to remove with it a portion of the muck adhering to the roots. For ornament, it bears no comparison with the European. For durability, as fence posts, timber, &c., it is not enough examined or known, and I hope those who have tried it, will communnicate their experiments, for I see I have not given much information, after all, on the subject. J. J. T.

GRAPE VINES.

MESSRS. EDITORS—I saw an article in the 10th No. of the present vol. of the Cultivator, stating that a grape vine, left to its natural habits, will bear as well as if it were dressed in a proper manner. No doubt it will *bear*, but who will be able to give sufficient proof to a person acquainted with vegetable physiology, or with horticulture, that a grape vine or any fruit-tree, left to itself, will bear as *much* and as *good* fruit, as those dressed in a judicious manner? Let the enlightened readers of the Cultivator look at the treatment the vine receives in Maderia, the Ionian islands, or any other country where the cultivation of the vine is made a science, and they will soon see the absurdity of trying to maintain that nature, left to herself, will in this case perform her work as well as it can be done by nature's *journeymen*. I think it useless, for the present, to advert to further proofs, but should your readers desire it, I will, in a future number, speak more fully of the utility of general pruning.

Greenbush, Nov. 1844. TYRO.

SWEET AND SOUR APPLE.

A writer over the signature of "S." in the October number of the Cultivator, remarks on the various humbugs of the day. We are are well aware that there are humbugs enough afloat at this day, to satisfy the most credulous wonder seekers. Among several undoubted cases of this character he alludes to the apple, said to be produced, part sour and part sweet. The writer of this has within a few days, seen and tasted an apple, one side of which was decidedly sour, and the opposite side as decidedly sweet, *not produced* by placing the bud "upside down," but by taking parts of two buds, one from a tree producing sour, and one from a tree producing sweet apples, and joining them nicely together.

Can you inform your readers where grafts of the "King apple" can be obtained? We have eaten one from the orchard of Mr. George Walker, near Ithaca, Tompkins co., and consider it the best apple produced any where. The King apple is red, of a medium size, slightly sour, and very juicy and rich. When baked, it makes a delicious jelly that nearly fills the pan. E. R.

We do not know the "King Apple," nor where scions of this variety can be obtained. It is possible it may be what is described in some catalogues as the "King of Pippins," which Mr. Kenrick, in his New American Orchardist, says is "a first rate fruit, which no garden should be without; middle sized; oblong; color, clear golden yellow, fine red next the sun; rich and juicy. Autumn. Productive."

CULTIVATION OF SPRING GRAIN AT THE SOUTH

It appears that in South Carolina, oats and barley may be sown in the fall, and the frost of winter is not hard enough to kill them. Our friend, Mr. Wm. Summer, of Pomaria, as chairman of a committee appointed for the purpose, recently submitted a report to the Newbury Agricultural Society, on the cultivation of oats, rye, barley, and buckwheat, from which we gather the following facts:—For oats, fall sowing is preferable, as the oats are not liable to be injured by spring drouth; the yield is greater, and the head much better than if sown in the spring. If not sown in the fall, they should at all events be sown during the month of February. Cotton seed, if applied to them, is of more importance to this, than to any other crop. The seed should be carefully plowed in, or if the ground has just been broken up, a heavy iron toothed harrow would perhaps answer a good purpose in putting the seed to a proper depth. The selection of proper seed is also a subject of much importance. There are however, some excellent varieties of oats cultivated among us. The Bremen or Potatoe Oats, is preferred by some, while others prefer the Ruffled. The black and white Tartarian, although not yet cultivated among us, are said to be the best description for the poorest exhausted soils, producing more on those sorts, than any other variety.

"*Rye* has been cultivated perhaps as long as any of the varieties of small grain, and its cultivation is becoming a matter of increased importance, as it is found particularly adapted for grazing, furnishing the best early spring pasture we can have recourse to for lambs, young calves, and pigs. Care should be taken not to graze horses, cattle and hogs upon it while young, and particularly while the ground is wet. It is not so easily pulled up by the roots, and is therefore better adapted to grazing hogs, than any other variety of small grain. If the intention is to pasture, it should invariably be put in during the month of September; it will then be fit to graze in February, at which time it will be particularly valuable, especially for ewes, with early lambs.

"*Barley*, has been cultivated from the earliest antiquity, and was much in use among the Romans, both as food for soldiers and horses. It is, upon the whole, one of the most valuable and important grain crops, which we can cultivate. It is almost invariably a certain crop, as from its early maturity it makes itself from the winter seasons. For soiling cattle and horses it is superior to any other grain that we can have recourse to. When soiling is the principal object, it is adviasble to sow at different times, from the first of October until the last of November; thus furnishing it in succession from the first of March until May. When young, it should be cut off carefully with a keen grass scythe, and raked neat and careful, and if the soil has been made rich, a second cutting can be obtained. It requires a rich loamy soil, and where this cannot be readily obtained, the ground must be made rich by supplying the necessary quantity of stable manure. Ashes is important to this, as it is to every other grain crop. Unless the ground is made rich, you can never expect to succeed with the crop; and as only a few acres are required for the purpose of soiling, even on the largest farm, the ground can be readily manured. Cotton seed applied liberally, is also an excellent manure. As soiling is the principal object, the spot selected for barley should be near, and convenient to the stables and cattle yard. Sow from a bushel to a bushel and a half to the acre. The ground should be deeply broken up, and the seed neatly plowed in; the whole should then be well harrowed, so that the ground is thoroughly and finely pulverized."

Rotation of Crops for South Carolina.—We make the following extract from an address delivered before the Greenvile Ag. Society of S. C., on the 19th Oct. last, by Hon. JOEL R. POINSETT. He says:—"Whatever system may be adopted must be based upon the rules laid down above. Do not cultivate grain crops on the same land two years in succession. Do not repeat the same crop at too short intervals. Change the seed frequently. The order of succession, as I said before, is of little consequence. Cultivate turneps in drills, and abundantly, as also sweet potatoes and peas; all of these are to be regarded as fallow crops, fitting the land to receive grain. Raise rye, the long straw of which is very useful in the preparation of dung. Manure your fields, and cultivate only that portion of land which you can manure sufficiently. I will venture to suggest a rotation of crops for four years, which it appears to me would suit our soil and climate:—

In the Light Soils.

First year, turneps and potatoes.
Second year, rye and oats with clover seed.
Third year, clover, cut once and plowed in.
Fourth year, wheat.

On Stronger Lands.

First year, Indian corn with peas well manured.
Second year, rye and oats with clover seed.
Third year, clover cut and turned in.
Fourth year, wheat.

These rotations are founded upon the principle that as much land as can be spared shall be cultivated in green crops, and a portion of it left in pasturage, in order to afford sustenance for cattle, and thereby furnish manure for the corn and grain crops. It is vain to encourage the farmer to raise fine cattle, until he has been taught to cultivate green crops to feed them. Fine cattle fed on broom sedge, and left to seek a scanty subsistence in the woods, will soon degenerate; whereas, the common stock of this District, if fed on turneps, potatoes, peas and clover, would improve and become an excellent race. The heat of the climate cannot be pleaded in excuse for our neglect. Lucerne will stand our sun and furnish permanent pasture. Clover will flourish and yield abundantly the first and second year; after which the best use that can be made of it is to turn it under, to prepare the land for wheat, rye and oats."

POULTRY.

James L. Child, Esq., of Augusta, Maine, gives in the Maine Farmer, an interesting account of his mode of managing hens. He keeps several varieties, and is making some crosses by way of experiment. He gives the preference, "considering their qualities, food, eggs, hardiness, &c., to the Polands," and says "they have truly been denominated *everlasting layers*. The Poland Hens seldom show an inclination to set, and the Dorkings much less than the other varieties. My Hens laid nearly as well during the winter as in the warm weather. Their habitation was warm, and so constructed as to bring them to the ground, where they found, at all times, a good supply of old plastering, ashes, pulverized oyster shells, charcoal, fresh water, once or twice a week beef liver, or some other kind of meat or grease instead. I feed chiefly upon baked or boiled potatoes, giving their food to them warm in the morning and at night, occasionally dealing to them a little corn or oats, and giving them all the crumbs, and skins, and fragments, of the cooked vegetables. To prevent their being infested with lice, about once a fortnight I mixed in dough, so as to discolor it, a quantity of flower of brimstone, which is the sure preventive as well as remedy, and may safely be given in small quantities to young chickens for the same purpose. It will be seen from my mode of keeping my Hens, which averaged about 25 and 3 Roosters, through the winter, that I cannot give the precise cost of keeping, but I am satisfied that potatoes may be given as the general food, and Fowls kept cheaper in this mode than in any other—and they will always be ready for the spit, if not stinted in quantity. I find my Fowls fat at all seasons. I estimate that my hens afford me from their eggs, without regard to their meat, a clear profit of fifty per cent. I confine them to their yard, hen house, and barn cellar during gardening, and to their house and cellar in the winter, and think with that degree of confinement, they lay better than when allowed to wander at large. Hen houses and roosts should be kept neat, and often whitewashed, and their nests should always have half an inch or more of ashes or lime on the bottom, under the hay. Broken or rotten eggs should never be allowed to remain in their nests. Dirty water should not be given them. To do well they require pure water, and all their food fresh and uninjured from taint or fermentation. I estimate that during the year, (deducting the time of their molting, and inclination to set) I have got daily one half as many eggs as I have had laying Hens. Every family can, with a very little trouble with their flock of a dozen Hens, have fresh eggs in plenty during the whole year, say in all, 2000, and 100 full grown Chickens; and of all the animals domesticated for the use of man, (if such be the fact) the hen is capable of yielding the greatest possible profit to the owner. I have stated that I gave my Fowls meat or grease; this is indispensable if they are not allowed to go at large. If corn is fed out, it should be soaked, and 15 bushels is a fair yearly allowance for 12 Hens and a Rooster. But they should always have food by them, and after they have become habituated to find enough at all times in the trough, they take but a few kernels at a time, except just before retiring to roost, when they will take nearly a spoonful into their crops—but if they are scantily or irregularly fed, they will greedily snatch up a whole crop full at a time, and stop laying, and not unfrequently engender some fatal disease.

THE HOUSEKEEPER.

From the "Housekeeper's Annual" for 1845, a pretty little work issued by Carter & Co., Boston, we copy the following Recipes:

To make Yeast.—Boil for half an hour two quarts of water, thickened with about three spoonfuls of fine flour, and sweetened with nearly half a pound of brown sugar, or two teacups of molasses. When almost cold, put it into a jug adding four spoonfuls of fresh yeast. Shake it well together, let it stand uncovered near the fire for a day to ferment. There will be a thin liquor on the top, pour this off, shake the remainder, and cork it up for use. To make half a peck of flour into bread, a quarter of a pint of the above mixture will be needed.

Soft Custards.—Boil one quart of new milk and with it cinnamon, mace, or lemon peel. Nine eggs, leaving out five whites, beat them well and add them to the milk, sweeten it with loaf sugar. Add rose water if you like. Put the custard into a pitcher, place it in a vessel of boiling water, stir it constantly. Beat the reserved whites to a stiff froth with powdered sugar, add a little rose water, or essence of lemon. Lay this frost on the top of the custards. The contrast is pretty, and more cups may be filled.

Pennsylvania Apple Butter.—To make this according to German law, the host should, in the Autumn, invite his neighbors, particularly the young men and maidens, to make up an apple butter party. Being assembled, let three bushels of fair sweet apples be pared, quartered and the cores removed. Meanwhile, let two barrels of new cider be boiled down to one-half. When this is done, commit the prepared apples to the cider and let the boiling go on briskly and systematically. But to accomplish the main design, the party must take turns at stirring the contents without cessation so that they may not become attached to the sides of the vessel and burn. Let the stirring go on till the amalgamated cider and apples become as thick as hasty pudding, then throw in powdered allspice, when it may be considered as finished and committed to the pots for further use. This is Apple Butter; and it will keep sweet for many years. It is a capital article for the table.

COTTON BEDS.

We have received from J. A. Geurnsey, Esq. a copy of the "Southron," published at Jackson, Miss., containing some remarks on the advantages of cotton for bedding. These advantages may be summed up as follows. It is claimed that "it is the cheapest, most comfortable, and most healthy material for bedding, that is known to the civilized world." In addition to these, may be named "*superior cleanliness*—vermin will not abide it—there is *no grease* in it, as in hair or wool—it does not get *stale* and acquire an *unpleasant odor*, as feathers do—moths do not infest it, as they do wool—it does not pack and become hard, as moss does—nor does it become dry, brittle and dusty, as do straw or husks—and it is in many cases *medicinal*." It is said not to cause that lassitude and inertia, which is produced by sleeping on feathers. People not acquainted with it, have supposed they had been sleeping on the best feathers, when in fact their beds were made of cotton. The relative cost of cotton compared with feathers, hair, &c. may be seen from the following statement:

"*Cost of a Hair Matrass.*—They are generally sold by the lb. and cost from 50 to 75 cents per lb. 30 or 40 lbs. will cost $15 or $20.

Wool.—30 lbs. wool, at 30 cents per lb. $9; 12 yards ticking, at 12½ cents per yard, $1 50; labor, thread, &c., 2 75. Total $13 25.

Feathers.—40 lbs. feathers at 30 cents per lb., $12 00; 15 yards ticking at 12½ cents per yard, 1 87½; labor, &c. $2 75. Total $16 62½.

Cotton.—30 lbs. cotton at 8 cents per lb. $2 40; 12 yards ticking at 12½ cents per yard, $1 50; labor, thread, &c., $2 75. Total $6 65."

It is recommended to run the cotton through a "picker," where one can conveniently be obtained, before using. This gives it additional cleanliness and buoyancy.

The substitution of cotton for bedding throughout the United States, would be an immense saving, besides opening a new avenue for that article to an extent according to the estimation of this writer, equal "to more than two of the largest crops of cotton ever produced in the United States."

Mr. W. Turnhill, of Braceboro', near Stamford, has now in his yard a goose which has been on the same premises for 50 years. She lately laid 11 eggs, has hatched, and is bringing up 11 fine goslings.—*Stamford Mercury.*

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Hobart, J. Griffin, p m
Hudson, J. McKinstry, p m
Homer, P. Barber
Henderson, E. Burnham, p m
Hoosick, M. Armstrong, p m
Hartford, W. E. Congdon
Hartwick, James L. Perkins
Hogansburg, M. McMartin
Harpersville, D. Wilcox
Harrisburg, E Gallup, p m
Hunt's Hollow, S. Hunt, p m
Higginsville, G. B. Fitch, p m
Hartwick, L. Harrington, p m
Hamilton, A. F. Chapin
Hoosick Falls, L. C. Ball
Hannibal, T. Skelton, p m
Henrietta, E. Kirby, p m
Hempstead, S. C. Snedecker, p m
Herkimer, L. B. Wakeman
Howlet Hill, J. Case, p m
Helena, D. Nevin
Hart's Village, J. Haight, Jr. p m
Huntington, S. C Rogers, p m
Ithaca, M. McCormick, p m
Ilion, E. D. Devoe, p m
J. Ingersoll
Jordan, W. F. Graves, p m
Jamestown, F. H. Waite, p m
Jonesville, R. H Kennedy
Johnstown, E. Wells
Jamesport, D Williamson, p m
Junius, A. B. Sherman
Jericho, J. Ellison, p m
A. G. Carll
Jamesville, J. W. Brewster, p m
Johnsburg, C. Burdett, p m
Jacksonville, C. H. How, p m
Junction, L W. Hawthorn
Knox, D. Cary
Knowlesville, C. J Hood, p m
Kingsbury, L B. Armstrong
Kendall, O. Plocker
Kingston, J. S. Smith
Ketcham's Corners, D. Weston

AGENTS FOR THE CULTIVATOR.

Kinneys X Roads, Robert Wall
Keyserick, C. D. Alliger
Kirkland, J. M. Kimball, p m
Keeseville, A. Macomber
A. Keese
Kiskaton, R. M. Lawrence, p m
Kinderhook, B. Van Schaak, p m
H. Hoysradt
Lyons, E. Price, p m
Lafargeville, G. Persons, p m
Lake Ridge, L. A. Morrell
Livonia, A. Beebe, Jr., p m
Lowville. Hiram Mills
Little Falls, M. Bettinger, p m
Leonardsville, D. Hardin, p m
Leeds, J H. Person, p m
Laurens, H. Stroug, p m
Lairdsville, Pomeroy Jones
Lancaster, E. Safford
Lansingburgh, Alexander Walsh
Limerick, J. Gillingham
Lithgow, F. J. Sisson, p m
Lee, D. Brown
Lockport, H. W. Scovill, p m
Lewis, L Sherman, p m
Livingston, H. Baker, p m
Litchfield, T. R. Harmon, p m
Le Roy, C. Danforth, p m
Little York, G. Curtis, p m
Lexington Heights, M. Bayley
Lewiston, L. Bement, p m
Lima, J. Nicholson
Lysander, N. Hart
Locke, J. H. Wood
Ledyard, A. Avery
Manlius, J. S. Rhoades, p m
Marshall, H. L Hawley
Mabbetsville, J Mabbett, p m
N. Haight
Middleville, V. S Kinyon
Mellenville, A. A. Jacoby, p m
Mamaroneck, J J. Marshall, p m
Manhasset, R H. Titus, p m
Malden, J. Preston, p m
Masonville, F. B. Cleveland
Malone, G S Adams, p m
Middle Granville. G W. Porter
Marcellus, S. Dalliba, p m
Morristown, E. W. White, p m
Minaville, D Cady, p m
Mechanicsville, C. Vernon
Milton. W. Soper, p m
Manchester Bridge, A. Graham, Jr., p m
Massena, A. H. Andrews, p m
Moores, James Humphreys
Mumford, T. Faulkner
Manheim Centre, J. Markell, p m
Middle Island, B. T. Hutchinson
Marietta, A Hicks
Macedon Centre, J. Odell, p m
Milan, S. Thorn, p m
Madison, L. W. Curtis
Mayville, R. Sackett, p m
Moriches, J. M. Fanning, p m
Milford, L Russell
Morrisville. H. C. Curtis
Marcellus Falls, R. Lothridge
Moscow, D H Wright
Macedon, H. Reed, p m
J J. Thomas
Maltaville, J. Tallmadge
Morean, L. Reynolds p m
Montgomery, J. W. Sears, p m
Middleburgh, A. Borst
Mexico, G. S Ferriss, p m
Mount Morris, H. Swan, p m
Mariaville. N. Wiggins, p m
Minden, J P. Keller, p m
Malden Bridge, H Van Valkenberg
Marlboro', M. Fletcher
Maple Grove, O. H. Wheeler
Meriden. S. A Law, p m
Middle Hope, J. W. Fenton, p m
Mount Upton, W. Gregory, p m
Monroe, G. W. McGarrah, p m
Montezuma, S. W. Badlong, p m
Middlefield Centre, H. Bowen
Milo, H. W. Dunn
Moffit's Store, W. Ray
Niagara Falls, S. De Veaux
Nashville, A. S. Morse
New Paltz Landing, J. C. Dubois
North Harpersfield, R. W. Hambleton, p m
New Paltz, W. H. Judd
Navarino, A J. Cummings, p m
North Port. S. E. Bunce, p m
Norway, D. Dubois, p m
Newville, S. Stafford
North Urbana, J. Wood
New Baltimore, R. S. Lay
N. Y. Mills, S. Maltbie, p m
New Hartford, Cyrus Ingalls
New Lebanon, M. Y. Tilden
New Lebanon Springs, J. Bull
New Lebanon Centre, F. W. Everest, p m
New Concord, O. Palmer, p m
Nelson, J. Donaldson, p m
New Rochelle, J. T. Eells, p m
North Granville, Dr. Utter
North Blenheim, N. T. Rossiter
North Salem, James Scott
New-York, M. H. Newman
Newark, C. S. Button, p m
Northeast Centre, J. G. Caulklin
Newtown, Charles Cook, p m
New Berlin, J. T. White
Newburgh, D. L. Proudfit
North Adams, Mr. Mack
New Windsor, G. L. Sherwood
Ninevah, H. Edgarton
North Easton, W Corens, p m
North Gage, A. F. Rockwell, p m
Norwich, S. Smith, p m
Nunda Valley, G. Wing
Newport, G. B Ramer
N. Steventown, H. R. Cranston
North Bainbridge, C. Kirby, p m
New Lisbon, H. Barrett
Oswego, J M Hart
Orlo Steel
Oxford, H. Balcom, p m
Oneonta, S. Sullivan
Orange. A. Gaylord, p m
Oyster Bay, S. Young
Orient, T. D. Tuthill
Oaks Corners, E. F. Crandell
Ogdensburg, P. B Fairchild
R. W. Bush
Ovid Centre, James Barry
Ovid, C. A. Gibbs, p m
Otego, L. Heale
Oneida Castle, H. G. Wetmore
Owego, George J. Pumpelly
Orleans, R. King, p m
Oxford Depot, J. H. Tuthill, p m
Onondaga, H. P. Shove, p m
Onondaga Hill, M. J. Potter
Oriskany Falls, A. M. Hitchcock
Otisco, H. Smith, p m
Otisville, A. Smith
Oran. W. C. Williams
Paine's Hollow, C. Filkins
Palmyra, J O. Vorse, p m
Poolville, O B. Lord
Pottsdam, J. Smith, p m
Paris, J. W. Head
Peoria, J. Gordon, p m
Pleasant Plains, B. J. Van Keuren, p m
Peru, W. Keese
Pamelia 4 Corners, C. G. Harper
Poughkeepsie. D. B. Lent
Perry, E. G. Billings
Pultneyville, W. H. Rogers
Pavillion, W. M. Sprague, p m
Perch River. C. B. Avery
Plessis, J. Clark
Port Chester. G. W Smith
Palatine Bridge, L. Spraker
Peekskill, W. B. Howard, p m
Parish, B. G. Flannegan
Perryville, R. Ransom
Peterborough, J. Van Vleeck
Pained Post, E. Townsend
Parma, L. Tallmadge
Pittsford, J. D. Adams
Port Orange, A. Crocker
Pultney. S. G. Smith
Phelps, J. Watson, p m
Persia, J. B. Wilton
Petersburg, S. Allen, p m
Penn Yan, D. A. Ogden, p m
Plattsburgh, L. Platt, p m
Pine Plains, R W. Bostwick
Pawlings, A. Sill, p m
Port Jackson, J. G. Hull, p m
Pierrepont Manor, S. E. Williamson, p m
Paris Hill, R. Porter
Pleasant Valley, M. D. L. Phillips
Prattsburg, H Pratt
Poland, N. Daniels
Penfield, R. Emburgh
Pekin, S. S. Sage, p m
Pines Bridge, S. Wood
Palentine Church, J. H. Markell
Port Jervis, C. Hardenburgh
Prattsville, J. G. Smedburg
Quaker Hill, J. Toffay, p m
Quaker Springs, D. Griffin
Rochester, D. M. Dewey
Samuel Hamilton
Rodman, Oliver Stone
Rexford Flats, L. E. Sheldon
Rushville, P. Vorce, p m
Root, H. Voorhees
Richmond Mills, N. Garlinghouse
Red Hook, P. N. Bonesteel
Richfield Springs, A R. Elwood
Rock Stream, P. McKey
Richford, C. L Rich
Richfield, J. C. Munson, p m
Rossie, Z. Yates, p m
Rutland, J. G. Tuttle, p m
Richland, H. N. Wright, p m
Rensselaerville, R. L. Mumford
Rye, B. Strong, p m
Rushford, G, Grimmard
Rock City, J A. Stockenburg
Russia, J. Bettinger
Red Creek, S. T. Burnall
Remsen, J. Jones
Rhinebeck, W. B. Pratt, p m
Rome, A. L. Johnson
Rose, E. N. Thomas, p m
Royalton, C. Butler
Richmond, J. Johnson, p m
Rosendale, J. A. Snyder, p m
Rouse's Point, J. Pratt
Red Mills, J. Whiting, p m
Rondout, E. Suydam, p m
Salt Point, Wm. Wild, p m
Salubria, J. Thom
Salisbury, W. Burrell
Shultzville, D. H. Shultz
St. Johnsville, R. Failing
Salisbury Corners, S. Thompson
Sammonsville, Mr Sammons
South Columbia, E. Sanford
Schuyler, L. Burch
Seneca Falls, Hon G. V. Sackett
Starkville, S. R. Hall, p m
Stephentown, N. Gardner, p m
Sterling, H. Crockett, p m
South Trenton, E. Thomas, p m
Sweden, R. A. Gillett, p m
Shrub Oak, L. Purdy
Stone Arabia, J. Cook
Stillwater, R. Merchant
Smoky Hollow, J. Holsopple
Schenectady, W. E. Russell
J. C. Barhydt
D. & C. Tomlinson
Scottsville, I. Carpenter, p m
Somerset, J. Mathers
Sherman, E. Miller
Sharon Centre, C. Peters
Stone Mills, W. Rouse
Stockbridge, D. H. Frost
South Oxford, W. B. Simons
South Rutland, T. Armstrong
Somers, F. J. Coffin
Salisbury Mills, R. Van Ellen
South Middletown, L. Vail, p m
Sherwood's Corners, A. Thomas
Saugerties, E. J. McCarty, p m
South Edmeston, D. H. Spure
South Durham, P. P. Grant
South Westerloo, T. Saxton, p m
Scaghticoke, E. Congdon, p m
Sheridan, J. J. Eacher, p m
Susquehannah, W. Doolittle, p m
Suffolk C. H., A. M. Young
Speedsville, L. W. Kingman, p m
Stoney Brook, J. N. Gould
Sackett's Harbor, E. M. Luff,
Sauquoit. D. Denham
Shawangunk, G. C. Graham, p m
Starky, B. Tuthill, p m
Smithstown, J. Miles, p m
Slaterville, J. Heath. p m
Stamfordville, W. H. Steward
Salem X. Roads, S. Hall, p m
Shawnee, D. Evans
Stokes, C. T. Albot
Skaneateles, L. Cleveland
Wm. Fuller
South Onondaga, J. T. Clark
South Cairo, R. Van Dyke
Smithsville, Charles Metcalf
Schuyler Falls, D. Johnson
South Dover, L. Hoag
Success, S. Howell
South Kortright, J. McDonald
Spencer, A. Vooris
Scienceville, D. B Strong
South New Berlin, L. Harris
Schoharie C. H., A. Gallup, p m
Summer Hill, H. Baker, p m
Shandakin, G. W. Tuthill
Stockport, P. Van Valkenburgh
Sing Sing, J. Lume len
Syracuse, Stoddard & Babcock
Syracuse, L. W. Hall
South Hartford, M. Ingalsbe
Salem, W. B. Harkness
Stow's Square, B. A. Bennett
Smyrna, M. Sutliff, p m
Scotch Town, J. Crans, p m
South Hammond, James Lambie
Spencertown, C. B. Dutcher, p m
South Easton, T. D. Bedle
Stamford, C. Griffin, p m
Scotland, J. F. D. Tolman, p m
Salisbury Centre, H Hadley
Southampton. B. H. Foster
Scott, H. S. Babcock, p m
Troy, L. Willard
B. S Boynton
Tribes Hill, F. Putnam, p m
Tonawanda, Charles Whitney
Truxton, A. Cotes, p m
Three Mile Bay, H. Cline, p m
Trenton Falls, W. Broadwell
Trumansburg, L Strowbridge
Tarrytown, J. Odell, p m
Tully Valley, J. T. Irish, p m
Triangle. E. G. Kinney, p m
The Purchase, J. T. Carpenter
Tyre, J. Smith, p m
Ticonderoga, J. L. Smith
Towners, J. Towner, p m
The Glen, C. Whittaker, p m
Tyrone, S. H. Arnold, p m
Townsendville, J. McLellan, p m
Tully, A. F. King, p m
Trenton, J. Billings
Tyler, George Geddes
Upper Red Hook, J. Rowley
Unadilla, G. W. Noble, p m
Upper Lisle, G. Wheeler, p m
Union Springs. T. B. Buffum
Union Ellery, J. A. Smith
Utica, W. Bristol
Versailles, Barker & Meal
Van Buren Centre, J. Skinner
Vernon, J. W. Jenkins, p m
Verona, J. T Peckham, p m
Volney, A. Moss
Van Hornsville, J. L. Springer
Vernon Centre, Levi T. Marshall
Verbank, J. G. Green
Waterford, D. B. King
Wurtsboro', J. A Morrison
White Store, N. Greene
West Dresden, W. Holden, p m
Whitehall, C, Hall, p m
Wappinger's Creek, J. Blackburn
Westmoreland, A. H. Phillips
West Winfield, D. R. Carrier
Waddington, H N. Pratt, p m
West Fayette, G. Ganger
W. Farmington, A. B. Repalje
Walton, A. N. Wheeler, p m
Washington Hollow, J. S. Simmons, p m
West Lowville, A. Dodge, p m
Watertown, E. S. Macey
J. F. Hutchinson
Westfield, O. Nichols, p m
Westchester, S. B. Bowne, p m
Windfall, D. Preston
Walden, B. Brooks
W. Schuyler, H. H. Knapp, p m
Watervale, J. Vanderburgh
West Galway Church, D. Carmichael
Walkill, J. C. Wilbur
Woodville, E. W. Scott
White Creek, S. Barker, p m
Wolcott, J. C. Watkins, p m
Willink, E. Wallis, p m
Wheeler. E. Aulls, p m
Windsor, B. H. Russell, p m
Wright's Corners, S. C Wright
Woodbourne, J. W Buckminster
Waterloo, F. Gage
West Edmeston, E. Chamberlin,
White Plains, W. Horton, p m
W. Martinsburgh, G. W. Henry
Warwick, J. R. Wilson
Warren, Z. W. Bingham, p m
Windham Centre, J. Matthews
Wheatland. C. Hall, p m
West Galway, J. Hayes, p m
West Hebron, W. J. Bockes, p m
West Point, R. D Arden
W. Greenfield. H. Gardner, p m
Webster, J. Middleton
Warrensburg, P. Richards

West Leyden, J. Dewey
Waterville, M. Babbitt, p m
West Moriah, George W. Farr
Waterburgh, S. W. Owen, p m
W. Bloomfield, E. A. Hale, p m
Youngstown, H. W. Phillips
York, N. Steward
Yates, P. Saxe, p m
Yaphank, J. H. Weeks
Yonkers, J. Bashford, p m

NEW JERSEY.

Augusta, W. H. Roe, p m
Allentown, George S. Potts
Bridgeton, J. B. Potter
Burlington, D. Sterling, p m
Blawenburgh, J. H. Striker
Belleville, J. Douglass
Berkshire Valley J. Hardy, p m
Carpenters Landing, W. V. Webster, p m
Camden, J. Elwell, p m
Cranberry, T. H. Holmes, p m
Crosswicks, R. Vanderbeck, p m
Chester, D. S. D. Camp, p m
Columbus, J. W. Wright, p m
Deckertown, J. McCag
Danville, D. Van Buskirk, p m
Dover, J. Losey, p m
Elizabethtown, T. B. C Batcham
Englishtown, A. S. McChesney
Elizabethport, J. Q. Stearns, p m
Freehold, W. Loyd, p m
Flemington, G. W. Risler, p m
Greenwich, B Shepard
Griggstown, H. J. Wilson, p m
Hamburg, R. A. Linn
Hackettstown, J. Smith, p m
Heightstown, J. C Purdy, p m
Harlingen, C. C. Hoagland
Hanover Neck, J. El[illegible], p m
Howell's Works, J P. Smith, p m
Leedsville, Charles Sears
Lawrenceville, C. S. Green
Middletown, W. W. Murray, p m
Millington, A. Dunn, p m
Morristown, J. J. Ray
Metuchen, W. M Ross
Mendham, J. J. Balentine
New Brunswick, J. Simpson, p m
Newton, P. C. Moore, p m
New Vernon, S. Lindsley, p m
Newark, J J. Plume. p m
Paterson, W. D. Quin, p m
Princeton, W. R. Murphy, p m
Perth Amboy, M. Bruen
Pemberton, P. White
Plainfield, J. W. Craig, p m
Rahway, J. Shann, p m
Roadstown, R. Fithian
Shrewsbury, H. Finch
South River, T. B. Washington
Somerville, E. Sanderson
Sidney, E. Phillips, p m
Six Mile Run, W. M. Baker, p m
Trenton. J. Justice, p m
Toms River, W. James, p m
Woodbridge, J. Smith, p m
Woodville, F. F. Gaston, p m
Weston, J. R. Cornell, p m
Westfield, W. H. Pierson, p m

PENNSYLVANIA

Athens, A. D. Saterlie, p m
Allentown, R. E. Wright
Asylum, O. D. Chamberlain, p m
Beaver C. H., James Allison
Brownsville, J. Beinns, Jr.
Bucksville, J. Molar
Bellefont, F. R. Smith
Blacklegs A. R. Sloan, p m
Bristol, G. Tomlinson
Berwick, J. S Bowman, p m
Bethany, E. W. Hamlin, p m
Byberry, C. Pierce
Blairsville, W. Moorehead
Belleville, D Overhalser, p m
Brown's Mills, Charles Colfelt
Bustleton, James Verre, Jr.
Carlisle, W. M. Porter, p m
Curwinsville, J Miles
Clarksville, W. Morrison, p m
Connellsville, J Herbert, p m
Carbondale, H. Hackley, p m
Cattawissa, C. A. Brobst, p m
Clintonville, R. Cross, p m
Chester, J. Flower
Coudersport, W McDongall, p m
Columbia, H. Wislee
Chambersburg, D. D. Duboras
Darlington, Joseph Martin
Dundaff, J. Alworth
Durby, J. Pierson, p m
Easton, G. W. Barnes
Eldredville, E. A. Eldred, p m
East Penn, J. Dinkey, p m
Elizabethtown, J. Lynch
Enon Valley, G. Robinson, p m
East Smithfield, A. Hale
Erie, Thomas Moorhead, Jr.
Fallston, A. G McCrary, p m
Fleetsville, A. Hobbs
Friendsville, C. Carmalt
Frankstown, Joseph Shannon
Frankford, J. Deal, p m
Factoryville, L. Wall
Gum Tree, W. Hughs
Gulf Mills, E. M. Hunter, p m
Guthrieville, A. W. Wills
Girard, T. W. Ward
Hopewell Cotton Works, E. J. Dirbrie
Hamorton, C. Passmore, p m
Hollidaysburg, E. Baker, p m
Hornbeck, Rev. R. Pitts
Hoguestown, J. Sprout
Herriottsville, J. McEwen, p m
Harewood, W. Main
Honesdale, J. B. Walton, Jr.
E. Leighton
Hamlinton, B. Hamlin
Harbor Creek, C. Leet
Harrisburg, J. Peacock
Harrisville, J. P. Cross
Huntingdon, D. Snow, p m
Indiana, W. Moorhead, p m
Jersey Shore, J. B. Torbot, p m
Kulpsville, J. W. Wampole
Lottsville, O. L. Monroe
Lancaster, J. Gish
Lewistown, W. P. Elliott p m
Le Raysville, D. Johnson
Little Meadows, J. Barnes, p m
Lumberville, W. J. Jewell
Lewisburg, W. Murray
Lackawaxen, R. Williams
Lackawanna, Z. Knapp
La Grange, J. Jackson
Meadville, C. L. Rowend
Morrisville, A. Croser, p m
Marietta, J. Goodman
McWilliamstown, T. T. Strode
Monroeton, O. N. Salisbury
Milesburg, J. Irvin
Millport, J. C. Allen, p m
Millerstown, G. Beaver
Mount Pleasant, J. Lippincott
Morrisdale. S. Warring, p m
Maiden Creek, J. Wright
Muncy, B. M. Ellis
McKean, M. Pinney, p m
New Harmony, H. Roland, p m
New Castle, V. Shafer, p m
Newportville, W. R. Olden
Newville, W. Woodburn, p m
Newtown, R. C. Nagle
Newtown Square, W. H. Green
New Derry, A. Beamer, p m
Norristown, P. Helm, p m
Oakland Mills, L. Wilson, p m
Pittsburg, J. W. Cook
Philadelphia, G. B. Zeiber & Co
Pine Grove, J. Kitznell
Petersburg, J Mings, p m
Pleasant Valley, J. M. Sands
Parkerville. N. Temple
Parkison, A. Wynn
Providence, T. Briggs
Pleasant Unity, J. Latta, p m
Paoli, C. Acker
Pleasant Mount, B. F. Rogers
Reading, C. Proxell
Setzler's Store, A. Bush
Shepherdstown, D. Sheffer, p m
Stroudsburg, T Stokes
Sumneytown, W. M. Jacobs
Shiremanstown, G. Sherban
Sharpsburg, J. O'Harra
Sharon, J. B Curtis
Selins Grove, Col W. H. Snyder
Springville, A. Blakeslee
Summerton, B. Crossdale
Shippensburg, L. R. Donavan
Spread Eagle, S Lewis
Sunbury, R. B. Packer, p m
Steelville, T. Wood, p m
Tyler, Joel Rogers
Tunkhannock, George Leighton
Thompsontown, J. Kurts, p m
Tarentum, L. Peterson
Upton, G. Cook
Uniontown, D. Smith, p m
W. Mill Creek, G. Nicholson
Westchester, J. Cope
Wesleyville, C. Hull, p m
Wrightstown, W. Dower, p m
Wilkesbarre, O. Collins
Waynesburg, J. Higinbotham
Wallsville, Robert Green
Wellsboro', W. Bache, p m
West Greenville, M. Varney, p m
Wayne, E. N. Hurlburt
York, George Upp, Jr.
Zelienople, C. S. Passavant, p m

DELAWARE.

Bridgeville, J. J. Jenkins, p m
Camden, T. Simpson
Dover, Dr. W. W. Morris
Darlington, G. W. Hatch
Frederica, J. G. Price, p m
Georgetown, E. L. Wells
Horsey's X Roads, N. G. Horsey
Loveville, S. Springer
New Castle, C. P. Holcomb
Seaford, P. N. Rust
Wilmington, James L. Roche

MARYLAND.

Allen's Fresh, R. W. Rencher
Annapolis, Lieut S. H. Drum
Baltimore, G. B. Smith
Buckeystown, G. Duvall, p m
Big Mills, F. Higgins, p m
Bladensburg, H. Penn
Brick Meeting House, E. G. Chandler
Belair, J. M. McCormick
Boonsboro', S. Stephens, p m
Centreville, J. Tilghman
Charlotte Hall, Albert Young
Clear Spring, W. Dodge
Cambridge, E. A. Marshall, p m
Darlington, J. Jewell, p m
Darnestown. L. W. Candler, p m
Elkton, A. Wham, p m
Ellicott's Mills, J. Butler
Emmittsburg, J. McCloskey
Friendship, R. S. D. Jones, p m
Federalsburg, W. L. Goslin, p m
Frederick, F. A. Rigney
Georgetown X Roads, J. T. Dunbar, p m
Head of Sassapas, C. T. Lusher
Hereford, N. R. Merryman, p m
Hampstead, A. L. Hover, p m
Long Green, J. N. Henderson
London Bridge, E. Burroughs
Marley, T. Robinson, p m
Matthew's Store, J B. Matthews
Middletown, W. Herring, p m
New Windsor, D. Engel, p m
Port Deposit, A. Anderson, p m
Pikesville, J. Mettam, p m
Port Tobacco, J. S. Key
Princess Ann, J. C. Hyland, p m
Petersville, T. Winter, p m
Queen Anne, W. W. W. Bowie
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Erie, S. Thomas
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Fort Gratiot, J. A. Emerson, p m
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Cornwallis, Dr. C. C. Hamilton
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THE CULTIVATOR:

A MONTHLY PAPER, DEVOTED TO

AGRICULTURE AND RURAL AFFAIRS

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES.] JANUARY, 1845. [VOL. II.—NO. 1.

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MONTHLY NOTICES.

Communications have been received since our last, from George Geddes, Esq., Dr. James Bates, A Farmer of Western New-York, D. Lee, Richmond, A Practical Farmer, P. A. Reading, J. B. Cook, W. T. Fannin, G. B. Smith, J. Townsend, Noyes Darling, Thomas Affleck, Za. Drummond, Oneida, B. P. Johnson, H. S. Randall, J. N. Smith, S. W. Jewett, C. D., James Pedder, O. W. Owen, H. J. Powell, A. G. Summer, A Subscriber, W., L. A. Morrell, Franklin, D. T., Spade Labor, Double-you, D. A. Ogden, W. A. Cowell, C. N. Bement, Exekiel Rich, L. B. Langworthy, N. N. D., J. P. Norton.

It will be seen by this list, that we have on hand a goodly number of contributions, all of which will be disposed of as rapidly as our limits will permit. Several, in type for this No., are necessarily deferred till our next.

We are indebted to J. S. Skinner, Esq., for a copy of his Address at Wilmington—to E. Mack, Esq., Ithaca, for a copy of his Address before the Tompkins Co. Ag. Society—to J. W. Proctor, Essex, for his Address to the Essex Co. (Mass.) Ag. Society—to John Delafield, Esq. Oaklands, for his Address to the Seneca Co. Ag. Society—to T. B. Wakeman, Esq., for Mr. Talmadge's Address to the American Institute—to D. G. Mitchell, England, for a copy of Mr. Shepard's treatise on Guano—to D. A. Ogden, Esq., for Mr. Lawrence's Address before the Yates Co. Ag. Society—to S. Williams, for his Essay on Manures, prepared for the Seneca Co. Ag. Society; and to Messrs. A. Walsh, Lansingburgh, and Egbert Cowles, Farmington, Ct., for papers, containing Reports of Agricultural Societies.

James Gowen, Esq., will please accept our thanks for his kind letter of Dec. 2. We shall be very glad to receive an article on the subject he mentions.

Agricultural Addresses.—Notices of such addresses as we have been favored with, are unavoidably deferred till our next.

Pure blood Merino Sheep.—We saw the other day some fine Merino sheep, purchased by Col. J. M. Sherwood, of Auburn, (N. Y.) of Mr. Jacob N. Blakeslee, of Watertown, Litchfield county, Connecticut. We have before spoken of Mr. Blakeslee's sheep—in last volume, pages 315 and 338. They are a very valuable stock, and we presume will lose none of their excellence or reputation in the hands of Col. Sherwood.

Hussey's Reaping Machine.—We take pleasure in inviting attention to the advertisement of Mr. Hussey, on our last page. His Reaping Machine, from all we hear of it, has fully answered public expectation, and we trust he will be abundantly rewarded, as he certainly ought to be, for the time, ingenuity and money he has expended in bringing his useful invention to its present state of perfection.

Portable Mills.—We would refer Mr. W. T. Fannin of Georgia, to the notice and representation of Sinclair & Co's Portable Mill, which we publish in this number. We possess no more definite information in relation to this mill, or Platt's, heretofore published, than we have given to the public. He can probably ascertain any farther particulars he may require, by addressing the manufacturers.

Saleratus as a Substitute for Saltpetre.—Our correspondent, "C. D." it seems, made a mistake in his paragraph on this subject, in our Nov. number, p. 345, which escaped our notice, till our attention was called to it by a writer in the Providence Transcript, and since by several correspondents. Saleratus, instead of being "composed of sulphate of potash and pearlash," as stated by C. D., "is not," says the writer in the Providence paper, "a very pure bi-carbonate of potash. As usually found in the shops, it may contain some small portion of sulphate of potash and of pearlash, together with certain impurities, none of which possess any remarkable preservative qualities, or would be likely to produce any valuable effect upon muscular fibre."

State Ag. Society.—We would remind our readers in this State, that the Annual Meeting of the N. Y. S. Ag. Society is to be held at the old State Hall in this city, on Wednesday, the 15th inst.

To our Friends in the South-West.—Circumstances forbidding us to visit, as we have long desired to do, the numerous friends of The Cultivator, in the South-Western States of the Union, we have, at the suggestion of several of them, engaged that old and familiar acquaintance of the readers of our paper, Solon Robinson of Indiana, to undertake an Agricultural Tour through several of the south-western states, for the purpose of procuring information and promoting the interests of "The Cultivator," in that section of our country. Those who have read the numerous articles of Mr. Robinson for the last ten years will, we doubt not, be gratified with this arrangement, and we trust that his correspondence during his present tour, will be found interesting to all our readers. We bespeak for Mr. R. a warm reception by the readers of the Cultivator whom he may visit, and hope we shall receive, through him, a large addition to our circulation, assured as we are by numerous friends in that quarter that all that is necessary to accomplish this object, is to have our paper brought to the notice of the planters of that extensive region. Though printed so far north, The Cultivator will be found of nearly equal interest to the Planter of the South as to the Farmer of the opposite section of the country. It is not intended as a *local* but as a *national* journal; and aside from the fact that the general principles of agriculture are everywhere the same, the constantly increasing list of its correspondents in the south and south-west, with the Letters of Mr. Robinson, will make its pages as valuable to those sections of our country, as to any other. Indeed, we think the communication in this No. from our valued friend Affleck of Mississippi, well worth ten times our annual subscription price, to any planter who will read and act upon such of his suggestions as he may find he can adopt to his advantage. Mr. R. will receive subscriptions for our current vol. and orders for any of the previous volumes; and we shall be greatly obliged for any aid which our friends may be able to render him.

☞ The readers of "*The Cultivator,*" and of the "*Central New-York Farmer,*" were apprised in the December number of both papers, that the latter would, at the close of the then current volume, be discontinued, and that its publishers would hereafter labor to promote the circulation of "The Cultivator." In making this arrangement, we were aware that we should not meet the views of many friends who have been very desirous of continuing a paper in Central New-York, but a proper regard for our own interests, has, among other things, induced us to make the present arrangement. Since the announcement in the December number of the Farmer, we have received from numerous individuals in different sections of this and other States, letters expressing regret at the discontinuance of our paper; and in some of them the writers have hinted pretty strongly that we have done the public a wrong in so doing. As we cannot well answer all letters of this character without encroaching too much upon our other labors, and as we have no doubt that *all* who thus address us will become subscribers to the Cultivator, we beg leave in this public manner to tender our acknowledgments for the manner in which our labors have been noticed, and to assure our friends that we duly appreciate the many favors which we have received from the friends of agriculture.

We trust that all with whom we have formerly held converse through the columns of the "Farmer," will continue to take some agricultural paper, and it will give us great pleasure to forward their names as subscribers to the Cultivator. We will not permit ourselves to believe that those who have during the several years that the "Farmer" has been published, been its constant patrons and readers, will, now that it is united with another, and we hope more valuable journal, forego the advantages of agricultural reading, or be deprived of intercourse with their brother farmers through the agricultural press.

Comstock & Johnson.

Intemperance.—We have received a well written article on this subject, by "*A Farmer's Wife,*" which, with the present press of matters relating more particularly to the objects of our paper, it will be impossible for us to publish.

OUR PLATE

IMPROVED SHORT HORNED COW, “RED LADY.”

Red Lady, the property of James Lenox, Esq., of New-York, received the prize offered by the New-York State Agricultural Society for the best cow exhibited at their show at Poughkeepsie, Sept. 1844. She also received the first prize at the Dutchess County Society's Show in 1843. Red Lady was calved in 1834, and bred by J. Whitaker, Esq., of Burleigh, Yorkshire, England, and imported by Mr. Lenox in 1840. Her pedigree is as follows:

“Red Lady, by Hubback, 2142. Dam by Don Juan, 1923. Grand Dam and G. D. Dam, by Mr. Woodhouse's bulls. The two latter names are not registered, but the stock has been good upwards of sixty years, and from this herd, Red Lady's ancestors have descended.” See Herd Book, vol. 5, p. 841.

Mr. Lenox has at his beautiful place Netherwood, Dutchess county, a small but splendid herd of improved Short Horned Cattle, consisting of imported animals and their progeny. In 1840, he imported two cows, Red Lady and Daffodil, the latter in calf by the celebrated Sir Thomas Fairfax (5196)—in 1841, the splendid white bull King Charles 2d, (4154) exhibited at the late State Fair, and of which we shall hereafter give a portrait. In 1843 Mr. L. imported another cow “Gayly,” in calf by Lord Henry Fairfax, (6145.) In the produce of these importations, Mr. L. has a beautiful lot of young animals of great excellence. For pedigree of Daffodil, see Herd Book, vol. 5, p. 231—for that of Gayly, p. 425, do.

TO OUR PATRONS.

In presenting you the first number of a new volume, we have great pleasure in tendering you the compliments of the season, and at the same time inviting your attention to the efforts we have made to present you with a paper worthy of the occasion. By the continued liberality of our correspondents, to whom we and the public are so much indebted for the interest and spirit imparted to our pages, and whose labors have given it so strong a hold on the public mind, we are enabled this month to present our readers with communications of unusual interest to every section of our extended country, from the extreme north to the “sunny south.” In the way of embellishment also, we are enabled to present our readers with something new and beautiful, in the portrait of Mr. Lenox's very superior cow, “*Red Lady*,” engraved on steel in a style altogether superior to anything of the kind heretofore issued in this country, and equalling the beautiful plates of the London Farmer's Magazine. Though this plate is issued at an expense of over $200, it is our intention, should our circulation the present year warrant it, to follow it with others of a similar character. Indeed no efforts or expense will be spared on our part, to sustain and increase the interest of our pages each succeeding year. In return for these exertions to please, is it too much to ask of our friends, and the friends of agricultural improvement generally, that they will aid us by their efforts and influence, in extending the circulation of “The Cultivator?” The invitation to act as Agents, is extended to every one of our readers who may deem our journal worthy of this mark of his favor. It will be seen that by clubbing together, the cost of the paper, postage and all, will be less than one dollar a year, and we would suggest to such gentlemen as may be disposed to aid us in this way, the example afforded by several of our friends last year, who adopted the course mentioned in the following extract of a letter:

> “In order to obviate any objection to the price of the subscription, I divided the $10 for fifteen copies, into fifteen parts, and received of each subscriber his proportion of the $10; and in this way I soon obtained the fifteen subscribers, for which I send you herewith $10. If the friends of agricultural improvement generally, would adopt this course, I think your subscription might easily be doubled or trebled, as there are few neighborhoods where a club of seven or fifteen subscribers might not be obtained, with but little trouble, as in this way the paper and postage would cost less than a dollar.”

The writer of this letter, by adopting this course, procured over fifty subscribers to our last vol. in a place where we had never before had a dozen. Several other agents who adopted this plan, were equally successful. To any person disposed to act as Agent, we shall with pleasure send such number of extra copies as they may order, that they may have copies on hand to deliver to those who become subscribers.

CONDENSED CORRESPONDENCE.

Merino Sheep of Col. Randall and Hon. Wm. Jarvis.—We have a letter from Col. Randall, in relation to the pedigrees of such of his sheep as have descended from the flock of Hon. Wm. Jarvis. In the communication of Col. R. in our last No. he gave no detailed statement in relation to this portion of his flock, supposing it would be generally conceded that Mr. Jarvis had preserved a portion of the merinoes originally imported by him, free from all alien admixture. “Finding myself mistaken in this supposition,” says Col. R. “I addressed the following inquiry to Mr. Jarvis:—Have you a flock of merinos, which you *know* to be the pure blooded descendants of your early importations?” In reply to this question, Mr. Jarvis details minutely the course he has pursued in the management and care of his flocks. We make but a brief extract—all, certainly, that can be necessary to establish the fact that he has kept a portion of his flock as free from all foreign admixture as at the time of their importation. Mr. Jarvis says:—“In May, 1826, I purchased 52 or 53 at the sale in Brighton, Mass., of the large importation of Saxony sheep by Messrs. Searle of Boston; and the following autumn I selected and separated one hundred Merino ewes from my flock, and the rest I crossed with Saxony bucks. Those hundred merinos and their descendants I have always been careful to keep by themselves, both summer and winter, and have been very particular in the choice of pure blood Merino bucks to put to them for breeding.” Col. Jarvis farther says:—“My flock consists of about a thousand sheep of all kinds, of which there are one hundred and sixty merinos, the pure blooded descendants of those I purchased in Spain in 1809 and '10, and exported from Lisbon; about one hundred full blood Saxons; and the remainder are crossed between Saxony and Merino. The fleeces of the latter, from the attention I have paid to the selection of bucks, (as before mentioned) are much heavier than in 1832. The average of the three kinds, taken together, is now 3 lbs. 2 oz. to 3 lbs. 4 oz. per head.”

Irrigation, &c.—We make the following extract from a letter of P. A. Reading, Esq. of Philadelphia:—“The application of manure and the best rotation of crops, I deem to be at this time a question of great importance to our farming interest. Next in order of importance, is the subject of Irrigation, as practicable to the system of farming in the United States, under the system of rotation in crops, when each field becomes the meadow in turn, and when the locality is such as to render a small stream or spring available for such purposes. The time when, and how long a period should the water be turned on, in order that the coming crop of grass may receive the most benefit. All these things, and many more, I should be glad to see discussed in the Cultivator.”

Farmers' Troubles.—We have received a communication treating of the peculiar evils to which the farmer in this country is subjected, and pointing out for some of them a remedy, signed “A Farmer of Western New-York.” The writer thinks there is “no class in the community which are so poorly paid for their labor, as farmers; many of whom,” he says, “like the waterman who is rowing against the current, instead of making headway, are actually beating down stream.”—Among the evils and hardships with which the farmer has to contend, he enumerates the smut, rust and fly, in grain—weeds—the rot in the potatoe—low prices of produce—high price of labor in proportion to the price of produce—emigration to the west—indebtedness—high rates of taxes, &c. &c. He thinks farmers “run in debt at the stores for many things they might do without”—that they “have too much aped the fashions of the proud and vain—have gone beyond their means for fine carriages, elegant dwellings, costly furniture and apparel.” This, he says, they “were drawn into in times when speculation ran high, and produce brought enormous prices." He thinks farmers permit themselves to be ruled too much in pecuniary and political matters by a class of men whose interest it is to "keep down the price of every thing they consume," and that as long as farmers continue to be "ruled and trodden down by them, they merit the appellation of *dough faces*." He thinks the presses and the banks are too much controlled by the class just mentioned, and observes that "if a farmer has been so unfortunate as to get in debt, and wants the loan of a little money to save his property from being sacrificed, he cannot obtain a dollar, though he presents a note endorsed by the best men in his county; while at the same time if a speculator wants money to bid off that same individual's property, he can get from the bank as much as he wants." Unless there is an end put to this state of things, he says it is his "honest conviction that the time is not far distant, when all the real estate will be owned by the wealthy land holders, and the present owners and their posterity will be only tenants and serfs." He proposes as a remedy for these troubles, the adoption of what he calls "*the farmer's system*," the outlines of which he gives as follows:—"Let every farmer provide himself with a store-house or granary, of sufficient dimensions to contain the products of his farm, and there secure them with bolts and bars, until he can obtain fair prices for them. Let there be an understanding among the farmers generally, throughout the country, and let them regulate their own prices. Let them establish *newspapers* at different points, which shall advocate the farmer's cause, and let them be liberally sustained. Let lecturers be appointed to go through the country, and arouse the energies of the farming population on subjects connected with agriculture and their interests." "We do not," says our correspondent, "wish to monopolize or tyrannize over other classes of the community; all we ask, is a fair compensation for our labor, and to be raised to our proper sphere in the scale of being. We do not want to be confined to unremitting toil, like a Russian serf, or a galley slave. We want some leisure to read and reflect, as intelligence is the life of liberty; and general information among all classes, is indispensable to qualify them for the discharge of the important duties of citizens of this republic."

Profitable Apple Tree.—We are informed by Mr. Ingalsbe, of South Hartford, in this state, that Mr. Seth Cooley of that town, gathered forty bushels of greening apples, of a superior quality, from a single tree the past season, worth from 44 to 50 cents a bushel on the premises. The tree was situated in rather a north-western exposure—soil, a deep loose gravel, well manured. "There is many a two acre lot in this town," says our informant, "that yields less profit than the three square rods occupied by this tree."

Rapid Fattening of a Pig.—W. R. Gilkey, Esq. of Windsor, Vt., informs us that "Mr. T. B. Otis, of that place, bought a pig, April 24th, 1844—weight 9¼ lbs., (said to be five weeks old.) He killed the same on the 18th of Nov. It weighed, dressed, 350 lbs.; making an increase of *pork*, deducting the weight of the pig when bought, 340¾ lbs. in 208 days, it being 1 lb. 10 oz. per day. Blood not known. Feed, slops from the house, and corn meal. Beat this who can."

Tobacco for Glanders.—In answer to the inquiry of Mr. Clark, (vol. I., p. 336,) Mr. Cook of Demopolis, (Ala.,) says—"I regret to state it is out of my power to give to your correspondent, Mr. C. B. Clark, specific directions as to quantity or manner of giving, as I have to rely on impressions alone, long since made on my mind, and that too, but occasionally spoken of. The impression is, the quantity given was considerable, and once a day for as much as eight or ten days, and given in the common form of a drench. My impressions as to quantity, strength, &c., result from what I have distinct recollection of hearing my father say in relation to the case, that he treated him as a dead horse; having at the time, no thought of a cure; he gave something else at the time, but always spoke of tobacco, in his opinion, as the sole agent in the cure. The subsequent treatment of the horse I think was purely southern, corn and fodder, running on a poor grass pasture."

Tobacco for Consumption.—Mr. Cook farther says—"I would submit it as a matter worthy of serious inquiry, whether an habitual tobacco chewer or smoker, has ever been known to die of pulmonary consumption."

Apples without Seed or Core.—Mr. O. W. Owe of Buffalo, says—"I find in a late number of the Cultivator, an article on the absurdity of the existence of apple or pear trees bearing fruit without seeds or core. Will you please to state to your readers that the fruit *can* be produced perfectly free of seed or core, by the following process: Where the tree is sufficiently young to admit of bending or twisting without breaking, take the extreme top of a limb, or small tree, and bring it to the earth, bury it, and when it shall have taken root, cut off the other end of the limb or tree, and you will have thus reversed the order of things, the body or heavy part of the limb being uppermost. New limbs, leaves and blossoms, will put forth in due season, and the fruit will be free of seeds or core. The process was made known to me by a gentleman belonging to Ohio, at the time of presenting me with a specimen of the above fruit, which he raised as stated. I was also told that this transformation could not be produced in other than the apple or pear fruit."

INQUIRIES.

Night Soil.—"Franklin" is referred to pp. 174, 266 and 381, of our last vol. for an answer to his inquiry as to the best mode of using this valuable manure.

Steeping Seeds.—The same correspondent will find the information he asks for, on this subject, in the communication of Dr. Smith, p. 281 of our last vol., where it is given in a more simple form than in any other paper, which has fallen under our notice. The other matters in Franklin's letter shall be attended to hereafter.

Cayuga Marshes.—In reference to the inquiry of Mr. Jason Smith of Tyre, relative to the quality of the muck from the Cayuga marshes, &c., we reply that we have conversed with Prof. Emmons, and also with Prof. Hall, on the subject. They both agree in the opinion that these marshes would become very productive, if they could be drained. If Mr. Smith will send a sample of the muck, Prof. Emmons will make an analysis of it. It would also be desirable to send in connexion with it, a specimen of the marl which it is understood is to be found below the muck. A few pounds of each will answer the purpose.

Locust Trees.—A writer with the signature "M.," in the Providence Transcript, inquires of us whether the locust tree, when set in wood lots, &c., as mentioned in an article in our Nov. number, escapes the attack of the borer. To which we reply, that in western New-York, and we believe in the west generally, the ravages of the borer are mostly confined to locusts which are cultivated by themselves, or such as stand singly, in rows, or small clumps; and we have generally noticed that those were most attacked, which stand in villages or towns. We know this is particularly the case in many parts of Ohio, though in the country or in forests, the tree is entirely free from the insect. Why the borer should confine itself in this manner to trees in towns or open grounds, we are unable to say. No successful mode of preventing its attacks, has yet been discovered, so far as we have learned.

Melons.—A correspondent, "W." at Troy, inquires whether there is a species or variety of the Musk-melon, adapted to this climate, called "*pomegranate*"—and also if citron melons are valuable for any other purpose than preserving. We do not know of any melon by the name of pomegranate—if any of our subscribers know such an one, we would thank them to inform us. The common citron melon, of the water-melon tribe, is not, that we are aware, useful for anything but making sweet-meats; but we have seen a fruit of the *musk*-melon tribe called a citron, which is very good to eat. There is an inconsistency in giving the same name to two fruits of different species, and so opposite in their qualities.

Inquiry.—We shall feel obliged if some of our correspondents will answer the following inquiry, proposed by Mr. W. J. Powell, of Marshall, Michigan. "Our opening lands, which are a rich gravel loam, and are *admirably adapted to the growth of wheat and other grains*, will not raise more than *half a crop* of grass; notwithstanding, clover and timothy are very tenacious and next to impossible to remove from the land, after becoming once well soded. What, in your opinion, would be the proper course of treatment, to make them yield a good burden of grass?"

CARE OF ANIMALS IN WINTER.

In the cold climate of the northern section of our country, buildings, of some kind, are required for sheltering all domestic animals, and in general we think all should be fed under cover, or in yards attached to barns and sheds. There is much less waste in this way, and the animals are much more quiet and comfortable than when the food is thrown out in the dirt, and they are forced to eat under the exposure of wind and storm. In dry, cold weather, when the air is still, sheep may be sometimes foddered on clean, hard snow to good advantage—they will eat fodder here which they would refuse any where else. But it is only in dry weather that they can be fed in this way—as soon as the snow softens, or the weather becomes moist, they will not eat their fodder clean, out of doors, and they must be fed from racks or mangers in the house. Sheep do not like *wet*—they always prefer to keep both their food and their bodies *dry*.

Large flocks of sheep should be divided, putting the bucks and wethers together, the ewes in another lot, and the lambs and weak sheep in another. Subdivisions of these may be necessary, for too many must not be kept together. Some very good sheep-farmers think not more than a hundred should be allowed to run together—others allow more—but much depends on the room given them, the facilities for feeding, sheltering, &c. A *hospital* should be provided—self-interest, as well as humanity, demand it—and attention to the sick and feeble will be well repaid. A little nursing at the proper time often has such a magical effect on the invalid, that he comes out in the spring as brisk and hale as the best of the flock—a much more gratifying sight, truly, than to see his carcass hanging on a tree for the crows to pick.

If it is designed to raise early lambs for market, the ewes should be at once provided with warm, dry shelter, and fed with a little grain, and some roots, such as potatoes, turneps, or beets. This will ensure a strong, healthy lamb, with plenty of milk to feed him.

Cold weather gives cattle and other stock sharp appetites, and this is the best time in the winter to feed out poor fodder. Give it to the stock in small quantities at a time, replenishing the mangers as often as they are cleaned, till the animals get their fill. It is not good policy to make *milch cows* eat too much poor fodder—it had better be fed mostly to the young cattle—such as steers and two-year-old heifers.

Considerable advantage is sometimes derived from cutting fodder with a machine. Clover hay and straw, cut fine and mixed together, may be fed in this way without waste. Corn-fodder, if the stalks are small and well cured, will all be eaten if it is cut pretty fine. But it is not so with *large* stalks, which are very coarse and fibrous, and the sap of which becomes *sour* before they can be cured—cattle will not eat such much sooner than they would eat their hoofs. It is of but little use to cut stuff for cattle to eat which is absolutely *uneatable*. It is true that animals will sometimes reject long fodder which is really nutricious, and which would be eaten if passed through a cutter; but the idea should never be taken from this, that cutting substances which are little else than woody fibre, will convert them into proper food for animals.

In the western section of the country, where large herds are kept, sheltering and feeding under cover is attended with more inconvenience; but we are satisfied that the extension of the practice even there, would be followed by advantages more than counterbalancing the trouble. There is a great difference in the management of farmers in that region—the contrast between good and bad farming being as strikingly shown there as anywhere else—but it is often the case that the stock is permitted to range at will over the whole farm. The loss which is sustained from the waste of food, the injury done to the land by the treading of the cattle when it is wet and soft, and, as a matter of course, the great waste of flesh in the animals, is incalculable. The practice of feeding cattle almost entirely on corn-fodder, which in that country is very long and coarse, is quite an obstacle to barn or yard feeding; but where this cannot be adopted, the stock should be fed on dry lands, with, if possible, a strong, blue-grass sod, and by all means sheltered from the bleak and cutting winds, by a forest or belt of trees.

IMPROVEMENT OF FARMS.

The Middlesex (Mass.) Ag. Society awarded the first premium for the best managed farm to Oliver C. Rogers, of Woburn. It appears from the account given by the chairman of the committee, Nahum Hardy, Esq., appointed to examine farms, that when Mr. Rogers came into possession of his farm, about seven years ago, it was much out of order—the fields were unproductive, and in many places so wet that they could not be plowed in spring early enough for planting. He dug deep ditches to drain the land, stoned them up, and covered over with flat stones—leaving the covering from sixteen to eighteen inches below the surface. He has dug, stoned, and covered over 360 rods of these "blind" ditches. The committee say—"the crops speak well for the improvements in these fields." In most of this swampy land, there is a hard subsoil, in others a deep mud. Mr. Rogers has reclaimed within seven years, more than forty acres, which was very rough and unproductive, when he took possession of the farm. He has also built more than nine hundred rods of stone wall, sixty rods of which is heavy faced wall, "beautifully pointed with cement." He has made various improvements in his buildings, and the committee add, "has constructed a good cellar under his barn for the manufacture of compost manure, being convinced that no good farmer should be without one." Besides these improvements, Mr. Rogers has set out peach and apple orchards, and has carried from his fields and buried in low places and mud holes, about two thousand loads of stone, within the seven years.

Compost Making.—The same committee which made the above award, made a report in relation to the manufacture of compost manures. They mention that one of the competitors, Mr. Fay of Marlborough, burns hussocks from bog meadows, and mixes the ashes with loam and barn-yard manure. Another man, Mr. Chaffin, of Acton, is in the habit, every morning in summer, of throwing a mixture of sand and muck, over the manure dropped by the cattle the preceding night.

Mr. Moore, to whom the committee awarded the premium for the best mode of manufacturing composts, stated that his attention was first particularly called to this subject about five years since. About that time he built a barn, 80 by 40 feet, with a cellar under the whole of it, and began making compost. He keeps seven cows, one bull, two yoke of oxen, and two horses, which are tied up in the barn every night to save the manure. In addition to the above, he winters from twenty to twenty-five head of young and fat cattle. He keeps hogs in his barn cellar. The method which he prefers, is, to keep always at hand plenty of good loam and peat mud, both in the cellar and barn-yard. This is placed in the cellar under the holes where the manure from the cattle is put down, and after remaining there about a week, it is spread over the hog-sties in the cellar, which are 80 feet long by 24 feet wide. Before spreading the loam or mud, corn is sown over it, which induces the hogs to root and turn the whole over. Mr. Moore thinks the urine of cattle is as valuable, when properly applied, as their dung. He thinks urine of so much consequence that he places barrels in his sheds to receive that from the house, which is afterwards emptied on the manure heaps. Plank troughs, set on runners, are placed under the privies, and when they are partly full, are drawn away and mixed with loam and mud.

The committee, in conclusion, suggest that there is no necessity of going to France for poudrette, or to the Pacific for guano, as farmers can manufacture these, or their equivalents, at less than half the cost of importation.

INQUIRIES RELATIVE TO FRUIT TREES.

A correspondent makes the following inquiries:—"Assuming that a proper soil has been selected, according to the Jan. No. of the Cultivator, 1844, p. 37, on which to raise various kinds of fruit trees, such as the apple, pear, peach, plum, and quince, I would inquire,

1st. What is a good method of preserving the different kinds of seeds for planting ?

2d. What is the proper time for planting ?

3d. The proper depth for covering ?

4th. How near each other may trees stand until budded, or grafted ?

5th. Smallest size proper for budding or grafting ?

6th. Do any of the above varieties ordinarily require protection in winter ?

7th. If after suitable care in the selection of the hardiest buds for insertion, any fail, what shall be done with the stocks next season ?

8th. If any of those failing are cut or headed down, when shall it be done ?—that is with respect to the age of the tree and season of the year ?

9th. Proper time for transplanting seedlings ?

10th. What shall be done with the tap root ?"

Answers.

1. The best way to preserve the seeds of fruit trees, is to mix them with pure or clean sand, as this prevents their drying if it is kept moist, and also prevents their moulding or fermenting, which often takes place when moist seed lie some time in actual contact with each other. The seeds of stone fruit should not become much dried internally—the outside should only be exposed long enough to the air to evaporate external moisture and prevent moulding, when they should be packed in sand.

2. The best time for planting is autumn and spring. If they are well packed and exposed to the weather, so that their external coats may be split with freezing and thawing, spring is as good as autumn, and sometimes better, as the seeds if planted in autumn are sometimes destroyed by mice or otherwise, from which they are more easily protected if remaining in a mass, unplanted, till spring.

3. The depth of covering, as well as in most other seeds, must be regulated chiefly by the size of the seeds, and the nature of the soil. Small seeds, as of the apple and pear, may be an inch or less deep in a heavy soil, and one and a half to two inches deep in a very light soil. Peach stones, (which, if uncracked, come up mostly the second year from planting,) may be from two to four inches deep, varying with the soil, and cherries and plums, one or one and a half to three inches.

4. Where land is plenty, and trees scarce, they may stand nearer than where the reverse is the case. Before budding or grafting, as well as afterwards, they will grow faster and make finer trees, if not crowded in the rows. If not budded or grafted till the second year, they may stand an inch or two apart, to be set out to six or eight inches or more after the first season's growth; but if budded the first summer or grafted the next spring, they should be six inches apart at first. The rows, if only hoed between, may be one to two feet apart the first season; if plowed, they should be three or four feet apart.

5. The smallest size of the stock for budding must depend somewhat on the size of the shoots whence the buds are taken. Buds from very large shoots cannot be well inserted into stocks smaller than themselves. As a general rule, however, half to three-quarters of an inch is a very good size for budding. For root (whip) grafting, trees may be one-quarter of an inch in diameter. For cleft-grafting, they are convenient, if from three-quarters of an inch to an inch and a quarter.

6. The above named kinds of fruit are generally hardy throughout the northern States, except the peach. Some of the varieties of the latter, especially of the earliest, are tender. The best protection in winter, is to plant them on soils least liable to frost. In parts of the country inclining to be hilly, other things being equal, the hill-tops are best and the valleys worst, as the latter become soonest warmed by the hot sun, and the trees are driven forward earlier in spring, and continue to grow later in autumn; while the sharper frosts to which such valleys are liable, still increase the difficulty. A wet subsoil is also detrimental. Mucky land, also, by radiating heat more rapidly, is more liable to frosts, than dry compact soils. Deep lakes, which do not freeze in winter, afford great protection to tender fruits, by softening the severe cold of the winter's air. All these things are to be taken into consideration in setting out tender fruit trees.

7. When buds fail, the stocks may be re-budded. Peach stocks, for this purpose, should be cut down to the ground, that fresh and vigorous shoots may spring up, all but the largest of which from each root, should be carefully removed.

8. The best time for thus heading down, is early in the spring of the year. It should be done when the tree is not more than two or three years old.

9. Seedlings may be transplanted both in spring and autumn.

10. The tap root should in all cases be cut off a few inches below the surface, so as to throw out horizontal roots only.

Our correspondent also inquires if "it is a good plan to stop the growth of trees in autumn in moist places, where frosts are expected ?" We do not understand this question. The only way to avoid the effects of frosts on tender trees, is to plant the trees where the frosts are least severe, and where the trees, from exposure to winds, &c., and by growing in a moderately fertile soil, will cease growing and harden their wood early in autumn.

He also inquires if the small crook in trees at the surface of the ground, occasioned by the sprouting of the seeds before planting, will seriously affect the value of the tree ? It will not; especially, if in transplanting, the crook is placed beneath the surface.

WINTER EVENINGS.

The favorable opportunity for reading and study, afforded by the long evenings of this season of the year, it is hoped will be duly improved by farmers. The school libraries which have been provided in several of the states, furnish to all an excellent means of acquiring useful information. As the agriculturists constitute the most numerous class in community, we think each of these libraries should contain some books particularly applicable to their profession. It is important that the farmer should acquaint himself, as thoroughly as possible, with the natural laws which constitute the basis of the art by which he obtains his livelihood; and the more his practice is made to conform to these unerring laws, the greater will be his success. Besides studying the principles of his art, the farmer should keep himself constantly advised of the improvements and discoveries in every department of rural economy, which are from time to time made. The readiest, and indeed almost the only medium of acquiring this information, is Agricultural Papers. They may be regarded as furnishing an opportunity for a mutual interchange of ideas on the various subjects of practical husbandry. They present in fact, to every farmer a medium for *conversing* with the most intelligent and successful of those engaged in the same occupation, in all parts of the country. The views of all may be obtained, compared, examined, and modified, to suit the particular circumstances of each individual—an opportunity which is almost equivalent to making a personal visit to each correspondent. What an extensive field, for instance, for this interchange of opinion, and the acquirement of information, is presented through the medium of the Cultivator, with its THREE HUNDRED correspondents, (which it actually had during the last volume) scattered over every state in the Union, besides several from the British North American Provinces, the West Indies, and a number of regular contributors from Europe! And for the sum of only *one dollar*, all the valuable knowledge thus collected for one year, is to be obtained! It is scarcely possible that there is a single farmer in the country, who, being fully aware of the importance of the subject, and the advantages to be thus derived, would lose a moment's time in becoming a subscriber to The Cultivator.

PRODUCTS OF THE DAIRY.

We trust that no apology is needed for calling the attention of the public to the importance of this subject. The production of butter and cheese is not a matter in which farmers alone are interested, but one which concerns every individual almost without exception, in whatever section of country they may reside, or in whatever occupation they may be engaged; for of the entire population of this country, very few can be found who are not either producers or consumers of these articles. True, there is occasionally to be found a person who has so little taste for good things as not to appreciate the luxury of a *bit* of good cheese, or the almost indispensable accompaniment of every meal, a nice ball of butter, and it is to be feared that in the larger towns, families might be found who have not the means to purchase these articles. The poor man in the country, however limited his means, and to whatever extent he may be deprived of the delicacies and refinements of life, nevertheless keeps his cow and usually his pig also; thus providing himself with that which cannot always be obtained by even the wealthy in our large cities, *pure milk and good sweet butter*, while with the addition of a little meal or a few potatoes, the pig contributes in a great degree to the more substantial provision of the laborer. No wonder then that that observing and shrewd writer, Colman, should descant so agreeably on the pleasures to the poor man, of keeping his cow and his pig.

The farmer has this advantage over all other classes, he can appropriate the choicest of the productions of the soil and of the dairy for his own consumption, thus enabling himself and family to enjoy the first and best fruits of honest labor, and well directed industry and skill. To no branch of agriculture does this remark apply with greater force than to the productions of the dairy. Unfavorable circumstances may injure the quality of the butter or cheese sent to market, but nothing need prevent the farmer from partaking of the best which the skill and care of the dairywoman can furnish. We design in this article simply to call attention to the subject, and to prepare the way for some remarks in a future paper; when we hope to be able to show to farmers the importance, the necessity indeed, of great improvement in the quality of their dairy products, and to prove to them that a very great increase in the average quantity per cow can profitably be effected. Indeed, when we consider the great defects which exist in the quality of much of the butter and cheese now manufactured, and the comparatively small quantity from each cow which is made in many of the dairies, we are forced to the conclusion that in few branches of agricultural or household duties, is there more need of improvement.

There seems to be but a comparatively small portion of the country which is well adapted to dairying. A soil suitable for the production of the proper grasses; a climate of the proper kind for the manufacture and preservation of the butter and cheese; an abundant supply of pure water; cool and dry cellars in which to preserve the butter in good condition; all these, and many other things, must combine to constitute a good dairy district. Several counties bordering on the Hudson river, would seem well adapted to this object; and the high reputation of much of the butter made in those counties, proves their adaptation to this business. This limited extent of territory, is however, no more than is needed to supply New-York and other large cities with milk, and to some extent, with butter for family use in the summer months. The same remark will also apply to that portion of Pennsylvania at no great distance from Philadelphia. In addition to the supply of milk and butter for family use, the counties contiguous to large cities must give the finish to the fattening of the great proportion of the cattle which are required for supplying the city with fresh beef. New-England, with her numerous manufacturing establishments, and the employment of her citizens in the various mechanical occupations, consumes vastly more butter and cheese than she produces. Western New-York must always be a wheat growing region; (unless the owners of the soil exhaust it by severe cropping,) and so to a great extent are the western States.

The central and northern parts of the State of New-York, must therefore constitute *the dairy district*, from whence must be derived a very great proportion of the butter and cheese used in our large cities, and which is needed for shipment to Europe. The demand for cheese for this latter purppse, is now considerable, and will, doubtless, greatly increase, if proper attention is given to the manufacture; but it is idle to expect a foreign demand for a poor article. It is then to the dairymen in the district referred to, that this subject presents itself with the greatest force; and we deem it one of sufficient moment to demand attention from our agricultural journals. We propose in our next, to give some statistics relating to the products of the dairy in different sections of the country, and also the quantity exported, as far as such information is within our reach. These facts will not, it is hoped, prove entirely uninteresting to any class of readers, whether producers or consumers.

E. Comstock.

Foreign Correspondence.

MR. NORTON'S LETTERS—No. VI.

Lab. of Ag. Chemistry Association,
Edinburgh, Oct. 30, 1844.

Luther Tucker, Esq.—Since the date of my last letter, I have made an excursion into Ayrshire and Renfrewshire. I accompanied Prof. Johnston, who went for the purpose of delivering four lectures in Ayr. He has, on at least one occasion before, addressed the Ayrshire farmers, and so pleased and benefited were they, that they invited him to come again and give them a somewhat more extended view of the great subject of the application of Chemistry to Agriculture. In compliance with this invitation, was the present visit. I will give a brief sketch of the plan and subjects of the Lectures.

The first was upon the organic part of plants. This organic portion of all vegetable bodies is separable into starch, gluten, woody fibre, gum, sugar, &c. By the simple experiment of burning sugar, one of these bodies, it is shown that it resolves itself into carbon or charcoal and water; the same is true of woody fibre, starch, and a great proportion of vegetable bodies. The properties of charcoal were explained, and the two gases of which water is composed, oxygen and hydrogen, were exhibited through their more striking phenomena. In gluten and other vegetable bodies, we have a fourth ingredient, nitrogen; this was also shown, and the method of its formation explained. We see then that the organic, which is far the larger portion of plants, consists of four substances, carbon, hydrogen, oxygen and nitrogen. Plants collect these indispensable materials in various ways; the carbon chiefly through the leaves in the form of carbonic acid gas; oxygen and hydrogen through the roots, a great proportion in the form of water, and the nitrogen through the roots, also in the form of ammonia, or other compounds. The decay of various substances, and the vegetable acids present in the soil, also supply a certain amount of *all* these bodies.

Lecture 2d, was upon the inorganic part of plants and soils. When we burn a quantity of vegetable matter, far the greater proportion is driven away, but something always remains. This, though a small part of the whole, is indispensable; it is as absolutely essential as the glue or nails of the carpenter, or mortar of the mason; plants cannot live long entirely without *some*, though the proportions in which they require it, vary. This inorganic portion consists of eleven substances: potash, soda, lime, magnesia, alumina, oxide of iron, oxide of manganese, silica, sulphuric acid, phosphoric acid, and chlorine; other things are rarely present. The organic portion is derived chiefly from the air, but partly from the soil; but this comes wholly from the soil. Every fertile soil then must possess the above constituents, and a soil which does not, will not grow good crops. If rich in all of the others, but deficient in one, lime for instance, it will not nourish a healthy grain or root crop. Thus we may have a soil that may at once be made fertile, by the addition of some one absent ingredient. Here chemical analysis comes to the farmer's aid, and is able to tell him the best and most economical method of improvement.

Lecture 3d, pointed out the ways by which the soil is to be improved. Although, as has been stated, some soils only require the addition of a special ingredient to bring them at once into a state of fertility, others are in need of many things. In many instances a soil contains every thing necessary for the nourishment of plants; but will not grow them on account of its physical condition; there may be a superabundance of water—this is to be removed by means of the drain; there may be some excess of acid or noxious mineral substance—these too are to be removed by drains, put in, not because of wetness, but that the rain may descend quickly into them, and carry these substances away with it. Great benefit is also to be derived from thorough stirring and pulverization of the soil, to the greatest possible depth. Sometimes the subsoil is more fertile than the upper, and may be brought to the surface with much advantage. Green cropping, is another most valuable and economical means of improvement. Vegetable matter is thus supplied at the expense of the atmosphere; and the long roots bring up inorganic substances from the subsoil. If we do not return to the soil, both the liquid and solid manure from animals, we do not return all that we have taken away, and it will sooner or later show a deficiency.

Lecture 4th, treated of the purposes to which the crops raised are applied, that is, to the food and sustenance of animals. We find that the muscle, blood, and bones of animals also consist of an organic and inorganic part. This organic and this inorganic part, respectively contain the same constituents as the corresponding parts of the food, and not only of the food, but of the soil: here, then, we have a complete and beautiful chain. The soil and the air build up the plant, the plant builds up the animal frame. The food having fulfilled its purpose in the nourishment of the animal, is rejected, returns to the earth again, and commences its round anew. With a knowledge of the constituent parts of the animal, we are able, having the same knowledge of the vegetable, to adapt our food to the purpose required. To the growing animal we would give food, rich in phosphates, to build up bones, in gluten to form muscle; to the fattening animal, we would give in addition, something rich in oil and fat. These things are all ready formed in the plant; in fact, it is a workshop to prepare materials for rearing and supporting the body; our part is the selection alone.

The above necessarily imperfect outlines will give an idea of the plan and scope of these lectures. The room in which they were delivered, was each day well filled; and on the last day, some persons were compelled to stand. Sir Charles Ferguson of Kilkewan, presided at the two first lectures, the Lord Justice General, at the 3d, and Mr. Campbell of Craigie, at the 4th. The expression of gratification was universal. In his conclusion, Prof. Johnston made some most excellent remarks upon the necessity of caution in our advances. Many men of science even, have launched off into wild theories, and greater injury results from those, who with an imperfect knowledge of the subject, boldly arrogate to themselves the office of teachers, and by erroneous results and conclusions, not only lead others astray, but throw discredit upon the whole science. Our consolation is, that truth will outlive these wounds of purblind friends, and will prevail at last.

During my journey, I was favored with opportunities to visit several of the fine Ayrshire farms; and propose to give some account of them in my next.

Very truly yours, JOHN P. NORTON.

FOREIGN INTELLIGENCE.

By the Hibernia, arrived at Boston on the 21st ult., we have received our usual files of foreign periodicals to the 2d ult.; but have but little time to examine them before our paper goes to press. We notice that great preparations are being made for the great show of fat stock at Smithfield, which was to commence on the 11th December. We shall probably obtain full accounts of it for our next number. The subject of allotments, and of the repeal, or modification of the outrageous game laws, are now creating much discussion in England, and progress seems to be made towards the accomplishment of both these objects.

The English papers announce the death of Lord Western, of Felix Hall, Essex. He was in his 78th year. He was a devoted patron of agriculture, and as such, his name will long rank with those of Spencer, Coke, and others of his country. His farm has for several years been a leading object of curiosity with the agricultural tourist; and a welcome and ready hospitality was always extended to those who called to inspect either the farm or the mansion. He was never married, has no brothers, and the title is said to be now extinct.

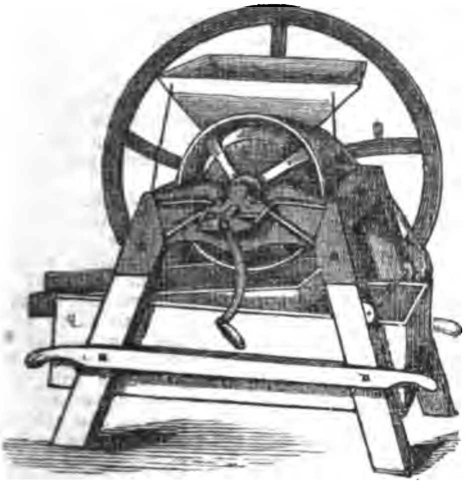
PRINCE ALBERT'S ANNUAL SALE OF LIVE STOCK.—This great sale, which lately took place at Windsor, attracted, as on former occasions, great numbers of butchers and salesmen. From the prices obtained, we should suppose the bailiff might be able to carry out the instructions which it is said were given by his Royal Highness when he undertook the management of the farms, viz. to "*be sure and make them pay.*"

HEREFORD CATTLE.—Mr. John Walker, of Burton, the famous breeder of Herefords, who is just removing to another farm, recently sold a portion of his stock. The sale begum with the cows and two year old heifers, some with calves and some in calf. These realized high prices, ranging from 20*l* to 58*l* each; the yearling heifers sold equally well, fetching from 18*l* to 35*l* each, and weaning calves from 10*l* to 27 each.

GRAZING STOCK.—At the late exhibition of the East Cumberland (Eng.) Agricultural Society, Mr. Ellison, one of the judges of stock, made some good practical remarks on the proper form and qualities of domestic animals. He said he had been a grazier for a number of years, and the result of his experience was, that a short backed, short legged animal, and one that would do with a short bite, was best, and would be found soonest fat for the butcher. There had been a very great improvement in the breed of sheep within the last forty years. Leicesters were now much run upon, and the reason was, that they were a short, compact animal that would suit any bite, and be made fit for the butcher in a short time. The great object in rearing stock as well as crops, was that the capital laid out should be returned as speedily as possible. In respect to pigs, there were certainly some good animals shown, but in his opinion, the object to be aimed at in raising improved breeds of pigs, was to give them smaller bones and larger carcases.

VISIT OF PROFESSOR LIEBIG TO ENGLAND AND SCOTLAND.—The distinguished chemist and physiologist Liebig has lately visited Great Britain. A public dinner was given him at Glasgow, at which the Earl of Eglinton presided. The chairman, in a complimentary speech, proposed the health of Professor Liebig, to which the Professor replied in an appropriate speech, that was received with much approbation. Professor L. received several other invitations to public dinners, which, on account of his short stay, he was obliged to decline. In his speech at Glasgow, the Professor, speaking of the advantage of science with practice in agriculture, observed—"Practical experience possesses unquestionable value; but it is like a vessel, to which, in the form of science, the compass, or the pilot, is wanting—it is a treasure which cannot be inherited. Science enables us to bequeath this treasure to our children, and it enables our children to increase the store. Science gives us the consciousness of our strength, and thus inspires us to recognize the food of plants, and the sources from which it is derived. This knowledge alone makes us the true masters of the soil—the lords of our capital. We can now see where we are guilty of waste, and where we are too sparing. The great truth that animal manures are nothing else but the ashes of the food produced from our fields, consumed or burned in the bodies of animals, has given the chief direction to all modern improvements in agriculture. The mineral food of the plants of all countries must be ascertained by analysis of their ashes."

☞ Some experienced cheese-makers in Nottinghamshire, are adopting the practice of adding churned milk to the usual cheese milk, which is said to very much improve the quality and taste of cheese, and prevents its rising after it is made.



R. SINCLAIR Jr. & CO'S PATENT CORN MILL—(Fig. 2.)

The machine represented by the above cut, is admirably adapted to plantation use. It makes coarse or fine meal with equal facility, at the rate of two and a half to three bushels per hour. When the screen is attached, (as shown in the centre of the cut,) and fine meal is required to be ground, it will be necessary to drive the mill by horse power, say two horses. Coarse meal for horses, may be ground by two men with good success. The grinding plates are made of the hardest composition metal, and will last about two years. A feeder is attached to the axle, which is intended to pass the grain into the plates at regular intervals. This feeder is important, and obviates the objection to cast iron mills generally. The feeder and grinding plate are represented separately from the mill, in figs. 3 and 4. Price of the mill with a set of extra plates, $40. Manufactured by R. Sinclair Jr. & Co., Baltimore.

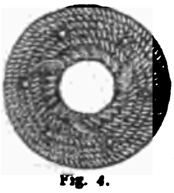


Fig. 4.

Fig. 3.

EXPERIMENTS IN THE CULTURE OF INDIAN CORN.

We are indebted to our friend Geo. Geddes, Esq., of Onondaga county, for the following detailed account of several experiments made by him, with great care, the past season, in the culture of Indian Corn. They will be read with interest, and our readers will be glad to learn that these experiments will be continued with the same exactness the ensuing season. Mr. Geddes says:

The Soil is a deposit of gravel mixed with sand and clay, resting upon a gypseous shale. The previous course of cultivation has been as follows, viz:—In 1837, a crop of corn was raised on a heavy sod turned under that spring, and slightly manured with barn-yard manure. The yield was estimated at 65 bushels to the acre. In 1838, corn was again raised, and without any manure; estimated to yield 50 bushels to the acre. In 1839, it was sown with oats, and yielded a very heavy crop. Grass seed was sown with the oats, which succeeded well. The next four years it was pastured. Plaster was put on both corn crops, and on the oats, and once or twice on the pasture.

The ground was plowed about the first day of May, six inches deep, and planted on the third and fourth days of that month.

The variety of corn was the improved Dutton; that is, Dutton that had been selected from the earliest ears for a series of years.

Experiment No. I.

One acre was planted in hills three feet apart each way, six kernels in the hill. Fifty loads of half rotted manure, was put on this acre, after it was plowed, and harrowed in as well as it could be done; it being so coarse that it piled up a great deal before the harrow. The hills had a hoe full of the best of the manure drawn in by the planter, and the corn dropped into it. It was hoed twice, and a cultivator was run once along each row *both ways*, at *each hoeing*. The account of the cost of cultivation, is as follows, viz:

To plowing and harrowing one acre,	$1·50
60 loads of manure, drawing and spreading,	12·50
2 days work of one man planting,	1·50
cultivating for both hoeings,	·50
hoeing twice, 3 days work,	2·25
harvesting, 3½ days work,	2·63
	$20·88

The product was 70½ bushels—at 4s=$35.25—20.88=$14.37, for the use of the land; or the corn cost, besides the use of the land, $0.29,6 per bushel.

Experiment No. II.

The other acre was cultivated as follows—One-tenth was planted in hills three feet by two feet apart, six kernels in a hill, and *without any manure*. The account of the cost of cultivation is as follows, reduced to acres.

To plowing and harrowing one acre,	$1·50
planting 2 days,	1.50
cultivating,	·50
hoeing twice, 4½ days,	3·37
harvesting 3 days,	2·25
	$9·12

The product was sixty and one-quarter bushels to the acre, at 4s=$30.12—9.12=$21.00 for the use of the land; or the corn cost, besides the use of the land, $0.15,1 per bushel.

Experiment No. III.

Another tenth was planted the same distance apart, and the same number of kernels in the hill as the last—and was manured, by filling each furrow, as it was plowed, full of barn-yard manure, *unfermented*—the amount used being at the rate of 150 loads to the acre. The cost of production was as follows, reduced to acres:

To plowing and harrowing one acre,	$1·50
2 men to fill the furrows with manure,	1·50
2 days work planting,	1·50
4½ days hoeing,	3·37
cultivating,	·50
3 days harvesting,	2·25
150 loads of coarse manure,	18·75
	$29·37

The product was seventy bushels to the acre, at 4s=$35.00—29.37=$5.63 for the use of the land; or the corn cost, besides the use of the land, $0.42 per bushel.

Experiment No. IV.

Another tenth was the same distance apart, and the same number of kernels in the hill as the last, and manured with coarse manure in the same way, and had beside, a top dressing of half rotted manure, at the rate of twenty-five loads to the acre. The cost of production was as follows, reduced to acres:

To plowing and harrowing one acre,	$1·50
150 loads of coarse manure,	18·75
25 " fine "	6·25
2 days work to put manure in furrows,	1·50
2 days planting,	1·50
4½ days hoeing,	3·37
cultivating.	·50
4 days harvesting,	3·00
	$36·37

The product was eighty bushels to the acre, at 4s=$40.00—36.37=$3.63 for the use of the land; or the corn cost $0.45,5 per bushel, besides the use of the land.

Experiment No. V.

Another tenth was planted in drills, three feet apart, the corn four inches apart in the drills. It was manured with 25 loads of half rotted manure, to the acre, put on after the plowing. The cost of production was as follows, reduced to acres:

To plowing and harrowing one acre,	$1·50
25 loads of manure,	6·25
drilling in seed 4 days,	3·00
two hoeings, 3 days work each,	4·50
cultivating,	·50
harvesting (small ears) 4 days,	3·00
	$18·75

The product was fifty-five bushels to the acre, at 4s=$27.50—18.75=$8.75 for the use of the land; or the corn cost $0.34 per bushel, besides the use of the land.

Experiment No. VI.

The remainder of the ground was planted in hills three feet by two feet, six kernels in the hill, with a top dressing of twenty-five loads of half rotted manure to the acre. The cost of production was as follows, reduced to acres.

To plowing and harrowing one acre,	$1·50
25 loads of manure,	6·25
2 days work planting,	1·50
4½ days hoeing,	3·37
cultivating,	·50
3¼ days harvesting,	2·44
	$15·56

The product was sixty-five and one-half bushels to the acre, at 4s=$32.75—15.56=$17.19, for the use of the land; or the corn cost, besides the use of the land, $0.23,7 per bushel.

It is proper to say, that the cost of labor for such small parcels, is a difficult thing to determine with perfect accuracy.

The stalks being of such equal value upon each piece, I have supposed it unnecessary to attempt any separate measurement; neither have I kept any separate account of the cost of the seed, for the same reason. The whole was plastered, but the expense being so slight, and costing the same for each piece, no account has been made of it. The manure is charged at its full value in each case, though the land is greatly benefited for future purposes. Hardly a quarter of its cost is justly chargeable to this crop. In No. 2, we have an example, in which the effects of the manure are easily traced through many years. The last manuring this piece had was in 1837—and it now produced 60¼ bushels to the acre. No charge being made against it for manure, it appears to be profitable above every other experiment. But if the account could be stated for a period of years for each piece of land as we have it for this year, I doubt not the manure would be found to pay fully all its costs.

These experiments were made chiefly to determine *how thick* corn should be planted—what is the *most convenient form to place the plants*—and whether the manure should be rotted and applied to the surface, or plowed under unfermented. The conclusion that now appears likely to be arrived at is, that hills three feet by three feet apart, put in rows, so that a cultivator can be used both ways, is the most convenient form for cultivation, and that six kernels put into each hill, will make the corn thick enough. I counted, and made examinations that satisfied me, that at harvest my hills averaged five stalks to the hill—no thinning was done, except by insects and accidents. That this is not too thick, is proven by experiment No. 6, where the hills were three feet by two feet, the product being 65½ bushels to the acre, and with one-half the manure that was put on No. 1, which was three feet by three feet apart, and the product only five bushels more to the acre. In fact, I believe that more bushels with the same manuring would have been raised with the hills two by three feet, than three by three feet, but the extra labor of planting, hoeing and harvesting, will more than counterbalance the gain.

The labor required to plow under *unfermented* manure in any considerable quantity, is so great, and its great bulk compared with its value, making it so expensive to draw, and the fact that it is not felt until late in the season—and that the next plowing must be deeper, in order to bring it all up and mix it with the soil—are great objections to its use. That the next plowing must be deeper, in order to bring up all the manure, is evident from the consideration that every time the soil is saturated with water it must sink deeper, unless it is held up by some stratum that is impervious to water. If the contents of the barn-yard are piled up in the spring as soon as the frost is out, and covered with gypsum so as to prevent the escape of any of its gases, and turned and re-piled at midsummer, and again covered with gypsum, the seeds of weeds will be destroyed, and the manure will be entirely rotted in time to put on the corn the next spring. The manure used in these experiments was but half rotted in consequence of neglecting to turn and re-pile it. From the decrease of the bulk, the expense of handling and mixing the manure with the earth, will be so much lessened as fully to compensate for all the expense of piling and rotting it.

The cost of the gypsum, too, will be but slight, as but little is required; merely enough to whiten the heap. The corn will then have its stimulus at the time it needs it most; and but few weeds will spring up from the manure. All these considerations lead me to prefer fine manure to coarse.

It is worthy of remark that in No. 2, where no manure was used, that the yield was 60¼ bushels—in No. 3, where 150 loads of unfermented manure were used, the yield was 70 bushels—a gain of 9¾ bushels to be ascribed to the manure; in No. 4, with the like amount of unfermented manure, and 25 loads of fine manure, the product was 80 bushels—a gain of 10 bushels to be ascribed to the fine manure—showing that one load of fine is worth more than six loads of coarse manure. While No. 6, which was manured with the fine only, yielded 65½ bushels—a gain of 5¼ bushels to be ascribed to the same amount of fine manure. Showing that one load of fine is worth about three and a quarter of coarse manure. But the land on which No. 6 was raised, was not as rich as Nos. 2, 3 and 4, owing to the fact that it was so situated in the field that it had not been as highly manured in those years gone by, when manure was only drawn out of the barn-yard "to get rid of it." Nos. 2, 3 and 4, were nearer the gate, and had been served about alike, and furnish the fairest test of the value of the different kinds of manure.

Some of the results obtained by these experiments were unexpected. The highest yield is very far below the great crops that have been reported. I know not why a hundred or more bushels to the acre were not raised on No. 4, with manure both on top and under the furrow, amounting to 150 loads of coarse and 25 loads of fine to the acre; and that too, along side of land that *without any manure*, yielded more than 60 bushels to the acre.

I purpose the next year to plant all of this ground with corn, and carefully measure the product of each piece, with a view of learning the effects of this manuring for the second year. Geo. Geddes.

AGRICULTURAL INSTRUCTION IN SCHOOLS.

We have seen several notices in our foreign papers, of a lecture recently delivered by Professor Johnston before a convention of school-teachers and others, on the subject of the introduction of agricultural instruction into the elementary schools of Scotland. As this subject has of late attracted much attention in this country, a portion of the remarks of Prof. J., who is deservedly considered one of the most practical among the distinguished scientific men of the age, will be read with peculiar interest.

In the course of his lecture, Prof. Johnston observed that he had previously had some doubts of the expediency of introducing this kind of instruction into these schools; but after hearing, at Glasgow, the examination of some boys from the Irish National Schools, all his scruples had been removed.

In relation to what should be taught, the Professor remarked, that

"Agriculture divided itself strictly into three branches; 1st, the culture and improvement of the soil; 2d, the rearing and improvement of stock; and 3d, the use and improvement of agricultural implements. Now, their teaching, that might be of two kinds—theoretical or practical, or both. He would come to the consideration of both. He thought that in elementary schools, they might easily inculcate and impress on the minds of the youth under their care, the principles upon which the culture of the soil ought to be based. Of the sciences on which these principles depended, chemistry was the most important, and it was necessary, therefore, before they could teach the young mind, that they should give a knowledge of so much elementary chemistry as to make him understand the words used by chemists. It was not enough that he should know such names as soda and potash—he should also know the difference between them. They must not teach any one science for its own sake, but as an important branch of national industry. They were to make their pupils—not chemists—not botanists, but scientific farmers, for in that the public were interested and would support them. As to the experiments they would find it necessary to make, they were few and very simple. For instance, here was the carbonate of soda in one glass vessel, and the carbonate of lime in another—take and pour spirits of salt on them, and they would observe carbonic acid gas arise, which extinguished a lighted taper when put into the vessel. They would also perceive that the smoke of the extinguished taper floated on the top of the gas, thereby showing how much was in the vessel. This gas, they were aware, performed most important functions; but it was not necessary to give the boy more information than was requisite to fix in his mind the name and property of the gas. Then as to phosphoric acid—here was a piece of phosphorus, which they would observe, when he burned it under a glass, sent up white fumes; all they had to do, therefore, was to tell the boy that those white fumes were phosphoric acid; that the same was in his bones, and in the food which he eats—and he would then easily remember what phosphoric acid was. If they did not happen to have phosphorus by them, they might use lucifer matches, which were easily procured, and which on friction being applied to them, sent up the same sort of white vapor as did the phosphorus which the boy had seen burned. They could also connect carbonic acid with the daily life of the pupil, by telling him that what was produced when charcoal was burned, was what he breathed. He would then go and tell his father that this same substance which he throws off from his lungs, was what the leaves of plants sucked in; that plants took it to form starch, and that animals eat the starch to form it. After making an experiment to show that liquid manure was an important substance if applied to plants, as it greatly promoted their growth, the Professor then went on to say that the more simple the teacher could make his experiments, the better—they should teach no more philosophy than was absolutely necessary; but at the same time, it must be strictly correct. He would advise them to confine themselves to facts, not to announce the principles. He would also press upon them, in endeavoring to fix facts on the boy's mind, to call forth all his senses—his sense of sight for instance. Then as to smell, ammonia might be used; and for taste, common salt, alum and soda, which were perfectly harmless. As to touch, sal ammoniac would be of use. They would observe that the little piece which he had just broken off, bent; and he knew of no other substance which a boy was likely to meet with that would bend in like manner.

As to the expense of making the experiments, it would not amount to more than five shillings a year, as the materials could be procured at a very cheap rate. With regard to the apparatus, all that is necessary could be got for thirty shillings from Messrs. Griffin of Glasglow, who had, at his request, prepared a set of apparatus. Then, as to the time it would occupy to teach the science; why, that was a point on which some misapprehension might readily arise. The boys who attended school generally did so for three or four years. Now all that he asked was one hour a week—that was enough to learn all that was necessary to be taught on the subject; but if they could give him two hours he should like it the better, as then there would be time to spare. The children also would learn much without teaching, from seeing the tables he had alluded to, and also from experiments. He did not wish that this one hour a week should interfere with the usual course of instruction, although it might not necessarily be new or additional time to what was now given to teaching. In fact, he did not wish any of them to teach in one particular way or another—he left that to themselves, merely taking the liberty of giving his opinion in the matter. As to the practical teaching of the science, that could be done in various ways. For instance, they might on a Saturday afternoon go with the boys to a farm in the neighborhood and describe the operations of the farmer. After telling them all about the rotation of crops—that a green crop followed after grain and so forth, the teacher might then say let us go now and see how the farmer works. This, he thought, might be of great benefit to the scholars."

SUMMER FALLOWS.

If ancient usage were in all cases to be considered sufficient evidence of the propriety of a practice, the expediency of FALLOWING would not now be questioned. The custom, if it did not originate with the Romans, it is certain was introduced by them wherever they extended their conquests. The practice seems to have originated in an idea that the land, after several years cropping, required *rest*, and that by remaining for one or more seasons without any crop being taken, its exhausted energies would become so far renovated that successive harvests might again be taken.

In England, there are several kinds of fallows, as "naked fallows," and "green fallows." Naked fallowing, as now understood, implies the plowing and cleaning of the land through one season, with a view of better preparing it to produce crops.

By green fallows, is merely meant the cultivation of the land in some hoed crop. In England, turneps, mangel wurzel, or some other root-crop, usually constitute the green fallow. The effect of the latter, is in one respect, that of cleaning the land, the same as the other kind. In the cultivation of the vegetables, the soil undergoes a thorough working, and is deeply perforated and divided by the roots; the tops and leaves thickly shade the ground, so that the combined effect is to pulverize the land and clear it from weeds and fowl growth.

In England, the chief advantage of naked fallows, is thought to be for stiff clay soils, or those which have become foul. The exposure of the soil to the sun, by which it receives a much greater degree of heat than it otherwise would, is by some in that country urged as one of the greatest arguments in favor of the practice. The course there recommended, is to begin in the fall, as soon as the crop for the season is removed; first throwing the ground into ridges in such a manner as to turn off the water as quickly as possible; in which state it is left for the action of the winter frosts. The next spring it is crossed plowed, and subsequently worked over as often as is necessary to secure the requisite degree of pulverization and mellowness, and the entire extirpation of grass and weeds.

The growth of weeds and grass—particularly couch grass, (*Triticum repens*)—is frequently a serious obstacle to the cultivation of grain crops; and where the root-culture, as it is called, either from the nature of the soil, or other cause, cannot be practiced, the only effectual remedy seems to be in a *well-managed* summer fallow. One mode which is recommended in some cases for clearing lands of foul growth, and which has also been practiced with much advantage, is to pare off, with an implement called a "breast plow," about two inches of the surface; which after being allowed to dry in the sun, is burnt in heaps on the ground. The operation of the fire destroys all vegetable life—seeds, roots, &c.—and the heaps of sods are reduced to ashes and calcined earth, which are spread evenly over the ground. If the soil is much filled with couch grass, there will remain a considerable portion of the roots, even after two inches of the top have been taken off and burnt. To eradicate these roots, the next step should be to plow the land thoroughly, by fine, narrow furrows. If the couch roots appear very numerous, or the nature of the soil is not adapted to root crops, it will be hardly advisable to put in any crop till the ground is well cleaned. In accomplishing this, an implement called a "grubber," is found useful and effective. It is made something in the form of a triangular harrow, with long curved teeth. It has wheels to regulate the depth, and handles by which it is guided. By the use of this implement, in connection with the plow, when the ground is in a proper state of dryness, the couch roots are drawn to the surface, and may be raked together and burnt. This course constitutes an excellent preparation of the ground for any crop; though it is thought more beneficial for stiff clayey soils, than for light ones. It has been practiced some by Mr. Sotham, on the farm of Mr. Corning, near this city. We shall probably describe it more at length, and speak more fully of its advantages, in a future number.

It is well to observe, that there is a wide difference between a *proper* fallow, and leaving the land as it often is left under that name. Fallowing, as often practiced in some sections of this country, is quite a different operation, and we may reasonably suppose is quite different in its effects, from what is recommended by the English authorities. Though the old idea of giving the land *rest* by abandoning its cultivation for a time, is now exploded with intelligent farmers, yet we have seen fallowing, (or what was called such,) practiced and defended from no more correct idea of its benefits. In grain-growing districts, we have sometimes seen fields half covered with weeds, mulleins, and thistles, and on inquiring the object of that mode of *mis*-management, have been told it was "fallow ground," or else that it was "thrown by to rest." It is difficult to perceive the advantage that can result from a "fallow" which not only exhausts the soil as much as would a crop of grain, but what is worse, instead of *cleaning* the land, is actually encouraging the growth of every noxious plant.

A very common practice in some sections of this country, with those who are considered good farmers, is to plow their grass or sod lands intended for wheat, in the month of May or June, and let them lie, sometimes with, and sometimes without harrowing, till September, or near the time for putting in the crop, when they are cross-plowed, harrowed and sowed. This is done without any particular regard to the nature of the sod turned down—whether a crop of clover was turned in, or it was the tough sod of a sheep pasture, the future course is generally the same. The expediency of this mode of fallowing, may well be questioned in some respects. The objections which have been urged against it, are, that whatever gases are produced by the decomposition of the vegetable matter turned in at the first plowing, are by the second plowing brought to the surface, and dissipated in the air; instead of remaining, as they should, to be taken up as food by the growing wheat. Another objection is, if the sward is not entirely dead, bringing it to the surface will cause the grass to grow and interfere with the wheat. In reference to obviating these objections, it has been suggested that some implement might be used for cultivating the ground, after it was once well plowed, which would properly prepare it for the reception of the seed, without again bringing the sod to the surface. An excellent farmer in Ohio, lately mentioned to us his intention of preparing a set of very small plows, to be set in a frame, and so regulated as to work the furrow just deep enough to answer the purposes of seeding, and not to disturb the old sod. Mr. Wiard's "plowing machine," or set of *gang plows*, described in the Nov. number of the Cultivator, is in some degree designed to answer this purpose.

Again, it has been suggested that sowing the ground designed for wheat, with some leguminous crop—as peas, beans, or vetches, which from the broadness of their leaves are known to draw most of their support from the air, and consequently do not much exhaust the soil—would secure the objects of clean tilth and friableness, equally as well as is done by the naked fallow, and give the crop as so much clear gain over that mode. In many situations, we have no doubt a crop of peas, or early beans, might be taken off sufficiently early for a crop of wheat, and it is well known that the effect of those crops is rather to ameliorate than impoverish the soil.

Where land is occupied by clover, and is clear of weeds, plowing has been sometimes deferred till the time of sowing the wheat—giving the benefit of the growth of clover, either for pasture, or to be plowed in, for nearly the whole season, and obviating the necessity of a summer fallow. On loamy soils, or those of not too heavy a nature, we think this course might be safely followed. Excellent crops of wheat have often been obtained by it.* Of the many examples which might be given showing this fact, we select the following given on unquestionable authority. On the farm formerly occupied by Mr. Woodward, of Camillus, Onondaga Co., (N. Y.) a field of fifteen acres in clover, was turned over in the month of October and sown with wheat. This proved the best on the farm—averaging 35 bushels per acre. Another instance was on the farm of Mr. Dickenson, Onondaga Valley, where the wheat was sown on a clover sod after a single plowing, and the measured yield from one acre was fifty-two bushels and eight quarts; and on several other acres the yield would not have fallen much if any short of the measured one.

It must be obvious that there is an immense difference in the profits of cultivation where no interval is allowed in the rotation, and where the ground is every third or fourth year unoccupied by any crop: and, excepting under particular circumstances, such as have already been mentioned, we see no good reason for the summer fallow. But, as we have remarked, there are some cases where, from the foulness of the ground, &c., the fallow must be adopted. In conclusion, therefore, and in consideration of the whole matter, we cannot present a more comprehensive and correct view, than by adopting the language of the late Rev. W. L. Rham, in that sterling work, the Dictionary of the Farm:—"The advice we would impress on the minds of cultivators, is—Avoid fallows, if you can keep your land clean; but when you fallow, do it effectually. Do not spare either plows or harrows in dry weather."

"SWEET AND SOUR APPLE."

I have seen apples called half sweet and half sour, said to have been produced by innoculating or grafting together two half buds; but I became satisfied that *the variety was natural*, and not produced by such means. It appeared to me that the *ridges* either ripened before the *hollows*, and hence the former became sweeter than the latter,—or else there was a defect or disease in the former which rendered them insipid. Indeed there was a deadness of flavor which I have found in no other apple.

Now if two half buds can be made to grow and coalesce, it is very strange that such artists only select *sweet* and *sour* apples for a trial of their skill, when a difference of *color*, of *size*, and of *earliness*, would be so much more strking and extraordinary. For instance—why have they not exhibited an apple which shall be on one side the *little* early juneating, and on the other the *large* fall pippin? or the *yellow* harvest and the *red* spitzenburgh? or the *early* bough and the *late* Roxbury russet? If they would take such kinds as should be agreed on, and achieve what they pretend has been done, all difference of opinion might be terminated at once, and a great number of splendid apples *manufactured* profitable to both the nurseryman and the orchardist.

Its not having been done, however, when it was quite as easy to do, is rather a suspicious circumstance; and it is not less remarkable that the *color* on both sides of the fruit which I have seen, should differ so little; that both sides should be so nearly of a *size*; and that both sides should be so nearly *mature* at the same time, not like the disparity between summer and winter apples. Another reason for doubting the reality of such *manufacture* may be found in the loose and careless manner in which its advocates have expressed their opinions. If the half of two *blossom* buds indeed, could be made to grow together, we might have an apple half *sweet* and half *sour*, or half *red* and half *white*, from those two buds, but nothing further; for if the grafter should take the half of two *leaf* buds, the result would be very different. He would then have a stem consisting of two distinct kinds, soldered or cemented as it were together—but not mixed, and each kind occupying its own side of the tree. Hence each side would have its own kind of fruit, and there would be no partnership business between them. The idea that each limb would be composed of the two kinds, is altogether preposterous.

Such are my views of this matter. If I am wrong, however, I shall be willing to make proper acknowledgments whenever the advocates of such amalgamation shall exhibit the necessary proofs of their skill.

Cayuga co. 12 *mo.* 15, 1844. D. T.

TURNEP CUTTING MACHINE.—A man by the name of Saul, in England, has invented a turnep cutting machine, which may be manufactured by the farmer's own workmen, at a cost of from not more than $2 to $4, that will cut turneps from two to three bushels per minute, any size that may be required.

IRRIGATION.

The benefits of thorough draining are becoming well understood by good farmers; but the mode of improving crops by irrigation, or watering soils by artificial channels, remains as yet almost unknown among them. With the hope of throwing some light and awakening some interest, we offer a few remarks on the subject.

The chief advantages of irrigation are of course to be looked for on grass lands. Every farmer must have noticed the greatly increased product of meadows where streams have passed across them. This may be in some degree owing to the greater richness of the soil in those low places, but it is by no means the chief reason. The few experiments which have been made, most conclusively show that dry upland, when watered by such streams as may be thrown upon it, and the soil enriched by such matters as they deposit, is improved in fertility to a very high degree. A few instances of such beneficial results may be mentioned.

S. Williams of Waterloo, N. Y., states that in the year 1840, during a season of severe drouth, he admitted water in small gutters between the hills and rows of vegetables in his garden. "In ten days, early potatoes grew two-thirds in size." In fact, he had never obtained a good crop of potatoes before. Other vegetables were greatly benefited.

E. Wilbur, now a resident of Macedon, N. Y., tried an experiment many years ago in Yates county, as follows: A field of seven acres lay on each side of a small valley through which a stream passed. This field was so unproductive, that to use the owner's own expression, "it was as dry and barren almost as a road." It was plowed and seeded. Channels were plowed from the stream, to carry the water on either side to the dry portions of the field. Successive furrows below, spread the water evenly over the surface as it escaped from the sides of the upper to the next below. Channels were also made from the side ditches of a road which crossed this valley, to carry the wash from them to the meadow. About a day's work was needed for the whole. And what was the result? "The effect was such," said he, "that it paid me a hundred fold for the seven acres after the first year. It produced for several years while I owned it, from two and a half to three tons of hay to the acre; and the man I sold it to, told me last year that he hardly ever saw such grass—there was hardly room on the ground to make the hay after it was mowed."*

E. D. Andrews, of Pittsford, N. Y., states, "In the hilly country of Vermont, I owned a farm, over which I carried the water of a small stream, in artificial channels, more than a mile. Lands that did not yield half a ton to the acre, were thus made at once to yield two tons; by which means I added to my crop six or eight tons. A little experience taught me I could carry water where I had not the least suspicion it could be carried. Every stream that runs with any rapidity, may be used for this purpose."*

Some farmers in the vicinity of Philadelphia, have long been in the practice of irrigation, by selecting permanent meadows on the sloping lands on each side of a stream, from which the water is diverted by channels, carrying it as high up the sides of the valley as the head of water will admit. Two tons and a half of hay are a common crop on such meadows.

In the southern portions of England, where irrigation is extensively and very successfully practiced, and in a much moister climate than our own, the chief benefits of the operation appear to be the deposition of fertilizing matters held in solution or suspension by the water. Some striking illustrations of this fact are given. A gentleman who owns meadows on the banks of the stream which passes through Winchester, has observed the great superiority of the waters below the city which have received the drainage of the sewers; and has also found that waters once used for irrigation, have their value greatly reduced by the deposit of the materials they contain. On one occasion, having long enjoyed the exclusive use of a stream, his neighbor, higher up, imitated his example, and the water became so deteriorated, that he thought of disputing the right with him. But the most extraordinary instance of the excellence of this mode of manuring, is furnished by the meadows of the Earl of Moray and others near Edinburgh. The spring water, which supplies that city, before it flows off, becomes saturated with all the enriching matters which the city affords. Such are the wonderful effects which after many years, these waters have had upon the meadows, that the grass which is cut and given green to cows, is mowed sometimes six times a year; it is sold by the quarter acre and upwards, and generally brings from £24 to £30 per acre per annum, or from $120 to $150. A part of the Earl of Moray's meadow brought £57 per acre, or about $280.†

It is true that such are rare instances, and that the command of such water is not very often obtained. But nearly all water of running streams contains fertilizing manures. Several analyses have shown that most of them contain considerable portions of carbonate of lime and gypsum; *hard* waters especially, containing the latter. Supposing then, as is often the case, that one part of gypsum is contained in every two thousand parts of river water, and that every square yard of dry meadow soil absorbs only eight gallons of water, (many soils absorb more) then more than a hundred weight and a half of gypsum per acre is diffused through the soil by the water.‡ The same reasoning is equally applicable to several other enriching materials.

Equal success has not always attended irrigation; some waters are doubtless much preferable to others; and on the other hand, some soils are vastly more benefited than others by the same stream, from a difference of composition. It has been found in some cases, that even heavy deposits from turbid streams have been of less utility, than the application of clear water in other cases, when that deposit consisted merely of sand and clay without a mixture of animal and vegetable substances and salts, and when, too, such clear water contained the latter substances in solution. But such, are rather exceptions to the general rule.

Heavy clays are generally least benefited, and sand and porous gravels most benefited by irrigation. On the latter, the water finds freer passage through the soil in depositing its impurities.

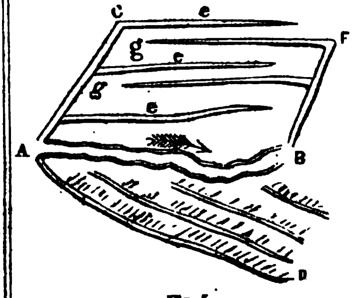


Fig 5

Two modes of watering the surface of lands are adopted, one for flat & nearly level land, and the other for land possessing considerable slope or steep acclivities. The annexed figure, (fig. 5) represents both these modes, where A B is the stream, and the side C is supposed to be a very gentle slope, and the side D much steeper. A dam is made at A, and the water carried by a main conductor to C, and from which it is distributed over the surface descending from it, by the feeders *e. e. e.* But it is important that the water should not collect nor become stagnant on any part; hence the main drain F is made on the lower side of the field, and from it lesser drains *g. g.* pass upwards between the feeders, and carry off the surplus water. But where the slope is more steep, as on the side D, feeders are made as represented in the figure, the water escaping from the upper one to each successive feeder below, as indicated by the dotted lines. Small pieces of boards placed in the lower sides of these feeders with holes bored through to admit the escape of the water, is the most perfect way of distributing it over the surface.

It is obvious that irrigation is chiefly useful on permanent pastures and meadows; but it may sometimes be employed on lands subjected to regular rotation, which lie in grass a short term of years. This is best effected by plowing the land in such a manner that the feeders may be made upon the ridges at the center of each "land," the dead furrows forming the drains for carrying off the surplus water. A section of this method is shown in fig. 6, F. F. being the feeders, and D. D. the drains.

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* Genesee Farmer, vols. 3 and 6.

† C. W. Johnson.—‡ Ib.

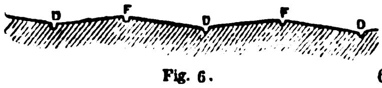


Fig. 6.

Laying out the ground, before striking the furrows, by means of a level, will greatly facilitate the work, and render it much more accurate and perfect. One of the most convenient instruments for this purpose, is the triangular level, represented by fig. 7. It is so made that the plumb line intersects the middle of the cross bar, when the extremities of the legs are precisely on a level. It is used in the following manner:—One foot of the instrument is placed at the level of the water to be drawn off, and the other at such a spot that the plumb will hang exactly at the middle of the cross bar; then bring round the other leg again to a level point as before. and so proceed to mark off the direction of the channel across the field. But it is necessary that the channel should have some descent; this is easily given, by suffering the plum to fall a little from the center towards the intended fall. If this distance from the center be half an inch, the descent from one leg to the other will be about one inch. This level should be made of light but stiff spars, and with ten or twelve feet span; and the exact course of the intended feeder or drain may be conspicuously indicated by a peg driven into the ground at each point marked by the foot of the level. The *general* slope of the land may be previously determined by the two *sights* at the extremeties of the cross bar.

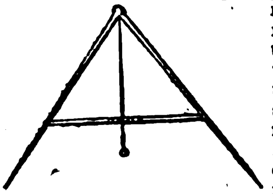


Fig. 7.

An objection has been brought to the practice of watering meadows, that the grass though greatly increased in quantity is much inferior in quality. This is indeed the case, but not more so than results from increased growth by the use of stable manure. The slight inferiority in this respect has been found by careful and accurate experiments to be vastly overbalanced by the increase of bulk.

Judgment must be exercised in not overdoing the business by suffering the water to remain on too long. Two or three weeks, with a short intermission, are admissible in dry seasons, or in autumn; but in spring, when the growth of the grass is rapid, much less time is sufficient. The appearance of scum upon the grass is regarded as an indication for the immediate withdrawal of the water. Autumn floodings are considered as the most permanently beneficial, as the waters are then charged with the animal and vegetable matters which have accumulated during summer. This season of the year will also be generally found most convenient for laying out and plowing the furrows for the channels.

When it is remembered that manure is spread in this way without the labor of drawing and shoveling—that the practice would probably be even more beneficial in our hot and dry summers, than in the moist climate of England—that it is in fact, not the transferring merely of manure from one spot to another, but the actual recovery of an immense amount of enriching material now swept through rivers to the sea,—the importance of a greater attention to the subject must force itself at once upon the mind.

CALCULATING THE VELOCITY OF WATER IN CHANNELS.—It often becomes a matter of some consequence, not only in cutting channels for irrigation, but for surface drains in reclaiming wet lands, to know the exact amount of water which may be carried with a given descent in the stream. To enable any person to calculate this readily, the following rule is given, and may be readily used by any boy who understands common arithmetic.

To ascertain the mean velocity of water in a canal or river flowing through a straight channel of equal size throughout:

Let f = the fall in one English mile in inches:

Let d = the hydraulic mean depth;

Let v = the velocity in inches per second, then

$v = 1.23\sqrt{d f}$.

The hydraulic mean depth is a quantity, which when multiplied by the perimeter of the channel in contact with the water, gives an area equal to the area of the section.

Example: Suppose a furrow is cut 6 inches wide and 4 inches deep, with perpendicular sides, and that it descends one inch in a rod; to find the quantity of water that will flow in it. It will fall 320 inches in a mile; the perimeter in contact with the water will be, 6 inches on the bottom and four inches at each side = 14 inches; the area of the section will be 6 times 4 = 24,—which divided by 14, the perimeter, gives 1.7 = the hydraulic mean depth. Then by applying the above rule,

$v = 1.23\sqrt{320 \times \text{[illegible]}7} = 1.23 \times 7.4 = 9.1$ inches, the velocity per second, or about one gall. per second, or one hogshead per minute.

In practice, considerable allowance must be made for rough and uneven sides and bottom, which would tend to retard the current. In larger channels, the calculation would be more accurate.

FARMING IN MASSACHUSETTS.

THE farm of CHEEVER NEWHALL, Esq., in Dorchester, six miles from Boston, furnishes one of the best examples of productive husbandry, we have any where met with. It consists of sixty acres, a few of which are still in wood. Several acres are taken up by the grounds about the house, in garden, shrubbery, &c., and there are eight or ten acres in orcharding; yet the farm supports twenty-five cows, one bull, four oxen, and three horses. All this stock is supported entirely from the farm, with the exception of a few oats occasionally for the carriage-horses, and some wheat bran for the cows.

The soil was originally very strong and some of it wet.

SOILING.—Mr. Newhall keeps his stock altogether on the soiling system. They are fed mostly in the barn, at all seasons of the year. The cows are turned out for a few hours in each day, when the weather will admit of it, and are driven for exercise to a small, shaded enclosure, about a quarter of a mile from the barn. They are perfectly healthy, and Mr. N. thinks give quite as much, if not more, milk, in the course of the year, as they would do if grazed in summer in the ordinary way. The cows average 420 gallons per year, and the milk is sold at the farm at an average of about fourteen cents per gallon.

The principal articles for feeding, in the summer season, are rye and Indian corn, cut green. The former is sown in the fall, and is the first thing that is fit to cut in the spring. It may be commenced on as soon as it is high enough to mow, and will continue to grow till the usual time that rye matures, by which time, the corn, which is most relied on, is fit to use. Corn is the most productive of fodder of any crop which can be grown. The past season, Mr. N. kept *twenty-three* cows for *eight weeks*, wholly from *two acres and a half* of corn. He is confident that *one acre* of rich land is more than sufficient to keep a cow the year round—that is, it will afford sufficient green food in summer, and leave enough to be dried to keep the cow through the winter. In 1843, Mr. Newhall measured a square rod, being part of a lot of corn sown for fall and winter use, and carefully weighed the produce, which he found to be at the rate of more than *thirty-two tons* per acre. It was then carefully dried when it weighed 160 lbs. to the rod, or nearly *thirteen tons* to the acre. He prefers planting in the drill mode, three feet apart, and uses two to three bushels of seed (of the southern corn) per acre. Large quantities of carrots, potatoes, and beets are grown for winter feeding. The white carrot is the kind most cultivated—it is easier raised than other sorts, and generally yields better—giving from 800 to 1000 bushels per acre. Each cow is fed during winter, with from a peck to a half-bushel of roots per day, with a little wheat bran, in addition to their dry fodder.

Making Manure.—Much attention is given to this branch of farming operations. The manure from the cattle and horses is pushed through scuttles into the cellar under the barn, and a layer of peat muck thrown over it three or four times a week. The barn-yard is so formed that none of the manure is wasted. Much manure is also made from hogs, eighteen or twenty of which are kept principally for this purpose. They are fed with the waste of public houses, &c., brought from Boston—on which food they get very fat. The pork covers all the expense of keeping, leaving the manure clear gain. The hogs are kept with a full supply of marsh mud, peat, &c., which being rooted over and mixed with their excrements, becomes good manure. The pens are mostly under roofing. We noticed a contrivance about the sties which we do not remember to have seen before, except on the farm of J. W. Haines, in Hallowell, Maine. The sty consists of an upper and a lower story, and the hogs resort to either as they find most conducive to their comfort and convenience, by means of an *inclined plane*, across which cleats are fastened to answer the purpose of steps and to keep the hogs from slipping down. The upper story, which is always dry, is generally used by the hogs for a *bed-chamber*—their work is done below, and in very hot weather, they go there to cool their bodies in the moist earth.

Besides availing himself of all the means of making manure from his stock, Mr. Newhall has another manufactory which is of great importance. From some large vats which have been provided at several of the large hotels in Boston, he obtains annually about sixty hogsheads of urine. The mode of using this, is to make it into compost with peat-muck. The muck is kept in the barn cellar, and the vehicle in which the urine is brought is driven into the barn, and the liquid is conducted by means of pipes to the muck below. Each hogshead of urine is sufficient to saturate a cord of muck, which is thus made—as experience has amply proved—of more value than the same quantity of any other manure used on the farm.

Buildings.—All the buildings are convenient and well and substantially made. The barn, (of which we hope to give a cut hereafter,) is one of the best we have seen. It is 120 feet long and 40 feet wide. The floor runs through the whole length, leaving the bay on one side and the stalls for cattle and horses on the other. The cattle stand on a platform raised a few inches from the floor, and slightly sloping backwards, and of such a length that the manure drops off behind it; by which means the cattle are kept clean and dry. Between the manger from which the cattle eat, and the platform on which they stand, is the watering-trough, which runs through all the stalls. Here the stock, whenever it is desired, are watered from a pump which is placed at one end of the barn. We omitted to mention, in our notice of Mr. French's farm last month, that his cattle are also watered in the same manner.

There is a deep cellar under the whole barn, a portion of which serves for the safe-keeping and manufacture of manure as already described, and the remainder as a store-house for vegetables. The space assigned for vegetables is divided into stalls or bins, arranged along one side of an alley, for the convenience of taking out the roots. There are scuttles in the barn floor, through which the vegetables are dropped directly from carts into the bins. The barn doors are made to slide on iron rails, instead of being hung on hinges. This is a plan which has prevailed considerably in Massachusetts for a few years past, and we think preferable to any we have seen. The door rests on cast-iron wheels, which run on the rail. The rails are cast with a small ridge in the centre, and the wheels with a corresponding groove. Thus the door keeps its exact place without any trouble, and runs very easily.

Fences.—From the system pursued with his stock, (soiling) Mr. Newhall has need of but few interior fences. Those required are heavy walls—the stones for which are found on the farm, and they were formerly in so great abundance that it was necessary to dig them out before the land could be tilled.

Sowing Grass-seed.—Mr. Newhall decidedly prefers the fall for sowing grass-seed. He thinks August too early for sowing on his farm, as there is sometimes a drouth after this time in the year which kills the young grass. He has been very successful in late sowing. He showed us a beautiful piece of sward which was sowed down on the seventh of October, 1843; and the past year he has sown still later. We think so late sowing succeeds better on his gravelly soil, than it would do on clay land, or that which is more liable to be thrown by frost.

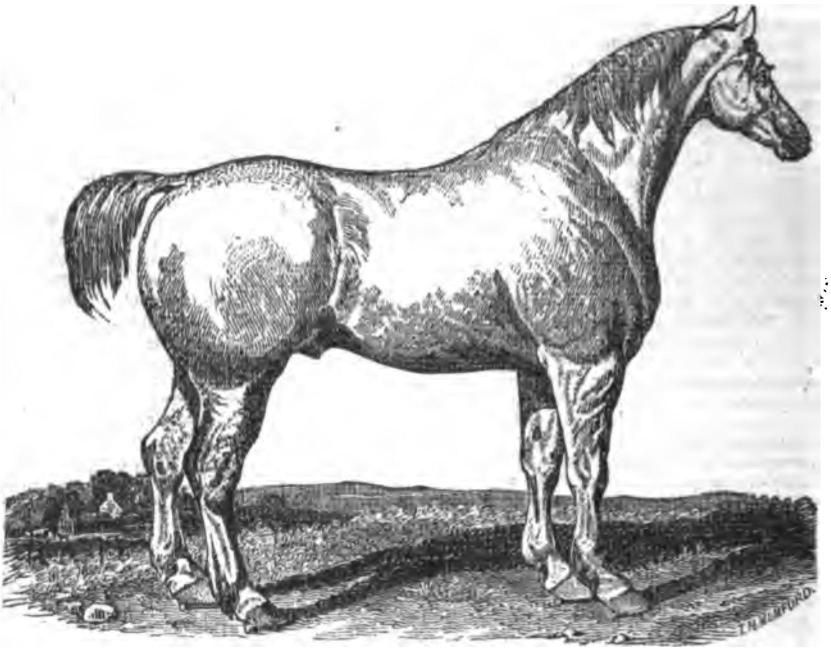
Fruit-trees.—Fruit, particularly apples and pears, is a considerable object on this farm. Besides having an abundance for home-consumption, three hundred dollars worth were sold the past year, among which were eight barrels of Bartlett pears, which brought fifty dollars. Mr. Newhall has a large collection of cherries, plums, grapes, and the smaller fruits. He showed us some of the finest Isabella and Catawba grapes we have met with in this latitude. Several of his pears are also very fine. We were shown specimens of Beurré Diel, Seckel, St. Germain, Napoleon, &c., which were excellent.

Mr. Newhall showed us a lot of pear trees imported from France and Germany, grafted on quince stocks, and cultivated at the distance of only four by five feet apart. The trees are kept trimmed in the shape of a distaff—what is called in France the *Quenouille* form—a mode which we are told succeeds well with these dwarf stocks. The trees are brought very early to bearing, and it is said as much, and as good fruit is obtained in this way for a given extent of land, as by standard planting: though none of the dwarf trees are as long lived as those grafted in their own species and cultivated in the usual manner.

Remarks.—Comment on the above facts seems scarcely necessary, yet we cannot omit to call attention to the great amount of products which Mr. Newhall obtains compared with many farms containing hundreds of acres each. Here is a farm of only sixty acres, which, besides affording three hundred dollars worth of fruit annually, and leaving a large portion of it for merely *ornamental* grounds, supports more stock than most farms of twice or thrice its extent. A striking example is here furnished of the fallacy of the idea that agriculture cannot be prosecuted to any extent or advantage without a *large farm*.

SUBSOIL PLOWING.

Col. Sherwood, of Auburn, made use of the subsoil plow the past season on fifteen acres. A part of the subsoiled land was planted to corn, and a part sown with wheat in the fall. The soil was loamy, and the subsoil hard clay and gravel. He used the subsoil plow of Ruggles, Nourse & Mason. It required four oxen to draw it, and to work to the best advantage at the depth it was run in this case, which was one foot, Col. Sherwood thinks there ought to be six oxen. The team worked over from an acre, to an acre and a quarter per day. The ground had not been plowed for thirty years. It was naturally wet, so much so that in a wet time, the water would stand on it to the injury of the grass. The effect of the subsoiling was to render the soil and subsoil so friable, that the water immediately found its way through, and though a portion of the past season was very wet, the water at no time remained on or so near the surface as to do the least damage to the crop. That part which was put to corn, was first planted on the 20th of May, but the seed failed, and it was planted again on the last day of May and first day of June, and grew so vigorously that it got ripe as soon as other corn in the neighborhood. Several strips of twenty to thirty feet wide were left through the field, *not* subsoiled. The difference in favor of the subsoiled portion, was very obvious in the ranker growth and larger size of the corn on that part—it was so plain that it might be seen to a row. The different portions were not measured separately at harvest time. The effect of subsoiling on the wheat crop, cannot be told at present.



THE CLYDESDALE HORSE.—(*Fig.* 8.)

Among the various descriptions of horses published in the Cultivator, I have no recollection of having noticed a description of the Clydesdale breed. The above portrait is copied from Mr. Stephen's "Book of the Farm."

In the Complete Grazier they are described as being "strong, active, hardy animals, of the middle size, remarkably steady, true pullers, of sound constitution, and well adapted to all the purposes of husbandry. They are, therefore, deservedly in esteem among the northern farmers, particularly on heavy soils; they are not, however, so active, nor, consequently, so well adapted for light land, as the Cleavelands; neither are they so handsome. They are said to have been descended from a cross, made by one of the Dukes of Hamilton, between some Flemish stallions, imported many years ago, with the Lanarkshire mares, and they derive their appellation from the district on the Clyde where they are chiefly found. They have already made their way into the bordering counties of England, and there can be little doubt that, as their good qualities become more appreciated, they will yet travel still further south."

This valuable breed of horses, is described by Mr. Aiton as "rising from 14 to 16 hands in height: if beyond that, they are generally unshapely mongrels, and greatly deficient in spirit; the effects of crossing small jaded mares with overgrown stallions. They are sound, fleshy, well-proportioned, strong, and heavy, without being too coarse or clumsy. The head is in due proportion to the body; rather small than large, and not so full and prominent below the eyes as some of the English breeds: the nostrils are wide, the eyes full and animated, and the ears erect. The neck is neither long nor slender, but strong, thick and fleshy, with a good curvature, and the mane strong and bushy. They are broad in the breast and thick in the shoulders, the blades being nearly as high as the chine, and not so much stretched backward as those of road horses. The arm tapers to the knee: the leg rather short, bone oval and strong, but solid and clean. The hoof round, of a black color, tough and firm, with the heels wide, and no long hair on the legs except a tuft at the fetlocks. The body round and heavy; the belly of a proportional size, neither small nor large, and the flank full. The back straight and broad, but not too long; the loin broad and raised a little; hucks visible but not prominent, and but a short space between them and the ribs. The sides from the shoulders to the hips, nearly straight. The thighs thick and meeting each other so close under the fundament, as to leave only a small groove for the tail to rest on. The tail strong, heavy to lift, and well haired." "The most common colors of the Clydesdale horse are black, or, more frequently, grey."

This description combines most of the best points peculiar to a perfect draught horse for the cart or plow; but it must be apparent that they are not often found united in one animal. C. N. **Bement.**

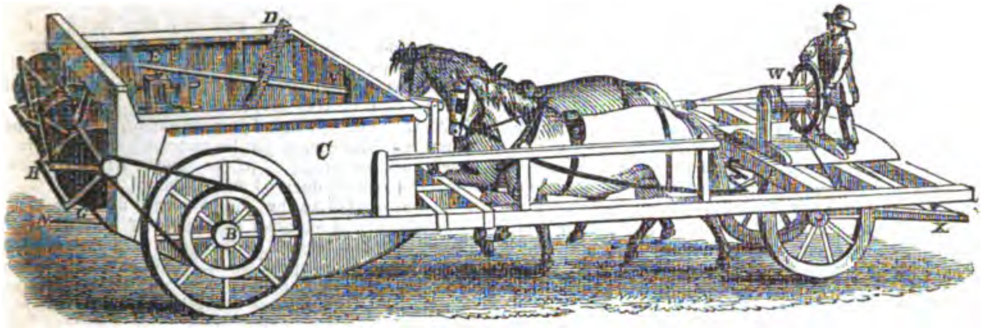
Albany, Dec. 5, 1844.

NEW PUBLICATIONS.

Agricultural Book for Schools.—We see it stated in our foreign papers, that "*A Catechism of Agricultural Chemistry and Geology,*" drawn up by Prof. **Johnston,** at the request of the schoolmasters of Ayrshire, has already passed through ten or twelve editions in Great Britain. From the high terms in which we have seen it alluded to, as well as from the practical and common sense views which the author takes of the connection of these sciences with the practice of agriculture in his lectures, we are rejoiced to learn that he has prepared an edition of his Catechism for publication in this country, by making such alterations as were deemed necessary to adapt it to the use of our schools, and that it is soon to be published, with an Introduction and Notes, by our correspondent, Mr. J. P. **Norton,** who, it will be remembered, is now pursuing his investigations in agricultural chemistry, with Prof. Johnston.

The Herd Book.—The 5th vol. of this work, consisting of two parts of 620 pages each, has been recently issued in England, and we have been favored by **Geo. Vail,** Esq. of Troy, with a copy of it. It is devoted exclusively to Cows and their progeny, and contains the pedigrees of a large number of animals owned and bred in this country. We are not aware that any copies of it are for sale in this country.

"Ohio Cultivator."—Mr. **Bateham,** whose retirement from the New Genesee Farmer, we noticed in our last, has removed to Columbus, Ohio, from whence he has sent us his prospectus for "The Ohio Cultivator," the publication of which he proposes to commence in that city on the first of this month. It will be published semi-monthly, 8 pages quarto, at $1.00 a year. Success to him.



ESTERLY'S PATENT HARVESTING MACHINE—(Fig. 9.)

This machine is calculated for cutting the heads from standing grain, leaving the straw behind. Where grain stands up well, it is warranted to cut the heads from 25 acres of wheat per day—the power employed being three horses, requiring two men and a boy to manage the machine. It is claimed that from one to three bushels more grain is saved per acre by the use of this machine, than is saved in the usual way. As the heads of the grain are cut off, they are received into a large box, or "receiver," and when that is filled, the heads may be conveyed to the barn, or secured in cribs—the latter being considered preferable, as they afford the grain a better chance to dry. From half an acre to an acre of wheat (according to the condition of the crop,) may be cut at a time, without unloading the "receiver." The operation of threshing is much facilitated by this mode of cutting grain—making a saving in this respect of from fifty to seventy-five per cent. It is confidently believed that this machine is destined to effect a great improvement in the saving of labor and expense in harvesting grain, and preparing it for market. By the use of it, the farmer is enabled to cut and secure, at the proper time and in good order, his wheat crop, with only the ordinary number of hands employed on his farm, besides abolishing the severe labor and drudgery of harvesting in the usual mode. The machine is manufactured by the patentee, **George Esterly**, Heart-Prairie, Wisconsin, and will shortly be for sale at Chicago, and other central points in the western country.

PRACTICAL HUSBANDRY.

Improvement of Worn Out and naturally Poor Lands, Old Fields, &c., in the Middle States.

I intimated in a late paper in the Cultivator, (vol. 1, p. 344,) that I would shortly give the readers of that excellent work an answer to the question HOW the improvement of the kinds of land mentioned in the heading of this article, could be accomplished in the cheapest way. I now proceed to the fulfilment of my promise. Land is poor or rich from various causes. It may be poor naturally, from being deprived of the accumulation of decomposed organized matter, by the washings of rain, the overflowing of streams, &c., and by its own gravelly and porous nature, admitting the upward filtering of spring water, as is the case in low gravelly bottoms. It may also be poor from the too large a portion of iron in its composition. But the most universal cause of poverty of soil, is EXHAUSTION, from over-cropping, taking away always, and returning nothing; as was so generally the practice in old times, and is too much the practice now in all the middle States. In a former paper I have expressed the opinion that a man may purchase and improve a piece of this poor or worn out land cheaper than will be the cost of removal to, and purchase of a piece of land in the west, especially when the sacrifices incident to such removal are taken into the account. I most sincerely believe in the truth of this proposition. But let us proceed to the subject—the HOW, not the *why*, this land should be improved.

The first object to be attended to in the improvement of land, is the grubbing up and clearing off every tree and shrub that is not wanted. Let this be done at the beginning. Allow no clumps or clusters of bushes or briars, or single ones either, to remain in the field. The next thing is ditching and draining of all sunken and boggy places, if such exist. Very often the simple plow furrow will answer, but sometimes a deep ditch must be dug. If it be deep enough, a blind ditch should always be preferred, so that you may cultivate the land over the ditch, and also save your land the inconvenience of open ditches. Having grubbed and ditched, and thus drained the land, the next object is to ascertain the quality of the soil, all parts of it. You may find that the low places you have drained are composed of hard clay. Some of the upper or higher places may be too sandy. You will in such case, employ your carts in carrying clay to the sandy parts, and return with sand to the clayey parts; and be very liberal in your exchanges, tòo. You may spread the clay at once, or allow it to remain a winter in cart load heaps, and spread it in the spring. The sand may be spread, of course, at once. All this is merely getting the land ready. A carpenter builds his shop, and "gets out" his stuff, before he thinks of "going to work" at his trade. So does every other artisan or mechanic. Why should a farmer not, also, before he goes to work to make money and a living, first "get his shop in order?" Having properly grubbed, drained, and mixed the soil, the next thing to be done is to ascertain the quality of the whole. It most probably wants lime to make it complete. Take a handful here and there from the whole field, say twenty handsful in all; mix them well together; then take a handful from the whole mixture, put it upon a shovel and heat it red hot; then take it from the fire and let it cool; when cold, pulverize it into a fine powder, and pour upon it good cider vinegar; diluted muriatic acid is best, but vinegar, if good, will do; if it foams considerably, you want no lime in the soil; if it do not foam, you must then apply lime. Nearly all the land in the middle States wants lime, and is benefited by its application. If it wants no lime, then go to work as follows: plow in the fall with the deepest working plow you can afford. In the spring, sow corn broadcast; and as soon as it is as high as you can well turn under with a good plow and two or three horse team, turn it under well, and immediately sow corn again broadcast; as soon as that is high enough to turn under, turn that also with a deep working plow. Generally you may turn under three crops in the same season. In the fall plow deeply in turning the last crop of corn under, harrow and seed with wheat. However poor your land may have been, you may be sure of a good crop of wheat the ensuing harvest. In sowing the corn, about three to four bushels should be sown to the acre, each crop.

If by the trial above described, you find your land requires lime, then, before the first plowing, apply twenty bushels of slaked lime to the acre, broadcast, then plow as before directed, sow the corn, and proceed as before, taking care to sow twenty bushels of lime before turning under each crop of corn; sow the lime on the corn as it stands, and turn corn and lime all in together. In this way, a first rate soil may be made out of the poorest old field in Maryland or any where else; and it will be observed that the only cost is in the liming and value of the seed corn, except the labor. Those who cannot afford to expend so much labor and money the first season, can extend the time over several seasons, applying say twenty or thirty bushels of lime to the acre, and turning under but one crop of corn each year.

The above may be considered a brief summary of the whole argument; and, it seems to me, scarcely requires elucidation. Some may however require explanations, and I therefore proceed to give them.

A clay soil requires only sand to make it a good one, so far as constitution is concerned; a sandy soil requires clay to make *it* good. These two elements of a good soil generally exist on all farms; and wherever they do exist in separate places, they should be combined and mixed, that the whole may be made fertile. If your land be too clayey, and you have no sand on *your* farm, probably some neighbor would be glad to exchange some of his sand for some of your clay, doing half the hauling, and thus both farms will be benefited at half the labor each. Rely upon it, there is more to be obtained in the improvement of land by a judicious admixture of soils, than is generally supposed. Manuring cannot supply its place, however large the quantity applied; and when once made, the effect is permanent, the benefit perpetual, the improvement lasts *forever*.

Low wet places are not only unproductive, but they are unhealthy, unseemly, and an absolute loss of all the land so situated. If your farm consists of one hundred acres, and twenty acres of it is of this low and wet kind, you have but eighty acres of land. Therefore drain, by ditching this low land, make it productive, by adding sand, &c., where necessary, and you will in effect have added twenty acres to your farm. And in draining, take care to avail yourself of the advantages of blind ditches. I do not suppose it necessary to tell you how to make them—the way may be found in almost all agricultural works, and they are very simple. A summary of the different plans may be stated as follows. Dig the trench as in the usual way of making an open ditch, of the proper depth and capacity, to carry off the water. Then lay in the bottom of the ditch, stones loosely packed, so that water will freely pass between them, about a foot deep. Then lay upon these loose stones, larger and flat ones, to keep the earth from filling the interstices, and then return the earth thrown out, leveling the whole surface. Some, instead of stone, lay in the bottom of the ditch, branches and limbs of trees and shrubs, and cover these with earth; but such blind ditches are obviously subject to obstruction from the decay of the wood, and thence from the caving in of the superincumbent earth. Others, in Europe especially, use an arching of *tiles* in the ditch instead of stones or brushwood; but this is too expensive for this country as yet. Where stones can be had, a good blind ditch may be made permanently effective by their use; next to stone, brushwood is to be preferred.

It surely cannot be necessary to say a word in illustration of the grubbing up of all useless growths of bushes, trees, &c. Never allow your fences to be sheltered by bushes or trees of any kind; they rot the timber, and you lose all the land they occupy. "Head lands," as they are called, are just so much deducted from your measure of acres. Clear out all such. If you have no other *clean* place in your field, let the head lands and fence corners be clean.

In ascertaining the precise quality of the soil, you accomplish precisely what every other artisan does when he ascertains his ability to do a certain job. You find out what the materials you are to work upon are capable of producing. If in that examination, you find your materials deficient in any one necessary ingredient—lime, for example—you, as other artisans would necessarily and instinctively do, apply lime. If you find it deficient in vegetable fibre, &c., you apply that substance, and if you find it deficient in clay or sand, as either of these preponderate, you apply the one or the other, as the result of the examination shall indicate.

Having prepared the soil for the reception of manure, the cheapest and most efficient method and material for supplying nutritious principles to the soil, is the next matter for consideration. I believe that corn sown broadcast, as above directed, is the cheapest, most efficient and speediest fertilizer. Some, and very many, suppose that the old plan of clover laying is the best and cheapest. I differ with them. You can only turn under a crop of clover once in two years; you can by an effort turn under three crops of corn in one year; and I believe that each crop of corn will carry as much nutritious matter into the soil as each crop of clover can do.

Now in this system of improvement, you have only to purchase the lime, if that be necessary; you can raise the seed corn on some part of the farm. All the rest of the improvement is derived from labor.

Never undertake the improvement of more land than you are certain you can manage. If you expend your funds upon too large a surface, you will be likely to lose the whole advantage of them. Calculate how much land you can work *well*, and confine yourself to that and no more. And in all your operations in agriculture, take care not to undertake too much. Suppose you can only work ten acres well in one year, if you undertake twenty acres, some of it will have injustice done it, and the result is obvious.

Deep plowing is one of the most efficient agents in the improvement of soils, as it is in the continuation of good soils. Never omit it. It may pay you scantily for a year or two; but it will ultimately repay you an hundred fold. Without it there cannot be any continued successful farming, no matter what the original soil may have been. Discard all shallow working plows from your farm, except the mere seed and cultivator plows.

Some lands will be benefited by 50 bushels of lime to the acre, and by it be rendered sufficiently calcareous; others may require 100 bushels; all this is to be found out only by proper experiments, as above indicated. If the solution of the soil foams freely in the vinegar or muriatic acid, it wants no lime; if but partially, it wants probably 50 bushels to the acre; if not at all, it may require an hundred bushels. If it be a red clayey soil, it wants more lime than if it be white or blue or yellow.

If you have no lime, and wood ashes are at hand, you may accomplish all the objects you aim at by their application. As ashes are mostly composed of different kinds of lime, besides their more soluble potash, from 50 to 100 bushels of ashes to the acre, applied in the same manner as directed for lime, will have the same effect as lime, besides giving you the advantage of the potash, the first year.

Where neither lime nor ashes are to be obtained, Plaster of Paris, as it is called, may be applied to most lands with advantage. The action of plaster continues to be a subject of dispute. My opinion is, that it simply serves the purpose of fixing the ammonia floating in the atmosphere, and that evolved from decaying animal matters, and thus securing it to the uses of the soil. No matter what its mode of action is, however, it certainly is a very efficient agent in soils generally, and in the absence of other still more effective agents, it should always be used, or at least tried.

I have said nothing of *fencing*, the most expensive item of farming, because it has nothing to do with the main object of this paper, and because the cheapest fence is that which each locality can afford with the greatest facility. One farmer can build a stone fence all around his farm, easier than he can a rail fence, simply because he has too many stones on his land, and in getting rid of them he hauls them to the line where he intends to make his fence, and in the seasons when he cannot be more profitably employed, he erects the wall. In the absence of stone, and where timber is plenty, the rail fence, the post and rail, &c., will of course be the cheapest fencing. I have no favorable opinion of hedges, except in the absolute absence of both stone and timber. They require a long time to grow; and in this country there is not a single kind of hedge plant that has succeeded satisfactorily. There are a few instances of good hedges being made, but I will venture to say there is not one in the United States that can be imitated profitably as to cost, time, and efficiency. If nothing but live fences had ever been in use, and some inventive genius had discovered the use of artificial fencing with rails and stone, he would have been considered the benefactor of his age. For myself, though I have traveled much, and have extended my observations over fifteen of the States of the Union, I have never seen a good efficient hedge occupying the place of ordinary farm fences. And yet the attention of farmers has been directed to it ever since the country was settled; the oldest American writers recommend them; seeds were imported to plant them a century ago; and all these efforts have been continued to the present day with increased force each year. And yet there is not, so far as I know, a single farm in the United States protected by hedges, in all its parts, or in any considerable portion of them. The economical farmer, therefore, will look to some other mode of fencing for protection; and, as said above, that which his land affords most plentifully and most easily of access, is the cheapest and best for him.

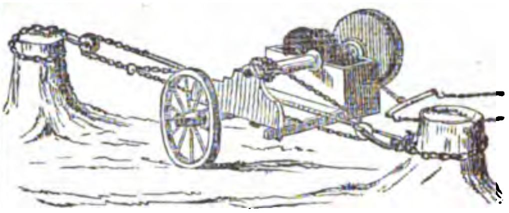
I must not omit a few words more upon *deep plowing*. I know it is the general opinion that we must not plow so deep as to turn up the "*hard pan*" of clay, or the white gravel, &c. &c. I am very certain this is a very great popular error. If we had a plow that would turn up the earth two feet deep, I do not care what the subsoil may be, in five years the *fertile soil* would be two feet deep. I admit, that generally a very stinted crop would be produced for the first two or three seasons; but I also assert, that the third or fourth and all subsequent seasons, will pay not only for all the deficiencies of the first two or three, but an hundred fold interest. Wherever a deep working plow has been used, the drouths of a dry season are not felt. The roots of plants pass deeply into the earth, and the burning suns and parching winds pass over them harmlessly. The subsoil plow is a good thing. It enables the farmer to avail himself of most of the advantages of deep plowing without any sacrifice of the first and second season's crop; but then it does not turn up this subsoil—it merely loosens it, enabling the roots to pass deeply. The roots, however, get no other advantage in this deep rooting, than that of protection from drouth; they get no nourishment in those depths. The protection from drouth, however, is an important consideration, and should always be availed of. But I would seek this advantage always when I could by the use of the deep plow, even at the sacrifice of a portion or even all the first two or three crops.

The saving of manure is the next, and though last here, not the least important matter for consideration. Every thing of a vegetable or animal kind, useless for other purposes, on a farm, should be gathered and saved for manure. A convenient compost yard and pit should be provided. The dung from the stables, the weeds from the fields, the chaff and offal straw, cornstalks, &c., the kitchen waters, *contents of chambers*, and all of such things, should be cast into the pit. The pit should be so situated that the drainings of urine, &c. from the stables should pass into it. A shed should be built over it to protect it from rains, and the effects of the sun's rays. Plaster of Paris should be sown over the surface of the manure pit once a week during warm weather, to catch and fix the volatile ammonia that will be continually passing off. If such a thing as a leisure day happen, (which, by the way, I do not see how a *good* farmer can ever have even a leisure moment,) the leaves from the woods may be profitably gathered and thrown into the pit. Twice a year, say in April and October, the contents of the pit should be taken out, thoroughly mixed and piled up to digest for a week or two or even a month. In forming the piles, if you have any swamp mud or bog earth, you may very properly add two or three loads of this to each load of the contents of the pit, taking care to mix them well. After the pile has stood a sufficient length of time, the compost may be carried out and spread over the land, either as a top dressing, or to be plowed in before seeding.

These are my views of the improvement of worn out and all other land. I submit them with great deference to the farmers of my country. Should they disagree with me in any or all particulars, I trust they will attribute my errors to at least good motives. I desire to do some good in my day, and the agricultural interest is, above all others, the most worthy of my efforts in my opinion. It certainly has my best affections and wishes.

GIDEON B. SMITH.

Baltimore, Nov., 1844.



HALL'S STUMP MACHINE—(Fig. 10.)

LUTHER TUCKER, Esq.—I have the pleasure of answering your inquiries in relation to Hall's Stump Machine, the model of which you have seen.

Mr. R. Hall's Stump Machine, to which the State Society recently awarded the premium and silver medal, has been used on my farm in pulling 400 or 500 pine stumps of the worst description, and I found its operation superior in all respects to any machine I have used or seen.

Mr. Hall has spent six years, and near ten thousand dollars, in bringing his machine to its present state of excellence; and certainly deserves great credit for his perseverance as well as ingenuity.

The machine requires three men and a boy, with a small horse, to work it to advantage. Its cost, with all the chains, levers, &c., is from $300 to $400.

Upon some of our best lands in the southern counties, the Stump Machine must precede all agricultural implements but the axe. The expense is considerable, being from 15 to 25 cents per stump, but the ground is thereby thoroughly cleaned to any depth. The stumps are either made into fence or burnt: the plow and harrow do their work; the seed is sown, and the effect is like magic; the unsightly stumps are gone, and the whole field is like a garden.

There are four or five different kinds of Stump Machines now in use in this county, and some of them work very well; but Hall's is the most powerful, most convenient in the application of power, and is least likely to get out of repair.

In conclusion, I ought to state that this machine is found of great service in moving buildings and sunken vessels, and in other similar operations; but it is especially *as an agricultural implement*, of great importance, that I desire to bring it to the notice of agriculturists through your excellent paper. Very respectfully,

Owego, N. Y., Oct. 19, 1844. GEO. J. PUMPELLY.

REMEDY FOR THE ROT IN THE POTATOE.

MR. EDITOR—I notice in the November number of the Cultivator, complaints made about the "rot" in potatoes. I was troubled with it for many years, and having found a remedy, give it for the benefit of your readers.

The rot in potatoes commenced in this section of the country about 10 years ago; one-third of a crop was frequently lost by it, and often in the spring, hundreds of bushels have been thrown from the cellar quite useless. For some years past, I have used slaked lime, which I sprinkle on the potatoes as soon as they are cut for seed, and shovel them over in it, and plant them immediately. Since I have adopted this plan, I have not lost a potatoe, either in the ground, or after they were put in the cellar; and such of my neighbors as follow my example, are alike fortunate, and in no way troubled with the rot.

When other potatoes were troubled with the rot—three varieties of mine were exempt from it, viz: the "Cups," "Black Apple," and "Red Apple" potatoes. I shall be glad if any of your correspondents can explain why they, with the same treatment, were not subject to the rot like other kinds.

I find it best to plant each kind of potatoes separate, otherwise if the seed is mixed, a few years will produce quite a different kind of potatoes.

I have often raised seed from the potatoe balls, adopting the mode recommended in the November number. The potatoe will obtain its growth in four years; but the second year, the best variety may be selected for yielding and for the table.

About seven years since, I raised from the ball an excellent kind of potatoe, resembling very much the "White blue nose," which I call "Howards;" they yield largely, and are of fine flavor, and preferred here to the "White blue nose."

If any of the above varieties of potatoes are wanted in your neighborhood, I can ship them to Boston, and if you will accept a barrel as sample, I will forward them as you may direct. Yours truly, Joseph Walton.

Saint Andrews, New Brunswick, Nov. 20, 1844.

Remarks.—We thank our respected correspondent for the above statement. The mode by which he has succeeded in preventing the rot in his potatoes, is certainly worthy of a trial by our farmers. The experiment will cost but a trifle, and can do no harm if it should fail of success on our soils. A barrel of samples of such varieties as Mr. W. may deem best, will be very acceptable. They may be shipped to Boston in the spring, to the care of A. D. Phelps, 124 Washington-st.

INDIAN CORN—NEW VARIETY—PLANTING.

I send you a few ears of a new variety of sweet corn, obtained by the process detailed below:

1st year. I had a very early yellow corn, but quite diminutive in its growth—the stalks not over 3 feet in height, and the ears not over 4 inches in length. Late in the season I planted this in a patch of sweet or shriveled corn, then considerably grown. As soon as the tops or blossoms of the yellow corn protruded, they were cut off, in order that the early corn might be impregnated only by the sweet corn. The result this year was yellow corn of the usual size and appearance.

2d year. The last year's product was planted by itself, at a distance from all other corn. The result was, a corn growing about five feet in height, having ears 7 to 8 inches in length, with a mixture of yellow and white smooth corn and sweet or shriveled corn on the same cob—fit to eat about the middle of July.

3d year. I separated the corn into two parts, the smooth by itself, and the shriveled by itself, and planted them apart, at a distance from other corn. The product this year corresponded mostly with the corn planted, only there was a slight mixture of the shriveled upon the smooth corn, and of the smooth upon the shriveled. The smooth was fit to eat about the middle of July, and the shriveled about a week later.

4th year. I again planted the smooth and the shriveled corn in separate patches. The smooth was fit to eat 18th of July, and the shriveled the 24th. The height of the stalks averaged about five feet. The character of the two kinds seemed now to be permanently established. The smooth corn produced its like, as did the shriveled. The latter has the disadvantage of being yellow, but is earlier than common sweet corn and equally palatable. The smooth corn has a mixture of white and yellow on the same cob.

5th year. I separated the white and yellow smooth corn, and planted them apart from each other. The result is two distinct varieties of smooth corn—the earliest fit for eating 19th of July. The white partakes very much of the tenderness of sweet corn. Some portion of it was about a week later than the rest and grew about a foot higher.

6th year. Having separated the earliest of the white corn from the latest, I planted them apart, and thus procured two distinct varieties of white smooth corn—one fit for boiling 18th July, the other about a week later. Upon the ears of the earliest variety of last year's growth, I noticed a few scattering kernels of white sweet corn. These were carefully picked out and planted this year by themselves. The result is *a white sweet corn fit for boiling 18th of July*, corresponding with the earliest smooth corn in size of stalk and ear.

My object in instituting this experiment having been to obtain a corn, suitable in color and early maturity for marketing, I discarded the yellow varieties, closing the experiment in possession—

1st. Of a white, smooth, eight rowed corn, with ears 7 to 8 inches long, approaching the common sweet corn in flavor, and fit for boiling 18th of July.

2d. Of a similar corn, but somewhat larger in stalk and ear, and a week later.

3d. Of an *eight-rowed sweet corn*, with ears 6 to 7 inches long, and fit for boiling 18th July, (in 1844, 14th.)

The last variety, proving to be the precise article that I was in pursuit of, I have for three years past kept for cultivation that alone. It is that which I send you.

A word upon the proper depth of planting Indian corn. A small patch of the early sweet corn above mentioned, was planted last spring *three inches* deep. It came up well and grew thriftily till it was 3 or 4 inches high, but then came to a stand. It remained without increasing its height perceptibly, a full fortnight, while another patch of the same kind of corn grew rapidly. On examining the roots of the non-growing corn, it was found that a joint had been formed about an inch and a half above the kernel, and that roots had sprouted out from the joint, *leaving all below to perish.* In other words, the plant had abandoned the lower roots at 3 inches depth, and formed a new set an inch and a half from the surface. While the process of changing the roots was going on, the plant seems to have ceased to grow above the ground. The effect was to retard the maturity of the corn about a fortnight; but I do not know that its size and productiveness were ultimately impaired.

The inference which I make is, that corn, *to be early*, should not be planted more than 1½ inch deep.

Noyes Darling.

New-Haven, Ct., November 18, 1844.

AGRICULTURE AND RURAL ECONOMY OF THE SOUTH.

Ingleside, near Washington, Miss., Nov. 16, 1844.

To the Editor of the Cultivator:

Dear Sir—Press of business, alone, has prevented my carrying out my intention of addressing you, as I promised in my last, on various subjects of interest to us here; and in particular of replying to Mr. Camak's call for aid in introducing the olive to the south. He does me but justice in supposing that no effort on my part, within my power to make, would be wanting towards the introduction of any plant that would add to the wealth of my adopted country. Among others I have often thought and spoken of the olive; but felt so much discouraged by the fact that my father-in-law, Mr. Isaac Dunbar of this place, has repeatedly introduced varieties of that plant without success, the frost destroying them, that I entirely overlooked the extract in Kenrick's work. Since reading Mr. Camak's article, I am resolved to make an effort to procure the Nikita olive and give it a fair trial here. The difficulties, however, which a private individual has to contend with in such an effort, are very great. In my own case, the only course I can pursue, is to request my correspondents in Paris to make every exertion to procure some plants for me. If some few others would do the same, we might, some one of us, ultimately succeed. I have long ceased to expect that the General Government will give any such aid to the farming interest.

That every effort should be made by the south, to introduce other staple crops than cotton, is very certain. The over-production is so great that prices cannot improve; at present prices this troublesome crop cannot be grown with profit—in fact not without loss—and the only possible means of lessening this over-production, is to induce the cotton planter to turn his attention to and employ a portion of his force in other crops, or in auxiliary branches of economical husbandry, if even these pay no better than cotton does now. Here it is that a State Agricultural Society *and farm*, liberally supported by the state, would give proof of their value. Those experiments in the introduction of new staple crops could be tried there, which cannot well be done by individuals to any extent, with justice to themselves. Any planter can however, after a few years, carry on upon his plantation many practices of economical good management—to some of which I will presently advert.

I prepared a series of resolutions some weeks ago, which I intended submitting to our Ag. Society at its business meeting after our last Fair. But so great was the political excitement at this time, that I regret to say a sufficient number of the members did not attend on that day to form a quorum. As another business meeting will be held about the time your January number will have reached us, when I intend bringing the matter forward, I will give you these proposed resolutions here:

"Resolved, That it is the opinion of this society, that the present ruinously low price of cotton, arises almost wholly from inordinate over-production.

"That a committee be appointed to prepare an address to the farmers of the cotton-growing region; setting forth the absolute necessity that exists for an entire change in the system of farming pursued among us, so as to lessen the quantity of cotton produced—to employ a considerable proportion of the labor of our slaves in the production of other staples; and of all the supplies necessary for the plantation which can be so produced, if not with profit, at least without loss.

"That they shall include, in their address, all the information they can procure as to the staple crops which may be so introduced; with short notices of the system of culture necessary for each; cost of production compared with cotton, &c.

"That the use of cotton bagging, in baling, be particularly considered; information acquired as to the cost, in plantation labor, of its manufacture; strength requisite, &c.; and the particular grounds that may exist for objections, if any there be, to its use.

"That they also inquire, whether the establishment of cotton factories generally within the cotton growing states, would not have the effect of counteracting the combinations which are formed in the foreign markets to keep down the prices of the staple.—Whether, such a demand for provisions may not thus be created at home, as to render their production at least as profitable as that of cotton, and thus divert a considerable portion of the labor now employed in the over-production of the latter—And if, in the judgment of the committee, manufactories within the cotton region would produce these results, what measures can be best adopted to encourage their introduction.

"That they shall submit their address and report at the next regular meeting of this society."

In all enlightened governments, but our own, agriculture receives powerful aid and support; not so much by means of protective duties and imposts, as by the wise measures taken for its relief when in any manner oppressed. Witness, in Great Britain, the frequent appointments of committees of the House of Commons, to examine into the causes of results the most trivial when compared with that now in question, and with power to call before them for information, individual and documentary evidence from every part of the country. Although we in this country, have no such powerful aid given us, we might do much good by such a plan as this here proposed.

Some weeks ago, I had some inquiries made of me by a gentleman in Natchez, who informed me that he was one of a company formed with the view of shortly erecting an oil mill there; chiefly with a view to the making of castor oil. I assured him, at once, that the bean can be grown with profit by the planter; and promised to grow, next year, an acre or so, each, of the castor oil bean, sunflower, and Bené; also to try the Madia sativa, of which I have a small quantity of seed. I know that all these plants will do well here.* In Illinois large quantities of the Palma Christi bean are grown, and the manufacture of castor oil is carried on with much profit. The farmers, there, so far as my recollection goes, found the bean a very remunerative crop. I neither remember the average yield per acre, nor the usual price, but have taken measures for refreshing my memory. Can you aid me? If you have files of the (Chicago) Union Ag. and Prairie Farmer, I think you will there find all the information wanted. It grows spontaneously along our road side, producing, I think, quite as good crops as those I have seen in Illinois. I have a variety of it in my garden of extraordinary and productive growth. A plant of it, which made its appearance in one of the borders, a volunteer, quite late in this present season, has attained a large growth. At five feet from the ground the stem is 15 inches in circumference; there it throws out three branches the tops of which are 17 feet from the ground, and spread to a diameter of 12 or 14 feet. Where the branches spring out, a spike of seeds has been ripe this three months; and now at the top of each of the three branches is a very heavily laden spike, the seeds in which are not quite ripe; though they certainly would have been had the seed been planted sufficiently early. The beans of this variety are very large. I find on trial that they weigh an average of six grains each. The stem and leaf-stems have a reddish tinge; the plant altogether forming quite a handsome tree. Last winter was so mild with us here that plants of this variety stood uninjured, and in the spring threw out multitudes of flower spikes. I am perfectly aware that a plant of such gigantic growth would be illy adapted to field culture, as a crop in rich land; I mention it merely as a proof that there is nothing uncongenial in our climate to the growth of the Palma Christi; and because I think that this sort would do well as an aftercrop, say on oat stubble; and would then have abundance of time to ripen its seed.

The Bené grows vigorously, and produces an abundance of seed; so, I am told, does the Madia sativa, although I have no knowledge of it myself; the sunflower I know will do well—all of these yield a very large proportion of valuable oil.

I have grown a small crop of Havanna tobacco this season, which is said to be of fine quality by those who profess to be judges. When properly cured and made into cigars a better opinion can be formed. I cut this three times, and each cutting was good; if planted early, and a handful of cotton seed or some other equally portable and effective manure hoed in round the plants at the second cutting, I have no doubt but four cuttings could be had each season—the two last of course of inferior tobacco.

The gentleman before spoken of, Mr. Isaac Dunbar, has for many years made his own wine. That which he exhibited at our last Fair was pronounced decidedly superior to any he has before shown. I think it was the best native wine I have ever met with. Mr. D. has a vineyard of sufficient extent to make a few barrels of wine, and leave enough of grapes to give even his negroes a fair share. His favorite grape is the Herbemont Madeira—as being perfectly hardy and requiring but little attention. At our summer Fair, this season, one gentleman exhibited seven varieties of grapes, principally European sorts. The variety that does best with us, is one known as the *Jack grape.* What it is I can only guess at. The vine is of a vigorous, healthy habit; young wood having a reddish tinge, resembling the cigar box and Norton's seedling; the bunches quite large and shouldered; the berries, which are entirely without pulp, are of sizes varying from that of an eighty-to-the-pound rifle bullet, to that of ordinary sized buckshot; juice a rich claret color and very abundant; the flavor fine, with a delicious admixture of sweet and sour; and forming altogether, when fully ripe, a most delicious table grape. If Mr. Camak will inform me by letter or otherwise, how to forward to him, I will have much pleasure in sending a couple of plants, that he may test this fine fruit in his region.

When I have again leisure, I may have somewhat to say on the cultivation of the vine, through yours or some other journal. I will only now add, that *excessive* deep planting will assuredly prove injurious. Moderately deep planting, however, *the soil being of a proportionate depth,* is by all means advisable. With you in the north, even as far south as Cincinnati and Nashville, and in the colder districts of Europe, the vine is trained low that it may benefit by the reflection of the sun's rays from the earth; while here, and even in latitudes north of us, to avoid this, and to secure the full benefit of the shade afforded by its own foliage, and all the air possible, the vine requires to be trained high—over a ten or twelve feet arbor, if possible.

I must pass over the subject of "new staple crops," on which a lengthy series of papers might be written. Indigo has been successfully and profitably grown here—the sole objection to it being the difficulty of making sale of the entire crop without having to seek for a mar ket. Madder, I am confident, would find its most congenial climate and soil here. It is a native of a southern clime, and requires just such a warm, light soil as we can here furnish it with.

Bread, meat and clothing, every cotton plantation *should and can* furnish for its own consumption, and even for sale, and yet grow as much cotton as should be grown. In fact, there is not a doubt, but if such a system could be generally introduced, cotton would again command a remunerative price. Other items should be included—comforts instead of blankets; leather for shoes and harness; tobacco for the negroes; bagging made at home, of cotton; hay grown for stock and for sale; all the mules and horses needed, raised at home; a flock of sheep kept, sufficient not only to clothe the negroes, but to afford a considerable return for wool and mutton; butter made for sale, the buttermilk being decidedly more wholesome for the negroes, young and old, than sweet milk, especially in summer, and any tidy old woman can easily make more in the dairy than in the field; and many other ways in which hands can be employed to at least *as great advantage and profit* as in the cotton crop—with the very great additional advantage of thereby lessening the ruinous over-production of that staple.

I have already written you, thus far, a most egotistical letter; too much so; and yet I do not see how I can so well sustain my assertion, as to the practicability of this change in our system of farming, as by giving my own experience. True, this experience has not been great—but it has this advantage, that though but of three years standing, it has been acquired in the face of serious difficulties. I had every thing to buy but corn—and even some little of that. So, with your leave, I will continue as I have begun, and give you a little more of *Ego!*—premising, that in good and economical management, I am far, far behind many of the planters of this region, *as yet*.

Corn can be grown here quite as well as in New-York, notwithstanding the opinion of that *enlightened southern gentleman*, who made such wonderful discoveries relative to the climate of the south—see the garbled edition of Johnson's Farmers' Encyclopedia. I am now offering 2,000 bu. of corn for sale, being my surplus of this year's crop, over the requisite supply for that plantation. Wheat, also, will do well at least two seasons in three; if we had a sort sufficiently early to ripen before excessive warm weather, I do not believe this crop would be any more subject to failure than with you. The "Valparaiso," of which I received a small quantity of seed through the Patent office, was entirely destroyed, this year, by rust. It tillered well, and the heads when coming in bloom, were very large. I mean to secure a supply of all of Mr. Harmon's sorts against another season. Egyptian or winter oats do remarkably well. They are sown in September or October, and afford capital pasture all winter, and a fine yield of grain, ripe early in May. Forty bushels is spoken of as a good, fair crop; one bushel sown produced me twenty. I prefer this grain to rye. It commands readily from sixty cents to a dollar, according to the supply. My pea crops, with the gleanings of the sweet potatoe lots, will fatten my hogs this year—a trifling quantity of corn *may* be needed. Of sweet potatoes, turneps, Irish potatoes, white beans, rice, hay, fodder, pindars, &c., I have hitherto found no difficulty in growing in abundance.

Cattle, unless where the range is extensive and good, or where the planter has formed good Bermuda pastures, I do not consider profitable stock here—at all events, by no means as much so as sheep, hogs or mules. To raise one's own meat, requires a good deal of care and attention—but it can be done profitably and advantageously on any cotton plantation. A little over two years ago, I commenced operations with eight thorough bred Berkshire sows, as many good common ones, and two or three fine boars, of different families of Berkshires, including imported Newberry. This fall I will kill a fair supply of meat, and offer some thirty or forty fine young, in-pig sows for sale, being unwilling to kill them while they are so much needed in the south. I offer them at less than the price of a barrel of pork each—$10. I lost, last spring, over one hundred pigs and shoats of a disease in the throat, caused, I believe, by their eating young cuckle-bur plants. Such, too, is the opinion of my overseer who had charge of them—Mr. Hamilton—a very intelligent, observing man. When turned out of the field where these grew, the hogs ceased dying and got well—when put back there they became sick again, and many died off. In addition to this, I have lost, in spite of every precaution, a good many through my own and my neighbors' negroes—no matter how much meat they may get, both salt and fresh, the negroes have a particular liking for fresh pig, killed and cooked *on the sly*, as school-boys say. All this, however, *can* be prevented. And even supposing that from ten good sows, one hand devoting his entire time and attention to them and their produce, 50 hogs of 200 lbs. each can be killed per annum, that hand is doing a fourfold better business than at growing cotton. Moreover, the hogs being during the picking season in the pea field, the services of the hand can be had at that time, when they are most valuable. I think I can have two hands supply the slaughter pen with three hundred fine fat hogs, each year, and attend to the breeding and stock hogs also. I feed much cotton seed, thoroughly cooked, and a small proportion of meal, with salt and ashes added, and occasionally pumpkins and turneps, boiled with it—and with decided economy and advantage. For sheep, as I have often asserted, this is the finest country I have ever seen, and I think myself tolerably good authority in the matter. This, however, may very fairly form the subject of a separate article.

Clothing—this too, requires time and attention; but there is nothing else needed to enable any force of negroes to manufacture the material for their own clothing, *with profit* to their owners. During winter the women cannot be so well employed in any way as in spinning up the wool—particularly where a carding machine is accessible. One woman, keeping a spinning machine and a loom going all the year, would spin the warp and weave the cloth for a very large place. Those spinning machines are a great convenience—they spin six threads at a time—the gin saws taking the cotton from the seed—the brush placing it on the cards when ginned, where it is carded, and then spun direct from the cards, all at one operation. Mine was made by Pearce & Co., Cincinnati, and cost $130. We have now, in Natchez, a very excellent manufactory established, and now in the hands of a most energetic business man—Mr. McAllister, of the firm of McAllister & Watson—who is proving that such a concern will succeed in the south, afford a profit to the manufacturer, and be a great source of convenience and economy to the planter. Linsey, jeans, all kinds of cotton goods, including *bagging* and sacking, bale rope and twine, &c. &c. Also *burring* and carding wool at so much per pound. Mr. McA. began by pledging himself that he would manufacture for the planter, from his own cotton and wool, fabrics of any kind to cost him, at least, *no more* than he could buy it for of northern manufacture, allowing a fair price for the raw material. The cotton bagging, made for Mr. Isaac Dunbar, out of most indifferent cotton, worth perhaps one or two cents per pound, is a very superior article—better, in the opinion of many, than the hemp article. I have little doubt that the cotton shipped from Natchez will be, half of it, put up next year in bagging of cotton—if the planters consult their own interest they will do so. If all the cotton made in the Union was packed in this material, we would have the crop lessened or consumption increased rather, to the amount of 22,500,000 pounds, or 56,250 bales—being five yards of bagging, weighing 9 pounds, for two and a half millions of bales. Bale rope and twine would swell the amount to over 70,000 bales.

Mrs. A. is just finishing off a lot of over 50 double and single comforts for the negroes, in place of blankets, which cost an average of about $1.12 each—not counting the labor of making, which in fact may be so much wet weather time of the women's labor saved, and it is well repaid in the difference in the cost of blankets. Had we not made comforts, I would have required over 45 pairs of blankets—difference, to pay for the making of the comforts, at least $120. This has been our first experiment in comforts, though some planters here have used them for many years. The use of comforts has other advantages—see the extra consumption of cotton—then the women are all taught to sew better than they usually do.

Many other items of economical management of the plantation might be mentioned, each of sufficient importance for a separate article; but I must now close, with the hope that every planter who has the good of the south at heart, and who is desirous of lessening the overproduction of our main staple, will never cease to act, to talk and to write with that object in view, until public attention is drawn effectually to it.

Yours, &c. Thomas Affleck.

INDIAN CORN AND POTATOES.

Salt Destructive to the Grub and Wire Worm—Diseased Potatoes.

Luther Tucker, Esq.—Every experiment which is made by the farmer, whether successful or otherwise, should be published for the benefit of the community. Among the enemies of the corn crop, especially on sward land, the grub and wire worm are pre-eminent. Many expedients have been tried for their destruction, some of which have proved useful, and others have entirely failed.

I had about three acres of sward land which had been in grass for several years, which I plowed in the spring for corn. On turning the sod under, I found the worms in great numbers, and fearful that my crop would be seriously injured by them, I sought for a preventive of their ravages. After it was plowed, I sowed broadcast about one and a half bushels of fine salt to the acre, and harrowed and rolled the land. My seed was prepared by soaking in warm water for about eighteen hours—and I dissolved two ounces of sal ammoniac, and put in the water, in which about a bushel of seed was prepared. The corn was planted the two succeeding days after the salt was sown. The seed germinated very quick, the plants remarkably vigorous, and grew very luxuriantly. Not a single hill during the season, was found injured by the worms, although multitudes of them were in the ground. A neighbor, who occupied a field near mine, and who planted his seed in the ordinary way, lost at least one-third of his field by the worms.

I have no doubt my corn was much benefited by the sal ammoniac, in bringing it forward rapidly, but I have supposed that its preservation from the ravages of the worms, resulted from the application of the salt. The crop was an unusually good one, and ripened very early. The soil was a gravelly loam.

In a field near by the one in which the corn was planted, I had three acres of potatoes. This was sward ground, but rather a sandy soil, with a clay subsoil. The land was manured with a good top dressing of barn-yard manure, previous to plowing. I planted five varieties of potatoes. The Perfectionists or Kelseyites, the seed of which I procured of Dr. H. Wendell of Albany, two years since, and which has proved a very valuable as well as prolific variety. The Pink Eyes, Silver Lake or Chenangoes, Black Ohio potatoe, and the Rohan.

The seed was cut, and the potatoes planted in hills about three feet apart. The potatoes came up well, and for a time advanced as rapidly as could be desired. The *curl* or *rust*, made its appearance when the potatoes were about half grown, and the crop from that cause was very seriously injured. The Pink Eyes, Silver Lake and Black potatoe, were also affected by the disease, which has prevailed so extensively this and the last season, and the crop from that cause diminished full one-third. The Kelseyites and the Rohans escaped the disease. In looking over an agricultural work, containing experiments in agriculture, made in Ireland, under the direction of the Dublin Society in 1773, I find that the *curl* existed at that time in Ireland. The remedy there recommended, *is change of seed every year*, and planting *whole potatoes*. It is there said to have been successful.

In the field of corn alluded to, I planted four rows of potatoes, same kind of seed as the other. These grew finely, were not injured by the curl, nor were they diseased. Their growth and yield equal to the most favored seasons. What was the cause of this difference? Had *the salt any influence* upon the potatoes, and were they benefited by it?

The fact is interesting; and I give it in hopes it may lead to further investigation, and perhaps to some useful result. Yours, B. P. Johnson.

Rome, N. Y., Dec. 7, 1844.

PREPARATION AND USE OF CHARCOAL.

Age and business both thickening upon me, I had ceased to write on agricultural subjects; but as I am called on, I come forth, willingly, cheerfully. But first, one word to my son Levi, and others of my sons. Whenever you may write me again, be assured I shall answer, but remember what I told you long ago, "it is hard work for an old man to gather fruit from a tree with so much brush about it."

In the winter and spring of 1842, I made and applied several thousand bushels of coal, mostly combined with the covering of earth and ashes of the pits; not doubting that coal, lying on or about the surface of the earth, absorbs ammonia in dry weather, and gives it to the earth in wet weather. I would not have it finer than the ends of my fingers, and unavoidably down to dust; for it is evident that in proportion to the pulverization, so are the pores destroyed. Towards the close of my operations, my preparation of the coal was to burn two or three pits on the same ground, mixing and casting back the same earth and coal for covering; by which, and a little extra labor with a shovel or hoe, the coal was pulverized to my liking. As to the effect of the pure coal which I pulverized and cast into my cattle yard, I cannot speak, as no test was attempted, but never expect to do the like again; for why should I use coal for securing my already acquired capital, when straw or leaves would answer the same purpose. Better use the coal broadcast to extract and secure capital from the universal fund. Remember that in my operations, the coal, the covering earth, (which is always filled with valuable salts,) and the ashes, were mixed together. This compound was carted out and cast on land in wheat, corn land, oat land, meadow and pasture grounds. The effect on wheat and corn, apparent and decisive, say improvement 15 to 20 per cent; both wheat and corn land inclined to white clay. Effect on oats not visible; land, white clay. Effect on meadow very evident, the grass being lifted thereby from 5 to 6 inches on both dry and wet land. The grass consisted of a mixture of greensward, alias Kentucky blue grass, and red clover.

The pasture ground operated on, was the top of a high poor ridge, which has ever since been closely grazed. On this, white clover and other permanent natural grasses are now about half as thick as I could desire, and suppose that in two more years, the ground will be well sodded. Be it known that this hill is so situated that it would improve without the coal, &c., but I attribute about one-half the improvement to this source.

The earth from a coal pit I would estimate at the outset, to at least as much as the coal; but as the coal is a permanent actor and reactor, it may ultimately perhaps be worth 100 per cent, or even 1,000 per cent more than the earth.

My manner of spreading this manure, is by casting it from the cart in such quantity as to blacken the earth handsomely, and for obvious reasons always keeping the cart on the wind side.

If Liebig's theory as to the action of coal be right, then it must act profitably on all lands wanting manure, except such as are continually wet; but on clay grounds, when plowed down, it has the additional virtue of opening the pores. If then the coal be used as manure separately, I would plow it into clay grounds; and if burnt earth and ashes be used separately, I would cast these on sandy grounds.

He who spreads manure of any kind, but especially coal, has this fund out at interest. It behooves us then to inquire what fund in labor or money we can afford to invest in this way. Let us suppose an acre of ground without improvement, capable of yielding 20 bushels of corn; which corn is worth $8; suppose $5 worth of coal, &c.,

spread on the acre, by which the crop is increased only 12¼ per cent, thus creating an annual income of $9, how now stands the case. If you live on the premises twenty years you pocket for one acre a profit of $15—ten acres, $150—one hundred acres, $1500. My son, 12¼ per cent profit above a living, will by and by make you rich, and whether this be in meal or malt, no difference. And remember moreover, the additional value of your lands, and the sweat you have saved by the difference in cultivating hard and poor ground, and that which is improved.

I would say to A. J. P. that coal and all other vegetable matter, must in time become earth; but I wish my coal to remain coal as long as possible; for I would value the ammonia which the coal may furnish, much more than the carbon which it would furnish by its decomposition. This winter I intend again to make and spread several thousand bushels of coal. But after all this, I doubt whether it is advisable for my son Levi to do so likewise; for if his lands are by nature black and porous enough, it contains already enough charcoal, or that which is its equivalent. But let me not discourage you, if this be the quality of your lands. I tell you what you can do; just burn your wood, not so much for the coal as for the burnt earth and ashes; and I will warrant the application equally as valuable on such lands, as on that which is sandy. To burn a large quantity of earth, and produce a large quantity of ashes, with a given quantity of wood, you will let the air more copiously in at the bottom of the pit, keep a goodly quantity of earth packed on, and burn the greater length of time. For agricultural purposes, it is best to open a coal pit while rain or snow is falling; or if water be convenient, this can be cast on the coal, by which it is broken or pulverized.

ZA. DRUMMOND.

Amherst Co., Va., Dec. 1844.

AGRICULTURE IN MEXICO—CORN STALK SUGAR.

THE following extract from "Prescott's Conquest of Mexico," (vol 1, p. 134,) recently published in the city of New-York, may be interesting to the readers of the Cultivator:

"Agriculture in Mexico was in the same advanced state as the other arts of social life. In few countries indeed, has it been more respected. It was closely interwoven with the civil and religious institutions of the nation. There were peculiar deities to preside over it; the names of the months and of the religious festivals had more or less reference to it. The public taxes as we have seen, were often paid in agricultural produce. All, except the soldiers and great nobles, even the inhabitants of the cities, cultivated the soil. The work was chiefly done by the men; the women scattering the seed, husking the corn, and taking part only in the lighter labors of the field. In this they presented an honorable contrast to the other tribes of the continent, who imposed the burden of agriculture, severe as it is in the north, on their women. Indeed, the sex was as tenderly regarded by the Aztecs in this matter, as it is in most parts of Europe at the present day."

"There was no want of judgment in the management of their ground. When somewhat exhausted, it was permitted to recover by lying fallow. Its extreme dryness was relieved by canals, with which the land was partially irrigated; and the same end was promoted by severe penalties against the destruction of the woods, with which the country, as already noticed, was well covered before the conquest. Lastly, they provided for their harvests ample granaries, which were admitted by the conquerors to be of admirable construction. In this provision, we see the forecast of civilized man."

"Among the most important articles of husbandry, we may notice the banana, whose facility of cultivation and exuberant returns are so fatal to habits of systematic and hardy industry. Another celebrated plant was the cacao, the fruit of which furnished the chocolate—from the Mexican *chocolatl*—now so common a beverage throughout Europe. The vanilla, confined to a small district of the sea-coast, was used for the same purposes, of flavoring their food and drink, as with us."

"The great staple of the country, as indeed of the American continent, was *maize or Indian corn*, which grew freely along the valleys, and up the steep sides of the Cordilleras to the high level of the table-land. The Aztecs were as curious in its preparation, and as well instructed in its manifold uses, as the most expert New-England housewife. *Its gigantic stalks, in these equinoctial regions, afford a saccharine matter, not found to the same extent in northern latitudes, and supplied the natives with sugar little inferior to that of the cane itself; which was not introduced among them till after the conquest,"* (in 1519.)

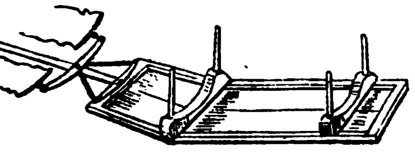
In perusing Prescott's Mexico, the above facts struck me as remarkable. If a semi-civilized nation on the continent of America, more than three hundred years ago, made sugar from the stalks of Indian corn, why may not the more civilized races of the present day in North America, with the aid of art and science, do the same? There is no doubt that it may be done; it has been done. But we have yet to try experiments, to improve the process, and not only to render it practicable, but profitable. As maize was, in the time of Montezuma, *the great staple* of the American continent, so it continues at the present day in its northern portion. Every State and Territory in these U. S. raise it in abundance. In Mr. Ellsworth's report to Congress of the crop of Indian corn, for the year 1842, it is estimated at 441,829,246 bushels. This *great staple* will increase with the rapid increase of our population; and the question will arise, how shall we dispose of our surplus? We can export but small portions to other countries, and must therefore create a market at home, or diminish its cultivation. How we can provide a home market to consume the superabundant crop, applicable to all parts of the country, it is difficult to determine. If maize continues to be as extensively planted as heretofore, it will become as it were a valueless drug, unless we cut a part of the crop when fullest of sap, and convert the expressed juice into sugar. This change of cultivation may not be advisable in all parts of the country. The experiments that have been made, show that it can be done, but in which of the States it can be most advantageously adopted, remains to be decided by other experiments. I feel satisfied that before long, we shall see and consume corn stalk sugar in abundance. I remember when maple sugar could only be obtained of the blackest and coarsest kind, such as was strained through the dirty blankets of the aborigines, and sold in small cakes or birch baskets as a rarity. At the late Fair of the State Society at Poughkeepsie, I saw beautiful specimens of refined maple sugar, and even rock candy, which had never before been made from the sap of the maple tree. The march of improvement is onward, and we shall see sugar from maize gradually introduced, as the process of granulation and refinement is improved, as has been the case with maple sugar.

It is encouraging to the husbandmen of our country to know that there was a time when cotton, and wool, and silk, and sugar from the cane, were not raised in the United States, while they are now firmly established. Maple sugar was always made in small quantity, but of late years, a large amount is manufactured, and refined equal to the best of imported sugar. So will corn stalk sugar be gradually improved and introduced. In some countries, sugar is a mere luxury, but with most of the people of the United States, it is a necessary article of consumption. In addition to the sugar imported, there was made in the country in 1842, (as by Mr. Ellsworth's report,) 142,445,199 lbs. Every State in the Union except Delaware, makes sugar; the southern States, from the sugar cane, and the northern and western States from the maple, (Acer saccharinum.) To supply the place of foreign sugar, let us persevere, until the manufacture of sugar from maize shall render it unnecessary to import the article.

RICHMOND.

Oakland Farm, Staten Island, Nov. 25, 1844.

LABELING SEEDS.—The Southern Cultivator furnishes a good hint to seedsmen, at all events a valuable one for purchasers—that it would be better to put upon them the date of the year in which they were raised, instead of the usual "*Warranted fresh.*"



STONE-BOAT OR SLED—(Fig. 11.)

The accompanying figure represents a simple but very useful implement, which no farmer should be without. It is nothing new, except the tongue. I am induced to present it to the public, by seeing its usefulness tested in smoothing down roads previous to freezing. If each pathmaster (or road supervisor) would procure one and go over his district, just before freezing up, it would confer a greater public benefit than the same amount of labor bestowed in any other way, by making a smooth sleigh track through the winter. I have represented it with saddles or bolsters for drawing logs, which can be taken off when it is wanted for any other use. They are used by the sawyers in this region to draw logs into the mill from remote parts of the yard. Large saw logs are easily loaded, and more easily removed in this than in any other way, even on bare ground. If the farmer is obliged to convey any thing over the roads, when they are partially frozen, this will draw more easily than any thing else; and instead of being like the wagon, detrimental to the road, is actually beneficial.

It is made of two or more plank, according to their width. They may be sawn in a sawmill, by cutting part one way, and then reversing the ends of the log and sawing the other. The tongue is attached by means of eyes passing through the fore part, secured by nuts; these are easily taken off when wanted for summer use in drawing stone. **Jason Smith.**

Tyre, N. Y., 1844.

SCIENCE OF AGRICULTURE.

Lectures on the Application of Chemistry and Geology to Agriculture. By Jas. F. W. Johnston—Part 4th, 8 vo. pp. 135. Wiley & Putnam, New-York.

This valuable work, as it was issued from the press of this country, has been noticed in preceding pages of the Cultivator. But when we called the attention of the agricultural community to the two volumes published in the city of New-York by Wiley & Putnam, the fourth part was still wanting. We now have that fourth part given to the public by the same publishers, and it completes the work, and when the several parts are put together it will form one octavo volume of 620 pages.

If the first, second, and third parts were valuable and interesting, the concluding fourth part is still more so. To the farmers of New-York, who feed stock to make butter and cheese, the twentieth lecture, *On Milk and its Products*, is worth more than any heretofore published work on these subjects. It contains, in a condensed form, under distinct heads, all that is desirable to be known in relation to butter and cheese as made in Europe. And although it may not be practicable in this country, to follow all the directions given in this lecture, yet the skillful agriculturist will find much information by which he may be benefited. To those who make cheese for export to England, the various methods of preparing it in that country will give him hints calculated to make it suitable to the taste of his customers.

On another occasion we stated in the Cultivator, the necessity of having pure salt to make good butter. Johnston in the above mentioned lecture corroborates our former expressed opinion by the following remarks:

"The salt should be as pure as possible, as free, at least, from lime and magnesia as it can be obtained, since these substances are apt to give it a bitter or other disagreeable taste. It is easy, however, to purify the common salt of the shops from these impurities, by pouring a couple of quarts of boiling water upon a stone or two of salt, stirring the whole well about, now and then, for a couple of hours, and afterwards straining it through a clean cloth. The water which runs through is a saturated solution of salt, and contains all the impurities, but may be used for common culinary purposes, or may be mixed with the food of the cattle. The salt which remains on the cloth is free from the soluble salts of lime and magnesia, and may be hung up in the cloth till it is dry enough to be used for mixing with the butter or with cheese." (p. 565.)

Johnston's work comes to us in the form of Lectures as they were delivered to a class of farmers in England. They were published in parts as the lecturer gave them to the press after delivery. The fourth now before us completes the series, and contains three lectures, being the 19th, 20th, and 21st of the entire course. These three treat respectively—*Of the Produce of the Soil—Of Milk and its Products—Of the feeding of Animals and the purposes served by the Food.* Each of these lectures is a treasure to the farmer. They are published in a small octavo volume by themselves, by Wiley & Putnam, (Broadway, New-York, price 31 cents.) The entire series of twenty-one lectures may also be obtained of them and other booksellers, in a handsomely bound volume of 620 pages for one dollar and fifty cents. The work is the most valuable of any of the late publications on agriculture. We do not mean by this commendation to depreciate the labors of Liebig. He pointed out many new chemical facts applicable to the improvement of agriculture, (some of which however were more theoretical than practical,) and he led the way for Johnston and others to profit by his labors, and render them practically useful. Johnston has done so in an eminent degree, and his work is a pearl to all practical farmers.

In the commencement of the 21st and last lecture he treats of the substances of which the parts of animals consist, viz: the muscles, the fat, the bones, hair, horn, wool, &c. He then in the second section asks—*Whence does the body obtain these substances? Are they contained in the food?* And continues—

"Whence does the body derive all the substances of which its several parts consist?"

"The answer to this question appears at first sight to be easy. They must be obtained from the food. But when the inquiry is further considered, a reply to it is not so readily given.

"It is true, indeed, that the organic part of the food contains carbon, hydrogen, oxygen, and nitrogen—the elements of which the organic parts of the body are composed. The *inorganic* matter also which exists in the food contains the lime, the magnesia, the potash, the soda, the sulphur, the phosphorus, and the iron which exist in the inorganic parts of the animal body—so that the question seems already resolved. The body obtains from the food all the elements of which it consists, and if these be not present in the food, the body of the animal cannot be properly built up and supported.

"But to the chemist and physiologist the more important part of the question still remains. *In what state do these elements enter into the body?* Are the substances of which the food consists decomposed after they are taken into the stomach? Are their parts first torn asunder and then reunited in a different way, so as to form the chemical compounds of which the muscles, bones and blood consist? Are the vital powers bound to labor, as it were for the existence and support of the body? Do they compound or build up, out of their ultimate elements, the various substances of which the body is composed—or do they obtain these substances ready prepared from the vegetable food on which animals in general are fed? The answer which recent chemical researches give to this second question, forms one of the most beautiful contributions which have been made to animal physiology in our time.

"We have seen that the flour of wheat and other cultivated grains consists in part of gluten, of albumen, or of casein. These substances all contain nitrogen, and are identical in constitution with each other, and with the fibrine of which the muscles of animals chiefly consist. The substance of the muscles exists ready formed, therefore, in the food which the animal eats. The labor of the stomach is in consequence restricted to that of merely selecting these substances from the food and dispatching them to the several parts of the body, where they are required. The plant compounds and prepares the materials of the muscles—the stomach only picks out the bricks, as it were, from the other building materials, and sends them forward to be placed where they happen to be wanted." (p. 589.)

Here we find the author of these lectures agreeing with Dumas and Boussingault in a work recently published in this country by the title of "The Balance of Organic Nature,"—but these opinions were also entertained by Liebig.

The animal frame receives a portion of its substance from the atmosphere, and expels carbon from the lungs. On the subject of respiration Johnston observes (p. 594) as follows:

"But for what purpose essential to life do animals respire? If the starch and sugar (as previously stated) be so necessary to feed the respiration—the breathing itself must be of vital importance to the living animal.

"Some doubts still exist upon this point. It is generally believed, however, that carbon is consumed or given off from the lungs for the purpose of sustaining the heat of the living body. When starch, or sugar, or gum, are burned in the open air, they are changed into carbonic acid and water, and at the same time produce much heat. It is supposed that in the body the same change—the conversion of starch and sugar into carbonic acid and water—taking place, heat must in like manner be produced. A slow combustion, in short, is supposed to be going on in the interior of the animal—the heat of the body being greater, in proportion to the quantity of carbonic acid given off from the lungs. In favor of this view many strong reasons have been advanced, but there are also objections against it of considerable weight which cannot as yet be satisfactorily removed."

"Were we to adopt this opinion in regard to the main purposes served by respiration as the true one, it would afford a very distinct reason for the large amount of starch existing in all our cultivated crops. Respiration, according to this view, is necessary to supply heat to the animal, and this respiration is most simply and easily fed by the starch contained in the vegetable food. The life and labors of the plant again minister to the life and labors of the animal."

That animal heat was derived from respiration was long since pointed out by Lavoisier in France, and Priestley in England, but they were not so certain as to the manner of its production.

"By the separation of carbonic acid (says our author, p. 596, note) which may be given off by the lungs—of water, which may or may not remain in the system—and of a portion of oxygen which may be used up in various ways in the blood, the starch or sugar of the food may be converted into fat.

"That in some such way these substances may be changed into the fat of animals, was first insisted upon and explained by Liebig, and it is probable, as I have said in the text, that in cases of emergency fat is really formed in the animal body from such kinds of food. But when Liebig put forth his views on this subject, it was not known that vegetable substances naturally contained so large a proportion of fat as has since been found in them. The necessity for the constant production or formation of fat in the body itself, therefore, is not now so apparent, and the soundest opinion, according to our present knowledge, seems to be that, while the vegetable food *usually* supplies all the fat ready formed which the animal requires, yet that a conversion of a certain part of the starch, gum, sugar, and even of the cellular fibre of the food, into fat, may take place, when all the wants of the body are not supplied by the fat which the food naturally contains. Of course this opinion applies only to animals in perfect health. In certain diseased states of the body a larger and more constant production of fat from the food may take place, as appears to be the case in animals which no diminution of food seems to prevent from laying on fat."

In the seventh section of the 21st lecture (p. 500) Johnston affirms that the health of the animal can be sustained only by a mixed food. From this summary we may learn a valuable lesson in dispensing food to animals, and the Graham philosophers may read a lesson that will teach them how to live.

"From what I have already stated, you see that the vegetable food eaten by a full grown animal for the purpose of keeping up its condition, should contain:

"1st. *Starch or sugar*, to supply the carbon given off in respiration.

"2d. *Fat or fatty oil*, to supply the fatty matter which exists more or less abundantly in the bodies of all animals.

"3d. *Gluten and fibrin*, to make up for the natural waste of the muscles and cartilage.

"4th. *Earthy phosphates*, to supply what is removed from the bones of the full grown animal by the daily waste, and—

"5th. *Saline substances*—sulphates and chlorides—to replace what is daily rejected in the excretions.

"Hence the food upon which any animal can be fed with the hope of maintaining it in a healthy state must be a mixed food. Starch or sugar alone, or pure fibrin or gelatine alone, will not sustain the animal body, because these substances do not contain what is necessary to build up all its parts, or to supply what is daily given off during respiration and in the excretions. The skillful feeder, therefore, will not attempt to maintain his stock on any kind of food which does not contain a sufficient supply of every one of the kinds of matter which the body requires."

There is much in these three lectures to interest the scholar, the man of leisure, or even the laborious farmer, who may read, and read again, and advantageously appropriate the information therein contained, as well as in the preceding parts before published. We will conclude our remarks on Johnston by giving his concluding summary, which, to those who have not read his work, will explain its nature and contents.

"§ 18. Concluding section." (p. 519.)

"I have now brought the subject of these lectures to a close. I have gone over the whole ground which in the outset I proposed to tread. It is the first time, I believe, that much of it has been trodden by scientific men, and I have endeavored in every part of our journey to lay before you, as clearly as I could, every thing we knew of the country we passed over, in so far as it had a practical bearing, or was likely to be susceptible hereafter of a practical application.

"In the first Part, I directed your attention to the organic portion of plants—showed you of what substances it consisted—on what kind of organic food plants live—and by what chemical changes the peculiar organic compounds of which they consist, are formed out of the organic food on which they live.

"In the second Part, I explained in a similar way, the nature, composition, and origin of the inorganic portion of plants. I dwelt also, upon the nature, origin and natural differences which exist among the soils on which our crops are grown, and from which the inorganic constituents of plants are altogether derived. This led me to explain the connection which exists between agriculture and geology, and the kind of light which this interesting science is fitted to throw upon the means of practically improving the soil.

"In the third Part, I dwelt upon the various means which may be adopted for increasing the general productiveness of the land—whether these means be of a mechanical or chemical nature. The whole doctrine of manures was here discussed, and many suggestions offered to your notice, which have already led to interesting practical results.

"In the fourth Part, I have explained the chemical composition of the several kinds of vegetable produce which are usually raised for food—showed upon what constituents their nutritive values depend—and how soil, climate and manure, affect their composition and their value as food. The nature and composition of milk and its products, butter and cheese—the theory of their manufacture, and the circumstances upon which their respective quantities and qualities depend—and lastly the way in which food acts upon and supports the animal body, and how the value of the manures they make is dependent upon the purpose for which the animal is fed—

these subjects have also been considered and discussed in this fourth Part.

"In discussing new topics I have had occasion to bring before you many new views. This, however, I have not done lightly or without consideration, and I feel it to have been one of the greatest advantages which have attended the periodical form in which these lectures have been brought before the public, that it has allowed me leisure to think, to inquire, and to make experiments in regard to points upon which it was difficult at first to throw any satisfactory light. It is gratifying to me to know that the general diffusion which these lectures have obtained, has already done some service to the agriculture of the country."

That country is England, and if the husbandmen of New-York, or other parts of the United States, should purchase and read and study Johnston's Lectures, they would be amply compensated, as believes their friend and fellow countryman,

November 12, 1844. A PRACTICAL FARMER.

AN EXPERIMENTAL FARM—No. I.

In this great state there are not far from eleven millions of acres under cultivation. In working these lands there is a vast amount of labor—I will not attempt to say how much—annually expended. As a practical question, and one of great moment, allow me to inquire: On what does the productive value of all this land and labor mainly depend?

For agricultural purposes, land without labor is valueless. This is demonstrated by the utter worthlessness of the products of the one thousand millions of acres in our national domain. Labor, then, is the one thing valuable. But the question still returns: Wherein consists the value of agricultural labor? Is it in the mechanical power of human bone and muscle; or in the intelligence of the directing mind? If in the former, as many seem to believe, then the labor of an ox is worth more than that of seven intelligent men. But with no mind to direct it, what is the strength of a thousand oxen, or of ten thousand demented persons' worth? This is a practical question, affecting the intrinsic value of labor, which every one, whether he have labor to sell, or to purchase, should study and understand.

There are at least a million of persons constantly employed in rural pursuits in the empire state. If all this honest toil can be made far more productive than it now is, and hence, be far better rewarded, who will complain? Probably no human being. The value of this rural industry, we have seen, is justly measured by the professional knowledge of those that direct, either wisely, or *unwisely*, all its operations. To increase largely the amount of this professional knowledge, and cheapen its cost to every practical farmer in New-York, there should be somewhere in the state a well conducted Experimental Farm, in connection with an Agricultural School.

Agriculture is essentially an experimental science. Its experiments and complicated details require much skill to decide accurately the value of any system of farming under different circumstances. That great improvements have been made, and that greater still may be achieved, no one can doubt who has investigated the subject. Every practical agriculturist knows that a single grain of wheat will often send up ten or more stems, and that each stem or stalk will bear an ear containing 100 or more seeds. This gives a yield of 1000 fold. Twenty-five hundred kernels of good wheat, and more of corn, have been harvested from one of either.

By planting wheat with a drilling machine that drops one seed in a place, and at a proper uniform distance asunder, that the air may circulate freely through the whole field, and by supplying each plant with all the ingredients in a soluble condition at its roots, necessary to build up its entire structure, it is believed by some that 100 bushels may be profitably grown on an acre. The raw materials required by nature to elaborate 100 bushels of wheat are not expensive. An experimental farm is needed to demonstrate practically from what sources these ingredients can be obtained at the smallest expense: and how they should be combined so that every plant may have its productive power developed to the fullest extent, and yet the farmer lose not one particle of the raw material not transformed into grain.

A moment's reflection will convince any one that in the production of any organic being, not a particle of matter is created. Every farmer knows that the leanness or fatness of his domestic animals, and cultivated plants, depends, mainly, on the scarcity or abundance of their food. To prepare this food for all our plants and animals, and to work it up without loss, and to the best possible advantage, is a *study* of great practical importance. The manufacture of breadstuffs, provisions, wool, cotton, flax and hemp, from certain raw materials, which God has provided most abundantly in the air, in water and in the soil, must ever be regarded as the most important branches of human industry. There are, however, millions of competitors in the manufacture of all these articles; and it is saying no more than the truth to remark that their numbers and their zeal are alike increasing with astonishing rapidity. Believe it who may, the time is close at hand when the entire profits of agricultural labor will depend on one's knowledge of the unerring laws of nature, his working in unison therewith, and never in opposition thereto.

Look at that locomotive. A knowledge of the laws of nature enables a man to make a little hot water and steam, draw a load for 200 horses, and travel at the rate of 20 miles an hour. Tell me, gentle reader, have the laws of nature nothing to do with the fertilizing of the earth? Have we nothing to learn in relation to the multiplication of plants and animals?

Exclusive of a small portion of earthy matter, all plants and all animals are nothing more than CONSOLIDATED AIR.

Four simple aeriform bodies, carbon, nitrogen, oxygen and hydrogen—the two latter being water—make up the whole catalogue of organic life, including man himself. Thanks to infinite benevolence, the air is full of bread, of meat, of clothing, and of fire! All gratitude is due to that Creator, who has made it impracticable for any selfish mortal to claim an exclusive title to any portion of the ever moving atmosphere, or to the rain and sunshine of heaven. The whole earth too, is full of silica, alumina, lime, potash, soda, magnesia, and the other minerals which enter into the composition of plants, and of animals. With all these materials furnished to our hands, with mental powers that derive their highest pleasure and dignity, from the investigation of the works of Providence, what is gold, what are deeded acres, to that knowledge which renders a rational being so nearly independent for every physical and intellectual comfort, if it do not also give him a higher, stronger hope of something better beyond the grave?

The fact is worthy of consideration that scientific, experimental farming has added more to the population of the island of Great Britain, within the last 44 years, than it had increased during the 423 years ending with the close of the 18th century. This wonderful and sudden increase of the human family has occurred in spite of the wars which desolated Europe for 15 years in this century, till the great battle of Waterloo; and in spite of the tens and hundreds of thousands of native Englishmen, who have emigrated to British colonies, to distant coasts and islands, and to foreign nations. As yet the prolific light of science has hardly begun to shine on the cultivated fields of "old England." It was but yesterday that the governments of Europe saw the folly and madness of human butchery, and wisely resolved "to beat their spears into pruning hooks, and their swords into plowshares." This is now done, and with the increased means for the support of our race, the human family are multiplying on the continent with a rapidity that has no parallel in the history of the world. Labor saving machinery in a thousand forms, serves to keep millions from mechanical pursuits. In all these operations, steam performs the labor of human hands. Hence, rural industry is very cheap, and the price of all agricultural products is constantly on the decline.

Soon to be excluded from all foreign markets, with our vast and fertile prairies under cultivation, can we, the farmers of New-York, safely neglect to cheapen, as far as practicable, the cost of raising whatever we have to sell?

Many of us have sons whose condition in life and standing in society, will depend on their ability to make property by farming; and I will add their ability to keep what their honest labor shall command, from the "itching palms" of those that study to acquire, not produce, the good things of this world. The science of keeping property, as well as that of producing it by the successful cultivation of the earth, I regard as a matter worthy to be taught in agricultural schools. Indeed, I have long contended that instruction in this useful branch of knowledge is too much overlooked in all our public schools and higher seminaries of learning.

Notwithstanding all the improvements in the useful arts, in science, and in labor saving machinery, by which one man performs the work of ten, the statistics of all civilized nations reveal the startling facts that Pauperism, Crime, and Insanity, increase faster than population. It is known that steam in Great Britain does the work of millions of human beings, and yet Mr. Colman states on what he regards as good authority, that there are in England and Wales a million and seventy thousand public paupers! In our own state the expense of supporting the poor last year, if I mistake not, exceeded $700,000. Over $17,000 "poor accounts," or accounts for taking care of the poor, have just been allowed by the board of supervisors in Erie county: nor is this an unusual sum. As God has given to each person but one pair of hands to work and provide food for one stomach, which must be fed three times every day—to work, and provide clothing for one naked back, a shelter for one houseless head, and for all its physical wants in infancy, sickness, and old age, it is plain that, if one person shall acquire a sum equal to the entire earnings of ten pairs of hands, some of the mouths attached by nature to these ten pairs of hands may go hungry. They may lack clothing and lack shelter, simply because they do not know so well how to keep and enjoy the fruits of their own industry, as other members of the society in which they live know how to exchange their shadows for the laboring man's substance.

Of what avail is it to a man that the annual product of his labor be increased fivefold, if he despise knowledge and allow his joints to be treated like gudgeons running under water, that never receive one drop of oil?

Farmers are much in the habit of changing work with merchants and professional gentlemen. The exchange is generally made after this fashion: The man who has devoted his life to the study and practice of agriculture, gives six days of his labor for one of the merchant or of the dealer in law or medicine. If either of the latter can find employment at this rate throughout the year, he may consume the entire product of one pair of hands, and lay up a sum equal to the whole earnings of five tillers of the soil. Estimating the value of this agricultural labor at $200 per hand, or at $1,000 for the five, instead of paying $70 a year to the laboring man who created this property, in the shape of interest, the man who has *acquired* it, lends it to the very men that produced it, and to their children after them, as a fair equivalent for 100 days work every year at 70 cents a day!

Let me suppose there was property sold in the year 1820, at 150 millions of dollars, in this great state, subject to an interest (less than 7 per cent) which would double the principle in 12 years. Call the population of the state at that time 1,250,000, which is not far from the truth. Since 1820 the population has doubled, or it is now 2,500,000. Look now after the property of $150,000,000 at interest. In 1832 it was 300 millions, in 1844 600 millions. While this dead matter, called sometimes gold and silver, at others something else, which can neither move, think, nor do the least thing whatever, has increased fourfold, and drawn from human thought and muscle 450 millions, without paying the debt, the number of laboring hands in the state to work and pay the interest on 600 millions is only double the number which had to pay the interest on the original debt of 150 millions. If the tax on labor increase twice as fast as population, what but increasing poverty and crime can result?

I have stated the above facts to demonstrate the reason *why*, pauperism is increasing so rapidly in the Empire state. In this free and civilized land we call the *annual service* of $5,000 in gold, which needs no food nor raiment, and which will last a thousand years, worth $7 per cent, or $350. To pay this, in the plenitude of our kindness to humanity, which unfortunately must be fed and clothed, we usually allow for labor one dollar a day. In England they lend gold at 3½ per cent, and credit labor fifty cents a day. In France and Germany gold is loaned at 2 per cent and labor credited about 25 cents a day.

The great error in all this matter is committed by the borrower, not the lender, in each of these countries. No man, as a general rule, is compelled to run into debt, when he begins in the world. If all interest on money were abolished, it would not prevent in the least, ignorant or foolish men, from selling their labor, or its products, at a price less than their value. *Knowledge* is the one thing indispensable, not less to keep, than to produce, the comforts of life. By trading and gambling a man may draw a prize; but the chances are that he will buy a blank. When every human intellect shall know how to make one pair of hands work to the best advantage; and also how to keep and enjoy what they produce, to bless himself and his own household, pauperism, crime and insanity will be nearly banished from the world. When no man can obtain wealth except by the sweat of his own face, over and above what he consumes, he will no longer cherish that morbid "love of money" which the Bible denounces as "the root of all evil." The equality of condition, which would result from every man's keeping the fruit of his labor or a fair equivalent, would remove the exciting cause of much of the pride, envy, extravagance, idleness, vice and disease, which now afflict those that needlessly violate the laws of their being. If our Maker designed that one rational being should consume the entire products of three hands, and another live on the products of one hand, would he not have given three hands to the body which needed their mechanical service, and only one hand to the body which required the labor of one only?

Buffalo, Nov. 27, 1844. D. LEE.

INJURIOUS EFFECTS OF IRON IN SOILS.

L. TUCKER, ESQ.—Much has been said and written, not only on the source whence plants derive their substance, but on their ability (instinctive?) to select their appropriate food and to reject all other.

I think there are some *facts*, which go to show that plants are not much more intelligent than animals in this respect. We have lately had statements in relation to the effects of common salt on fruit trees, good or bad according to quantity or other circumstances, and in one instance it has been averred that the salt went into and destroyed the flavor of the fruit.

I have about two acres on one side of my farm, lying about two feet below the general level, which, when first cultivated, had a dark brown, and what was thought an extremely rich appearance. But, alas, nothing valuable would grow on it. I satisfied myself that the sandy loam contained large quantities of iron, (perhaps sulphuret of iron or pyrites.) Most of this I have thrown into ridges, and drained it as well as the position admits, and supplied it pretty liberally with quick lime. It has produced a good crop of oats and peas, and the clover on it looks well.

Now for a *fact*, which I think is a proof that plants absorb by their spongioles or rootlets, substances which are not only poisonous, but which they can neither reject nor expel. My cornfield had a small corner project into this low plat, which had not been limed. Until the plants were some inches high, no difference was observed; but then it began to falter, and soon the leaves were beautifully striped with various shades, from a crimson to a corboo or reddish brown color. In another spot, some rods distant, in the midst of a healthy growth, was a patch of about a square rod, in which the appearance was the same. On this, the plants never exceeded 12 or 15 inches in height. On examining the roots, they were found corroded and eaten off in all directions, and thousands of little lateral rootlets thrown out to be corroded in their turn, and so on till death decided the struggle. Perhaps I shall be told the coloring matter in the leaves was not oxyd of iron. I have not said it was, and as I did not analyze it, I shall not so affirm; but I have no more doubt in my mind that some compound of that metal was the cause of both the color and death of the roots, than I should have with any proof short of positive.

My wish is to make this subject, not only one to stimulate investigation, but, as I know many hundred pieces of such soil, to advise those who have it, to apply quick lime in autumn, and mix it to a moderate depth with the soil in the spring. Yours truly,

Norridgewock, Me., Nov. 25, 1844. James Bates.

SUGAR CANE—ITS CULTURE IN LOUISIANA.

Mr. L. Tucker—The plants we cut and matlay in beds, during the autumn, usually in October, previous to the sugar making season, and before the canes are injured by frosts. Often the unripe tops, which would otherwise be thrown away, are winrowed for plants. The best plant cane we usually save for plants; because they are the easiest put up, and the quickest planted; for time and saving of labor are money. Besides, by planting the whole stalk, it grows more vigorously than the tops, especially in a dry season.

After the sugar making season is over, which usually is about the first of January, we prepare our land, designed for cane, by plowing and harrowing, breaking it from four to eight inches deep: the stiffer the land, the deeper the plowing is necessary to protect it from drouth. Thus prepared, the ground is laid off in rows, with a two horse plow, about 6 feet apart, (some plant as close as four feet.) In these furrows, a double mould board plow, with one horse, is run; in order to clear the furrows of lumps and sods, and also to deepen and widen the furrows; as it is necessary to put the plants several inches below the surface; otherwise the cane would require too much hilling, especially the second and third years.

The plants are now taken from these mats, and the leaves stripped off, placed in carts, carried and tipped out on the prepared land, and laid lengthwise in the furrows. We plant three canes side by side, or triple; some say one and a half is sufficient. The closer the rows, the less each would require. We now pass along with a cane knife, and cut the cane in pieces, say from two to three feet in length, in order that the canes may lay more level, and because more eyes will vegetate. Being thus placed, they are covered with a plow to the depth required, from one to three inches; over which, a light harrow may be passed. Many prefer to cover with the hoe. Soon as the freezes are over in February, the cane is plowed; running the bar each side the cane, and throwing the furrows from it; the cane, beginning to come up, is scraped, (so called); if covered too deep, the earth is taken off, usually with a hoe, sometimes with a harrow or other machine, and cleaned from grass and weeds. In a few weeks it is again plowed and hoed, and again when necessary, a little earth put to it when required.

The cane by April or May has come up thick in the rows, but usually not so thick but that the stalks, when about a foot and a half or two feet high, send out many new stools or shoots from the bottom of the stalk; and if they come out early, grow and mature equal to the main stalk. It is usual to give it three or four workings and in the last to hill the cane three or four inches, and sufficiently high to protect the lower eyes on the stalks from freezing during the winter. Those eyes vegetate next season, and produce nearly equal to the first season, on fresh land, and so again the third year, and often longer. Cane is injured by hilling before the stools are sufficiently high; and should receive the last working soon after it is about three feet high; in order to afford more time for ripening. After this period, say in June, it grows very rapidly; the joints begin to appear, and the lower joints begin to ripen, to sweeten; and by the middle of October usually ripen from two to four feet from the bottom, and continue to ripen about a joint, or six inches, a week, till they are cut for the mill; or till the freeze comes; or till they are cut to winrow, in order to secure them from an anticipated freeze. About the middle of October we commence making sugar. Each hand takes a row, first cuts the tops of the stalks off just below the green leaves, and drops them on the ground or lays them in winrow, if designed for plants; then, with the knife, (the blade of which is about 18 inches in length and two inches in breadth), the dry leaves are stripped from the stalks, and the cane is cut close to the ground, the left hand at the same time has hold of the canes thus cut, and places them in small heaps, convenient for loading into carts, drawn by horses, mules, or oxen. Other hands load the cane, and it is hauled to the mill.

The cane fields are all ditched, usually every acre in width, with cross ditches about every five acres. No water is allowed to remain on the surface. The cultivation is as simple as that of broom corn, and the young shoot far more vigorous.

Cane stalks usually grow from 6 to 9 feet high. The leaves shoot up two or three feet higher. Cane ripens in favorable seasons within 12 or 18 inches of the top. You will perceive we plant one-third of our cane land or crop yearly; two-thirds coming from the rattoons.

New River, La., Aug. 1844. S. Tillotson.

POTATO ONIONS.

From some remarks upon this species of onion, in the October number of the "Cultivator," it seems that farmers generally are not much acquainted with it. A brief description of its qualities and the mode of cultivating it, may therefore be acceptable to some of your readers.

Its mode of propagation is peculiar. A large onion, set in the ground early in spring, breaks into several (5 to 15) separate onions, which grow in a cluster of three or four good sized bulbs at the bottom, and a number of small ones lying on the top. These last vary in size from that of a nutmeg to that of a small hen's egg. The small ones are the seed for the next year's crop. The smallest will grow into very large, single bulbs; while the larger ones will grow into two or three middling sized onions. The average annual increase, taking large and small together, is about tenfold.

This description will readily suggest the proper mode of cultivation—which is to set out the small onions for the purpose of producing the large ones, for table use—and to set out a sufficient number of large onions for the purpose of producing the small ones for seed. The first should have a moderately rich soil, the last a soil rather barren.

The onions should be put into the ground as early in spring as the season will admit. After the ground is made mellow, set the onions in rows far enough apart to allow a hoe to pass between them. They may stand 3 to 4 inches apart in the rows. Just cover them with earth. They may be stuck into the ground with the thumb and finger. They need no further care, but to be kept free from weeds.

To preserve them, they are gathered with a potatoe hook, as soon as the tops are dried, and then spread for a few days on the barn floor, or some other dry place. I formerly kept them over winter on a scaffolding in my barn; but having lost about 70 bushels by the severe winter of 1834–5,[*] (thermometer 23° below zero,) I have since put them into my cellar, which happens to be a very dry one, where they keep perfectly well, on a crib with a bottom of laths far enough apart (¾ of an inch) to permit a circulation of air through them. Thus managed they keep longer than any other species of onion. I have them suitable for cooking the year round.

In their eating qualities, I do not discover any difference between them and other onions. But for cheapness of cultivation, certainty of crop and amount of produce upon a given space of ground, they surpass all others.

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[*] A curious fact in physiology came under my notice, the spring following, that deserves to be mentioned, though it is foreign to my subject. The rotten onions were thrown out in the spring into the barn-yard, where some of them were eaten by hens. This strange food *gave their eggs* a most unimaginable taste—loathsome and nauseous beyond all description.

There is a sort of Eschalot, that has been cultivated and sold for the potato onion. Wherever this fraud has been practiced it has given the onion a bad name. The genuine article, properly cultivated, has, I believe, been universally approved and highly valued.

NOYES DARLING.

New-Haven, Ct., November 19, 1844.

MANAGEMENT OF THE PEACH TREE.

THROUGH the medium of the Cultivator—which my neighbor Tyson says, "finds its way every where," I wish to make known a new theory with regard to the cause of the premature decay of the peach tree; suggesting a mode for the prevention of a malady that has pervaded our orchards, in many instances, to their annihilation; the evil spreading far and wide, and exhibiting an inveteracy of character, that bids defiance to the thousand-and-one *cures* that have been guarantied to follow the adoption of about as many applications, external and internal, that have been made public. I lay it down as a melancholy fact, then, that the evil, whatever it be, and proceeding from whatever cause, has never yet been fully understood, or met by a proper antidote. And this conclusion will be more readily admitted, than the novel doctrine, "that the yellows and the worm proceed from the same source, both being *effects* and not the immediate *causes* of disease;" it being now generally conceded, that our trees are as effectually destroyed by the former as the latter; nay, that trees affected by the yellows, will assuredly be destroyed by it, without the intervention of the worm in any of its stages, and at about the same period of time. Here, then, is one step gained. Then comes the idea that the disease is contagious, and to prevent its spreading, it will be necessary to remove the tree the moment its effects are visible; as, also, that a cure may be effected, by careful culture of the soil, or a top-dressing of alkaline substances, to correct the acidity produced by the putricity of the juices of the tree, it being admitted that oxygen is its basis. But although this treatment might be beneficial as a preventive, the expectation of a radical cure would be hopeless.

A residence in this peach-growing district, affords incidents of the greatest variety, and cases for "practice," innumerable; indeed, it might be regarded as analagous to "walking the hospitals," by the medical student; while frequent examination of the orchards of the large peach-growers of Delaware and elsewhere, have abundantly satisfied me, that the evil is progressing, maugre all the care and industry of men, superlatively endowed by knowledge, experience, intelligence and untiring perseverance, "to the contrary notwithstanding." Now these individuals have religiously kept their orchards under constant tillage, for the sole purpose of preserving the health of their trees; convinced, that without such incessant and careful culture, they could not be kept in existence; yet they find the disease is there, and with all their marling, manuring, and plowing three times a year, that it is rapidly progressing; the only question being, how long has the death of the trees been delayed by a process at once so tedious and expensive? So then, at all events, the disease is neither prevented or eradicated by any means now in use—will they, therefore, permit one who is deeply interested in the result, to suggest a mode of treatment, by which it is believed the evil is to be met and overcome.

In late visits to several of the nurseries of peach trees, both in Delaware and New Jersey, I have observed with wonder and astonishment, the gigantic size to which the trees are forced by every means of human ingenuity, many acquiring the height of 8 feet and 3 inches in circumference, from the bud of last autumn. And if to this be added the first year's shoot from the seed—say 6 feet, which is amputated in the spring, we have the enormous growth of 14 feet from the seed, in a year and a half! Now I would ask, does not this extravagant drainage from the root, or whence so ever it may be supposed to proceed, produce a laxity, and a disorganization of the sap-vessels, sufficient to engender disease in the plant, which might then be compared to an overgrown youth? If so, putricity must follow, and then blight, in the shape of *life*—the worm; and the yellows, of necessity and according to the law of nature. And is it not a fact, that the trees now raised by our nurserymen, are twice as large in their growth as formerly; and do not these men pride themselves in the art of producing them of enormous size, purchasers also, generally preferring those that are so? I lately saw trees from the nursery of a person at Moorestown, N. J., measuring more than 8 feet in height, an inch and a half in diameter, with roots sufficient in growth for trees of ten years old, one year only from the bud! Now, of what advantage is all this? None whatever, but a decided injury; productive, it is believed, of the very evil so much complained of. I know that some persons do not covet these large trees, prefering those of a smaller size; but if these are taken from the same nursery, they are, then, those that have sprung from small and weak seed, or been overgrown by larger plants, and are to be rejected, for the same reason that small apples, from among those of larger growth on the same tree, are always inferior, being generally diseased, or immature; so the evil is by no means avoided, or rather it is augmented.

At Manyunk, on the Schuylkill, I saw, some time since, a small nursery of peach trees, situated on an eminence; the soil thin, and resting on a bed of disintegrated rock, but dry and healthy. Here I found the trees about four feet in height from the bud, close and vigorous in their form, with no rampant leader; the wood, hard, well ripened, and of a deep red color. The owner observed, his trees were sought after at double price, for besides being of the best sorts and true to their kind, they were sure to grow, when transplanted; their roots being small and compactly formed around the body of the tree; besides this, they are free from disease, and would remain so, pointing to the well-ripened wood, and the compact growth of the tree, as indicative of health and vigor of constitution. The following course of treatment is, therefore, with much confidence, recommended for adoption.

First, raise the trees on a healthy and elevated spot, without the aid of manure or extra culture with the view of forcing their growth; shortening all large and vigorous shoots that may be thrown out, even during their first and second season. The operation of budding is too well understood, to require either note or comment. At the time of planting out, let the branches, leaders as well as side shoots, be headed down to within three inches of the body of the three, removing the tap root, and others of overgrown size; taking care that the southerly aspect, which it bore in the nursery, is given to it in its new location. And from this period, let a rigid system of pruning be adopted, without fear of evil consequences. No tree bears the knife so well as the peach; and to its regular and systematic use, is a cure of its diseases to be looked for. Let, therefore, every overgrowing branch be shortened, keeping the head of the tree of regular dimensions. It is seldom, indeed, that we see a peach tree that is not top-heavy; yet the order of pruning must be the reverse of that practiced on the apple tree, where it is customary to thin out the middle branches, for in the peach, the bearing wood should be there retained, as also on the sides of the larger branches; by these means, much breakage would be prevented, and thousands of the finest trees be saved from destruction—it is the healthiest trees which fall, crushed by the weight of fruit hanging at the ends of long branches; not those affected by the yellows.

The perpetual cultivation of the peach-orchard was resorted to, for the purpose of preventing the evils complained of, but would those who have practiced it the most vigorously say, if in any instance it has been found effectual? To those who still advocate such a course, as necessary to the well-being of the trees, the production of fine fruit, the eradication of the weeds, the destruction of the worm, and the prevention of the yellows, the following facts, fully to be relied upon, speak volumes.

Major Reybold, of Delaware, has an old peach orchard of about three acres, that has not been cultivated for five or six years, having been used as a hospital for sick sheep; yet from thence, for several years past, the finest fruit sent to market has been picked. While speaking of the orchard, the Major said, a few years since I had peaches here, when my friends had none; my family ate $300 worth, after which I sold the remainder for $2,700.

Mr. Caleb Brinton, of Pequea, Lancaster county, Pa., has an orchard, one half of which has been kept under constant culture, the other half being meadow. While searching for worms the past season, full 20 for 1 were found on the cultivated half; the trees sickly and dying of the yellows.

Mr. Mahlon Kirkbride, of Morrisville, Pa., writes, by constant culture and laying lime to the roots of the trees, he has been able to keep the worms at bay; but, spite of all his care and attention, the yellows have carried them all off, and he has not now a peach tree on his whole estate.

But none of these gentlemen have tried the effect of a thorough system of pruning, commencing with trees in health, youth and vigor, and that had not been prematurely forced in the nursery—a system which is advocated as likely to be far more important than the most careful cultivation, and all other "appliances and means to boot." If at any time, it be thought advisable to refresh the trees, this can be done by top-dressing, far more beneficially than by the plow, the use of which, in the estimation of those who adopt it, "gives fresh vigor to the growth of the tree"—the very thing to be deprecated. The peach orchard then, will become a sheep-walk or a hog-pasture, affording a profit instead of a loss, in seasons when fruit fails: the sheep performing the labor of pruning the lower branches of the trees, on which the fruit is always inferior, and keeping down the weeds far more effectually than can be done by the plow; while the hogs will do all the *cultivation* that is necessary, and clear away the diseased and fallen fruit; all stock being removed before the time of ripening. I lately observed on the farm of Mr. Bryan Jackson, of Newcastle county, Del., that a portion of the peach orchard had been thrown into the hog-pasture; here the trees were most vigorous; and under each, the tramping of the hogs had done, in the way of cultivation, as much as was deemed necessary. The trees are four or five years old; and I was glad to find that the intelligent owner intends at once to lay down the whole orchard to permanent pasture, for the purpose of grazing sheep and swine. J. C. D.

Salem, New Jersey, 12th Nov. 1844.

A VARIETY.

Luther Tucker, Esq.—I obtain something from almost every number of your paper that is of value to me, and in return, could I state a few things that would be serviceable to some of your readers, I should esteem the reward ample for the trouble of writing.

To stop the Scours in Sheep or Lambs.—Give them a small quantity of salt pork: if administered soon after they are attacked, two or three doses will generaly effect a cure. I have given it to neat cattle for the same complaint and with good effect.

To prevent Colts chewing their Halters.—Take the scab from the wart or issue on the inside of the leg, rub the halter thoroughly with that, and they will not be caught chewing their halter very soon. I have tried pepper, tobacco, &c., but nothing to so good purpose as their own or kindred musk.

To Destroy Ants and Prevent their building their Mounds upon Meadows.—I take a bog-hoe just as the ground is about to freeze in the fall, cut the mound off even with the ground, then sprinkle on the spot where the mound stood, about a shovel full of unleached ashes. The ants having burrowed a little below the surface, the lye of the ashes causes their utter destruction. The part taken off should then be removed from the meadow to the compost heap, or placed in some ditch or hole for the purpose of making the meadow smooth and level.

Coalpit dust I think has proved beneficial to my Fruit Trees, by placing a few shovels full about the roots of each tree; it keeps away the grass, prevents the borer from entering the bark, and withal makes an excellent manure. I am trying an experiment with coalpit dust about some young apple-trees this winter, to see what effect it will have in keeping the meadow mice from them, which are very plenty here, and often prove destructive to young trees, during our long winters of deep snow. Last winter I placed ashes about the roots and body of the young trees; they were not injured by the mice, but I found I had made so free use of the ashes as to injure the bark of the trees in a number of cases.

The Cause of Rot in the Potato.—Accounts of the disease of the potato differ in different sections of the country; some attribute the difficulty to wet heavy soils—some to soils light and porous—others to much wet, and the extreme heat of the season. The month of September in this vicinity, was both warm and dry. The farmers here think their potatoes came off best on clay and heavy soils—many that harvested early and put them in their cellars were obliged to carry them out. I think those left in the ground late, generally proved best, the weather being more favorable than usual for such experiments, though early digging did not prove fatal in all cases. I dug about 50 bushels and put in the cellar on the 19th Sept. They were the Leopards, grown on a heavy sand and clay soil; there was not a dozen infected ones in the whole. I put them in an airy cellar; they kept well. About the same time I was passing a farmer who was harvesting his potatoes in a neighboring town. I stopped and went into his field. I found him digging on a beautiful fine sandy soil. They were a mixture of Leopard and Kidney potatoes, and about half destroyed by the rot. There were many hills that had not a sound potato in them. About two miles from this place in the same town, I found a farmer harvesting potatoes on a limestone ridge. He told me he had not found a single rotten potato. His were the Leopards. About the 10th of Oct. I dug the remainder of my Leopards. They came out about the same as those first dug. I then began digging my Mercers; here I found more diseased potatoes: about one bushel in thirty were lost. They grew upon a ridge; the soil a dry gravel. The disease in this case I am sure could not be occasioned by too much wet, for there had not been sufficient rain here from the 1st of August to the 29th of September, to half wet a potatoe hill, had it all fallen at one time. They appear to be keeping well in the cellar. I found some that were diseased, that had become dry and somewhat resembling starch. From what information I can gather, and from what I have seen, there remains much mystery with me as to the cause of the disease. J. N. Smith

Chimney Point, Vt., Dec. 1, 1844.

CORN-STALK SUGAR.

In our May number of the volume for 1844, we gave a communication on this subject from Mr. John Beal, of New Harmony, Indiana. It appears that Mr. B. has been still more successful the present year than he was last. We are informed that he has made three hundred and ninety-five pounds of good sugar this season, from the corn stalks which grew on three quarters of an acre, which is at the rate of five hundred pounds per acre. His plan is said to be as follows:—"When the ears begin to form they are pulled off. When the leaves are dead about half way up, the stalk is stripped of leaves, cut up at the root, the top cut off, and then ground in a sugar mill. Twenty stalks will yield about one pound and a half, and of this three-fourths is grained sugar. Mr. B. made eighty pounds in a day, with a simple apparatus of his own construction. Five hundred pounds, at four cents per pound, is twenty dollars per acre. It would have produced, say 50 bushels of corn, at 25 cents, or $12.50.

Thrifty and Unthrifty Farmers.—The grand difference between a thriving farmer, and one who does not thrive, is, the one looks out for the *fractions*, the other does not. In farming, nothing should be lost; nothing should be neglected; every thing should be done at the proper time; every thing should be put in its proper place; every thing should be performed by its proper implement. When these rules are observed, the farmer will surely prosper—though his gains may be slow, they will be certain and sure.—*Proctor's Address.*

See, **Winter** comes, to rule the varied year,
Sullen and sad, with all his rising train;
Vapors, and clouds, and storms. Be these my theme.
These! that exalt the soul to solemn thought,
And heavenly musing.

SEED AND IMPLEMENT STORE,

At Rome, Oneida Co., N. Y.

COMSTOCK & JOHNSON, proprietors of the above store, will be happy to receive orders for seeds of any kind, and also for all the most approved implements used by farmers.

January, 1845—tf

FOR SALE.

THE subscriber offers for sale his fine Durham bull Osceola. He is now two years and a half old, and has taken the 1st premium at two successive State Fairs; for pedigree and further description, see Cultivator, Sept. 1843.

Also, his thorough bred Stallion Young Florizel.

Watervliet, Dec. 16, 1844—tf. **CLARKSON F. CROSBY.**

PLOWS

OF the most approved patterns now used in this State, will be constantly kept for sale either at wholesale or retail at the Rome Plow Factory, corner of Dominick and Washington streets. The *Diamond Plow*, which received the State Society's first premium last fall, is made by us in good style. Farmers in want of Plows, Cultivators, Cradles, Scrapers, &c. are invited to call.

A liberal discount to those who buy for retailing.

Jan. 1845—tf **BRAINARD, COMSTOCK & CO.**

HUSSEY'S REAPING MACHINE.

THE subscriber has now brought his Reaping Machine to the highest state of improvement. The cutting of four harvests has proved the last improvements to be permanent and durable. The four horse machine is warranted to cut from 15 to 20 acres per day—price, $170. The light two horse machine is warranted to cut from 12 to 15 acres per day—price $100 Medium size, price, $140. Farmers who intend getting machines to cut their next harvest, will please send their orders soon. References are given in the Dec. number of the Cultivator, 1844. Also for sale, my corn and cob crusher, an improved article; price 25 dollars.

Baltimore, Nov. 1844—tf* **OBED HUSSEY.**

SPLENDID FARM AND COUNTRY SEAT FOR SALE.

I NOW offer for sale my farm, consisting of 170 acres of the richest of the Mohawk Flats, all under improvement and in a highly productive state, together with the substantial and superbly finished brick mansion erected by the late Gen. John G. Weaver, at an expense of about $10,000. It is one and three-quarter miles from the city of Utica, on the north bank of the Mohawk, over a McAdam road. It has a beautiful orchard, garden, farm-house, barns, stables, sheds, &c., and is finely watered, and now stocked with choice Durham and grade cattle, Bakewell and Southdown Sheep, and all necessary farm implements; all of which will be sold at a great bargain to the purchaser. **D. SKINNER.**

Utica, January 1, 1845—3t*

AGRICULTURAL MACHINERY, &c.

MANUFACTURED BY R. SINCLAIR JR. & Co.

Baltimore.

CORN Mills,* $20 to $40.

Baldwin's Corn and Cob Crusher,‡ $65.

Sinclair & Co's ditto, particularly adapted for plantation use, with one set extra plates, $30.

Goldsborough's Corn Sheller and Shucking Machine, for horse power. A powerful and efficient machine, $40.

Threshing Machines and Horse Powers, warranted strong and durable.

Cylindrical Straw Cutters, 4 sizes, for hand and horse power, price $25, 30, 45 and $75.

25 sorts Plows, embracing the *Wheel*, Self-sharpening, Subsoil and various preferred kinds.

Also, a general assortment of FARMING MACHINERY AND TOOLS. GARDEN and FARMING Seeds, Books, Ornamental and Fruit Trees, Shrubs and Plants.

Catalogues of the above will be furnished to applicants, giving descriptions, prices, &c. of all the above, and other articles not enumerated. **R. S. Jr. & Co.**

* See cut and description at page 17 of this paper.

‡ A cut of this will appear in the next number of the Cultivator.

FINE FARMS FOR SALE AT AUCTION.

THE property known as the Stimson Farm, situated at Galway in the county of Saratoga and State of New-York, will be sold at auction, at the Court House in Ballston Spa, on Wednesday the second day of April next, at 12 o'clock noon. It contains in the whole about 325 acres and is so divided as to make three farms, each having on it the necessary farming buildings. The roads from Schenectady to the Fish House, and from Saratoga and Ballston to Johnstown, run through the property at right angles, dividing it into four parts. The two pieces lying north of the road, said to contain about 190 acres, will be sold together. On this part are, a large hotel, capable of accommodating one hundred boarders, with the most extensive and convenient buildings for agricultural purposes. It is a favorite place of resort for families in the summer season. This part of the property will be a most desirable investment for any person desiring to connect the business of farming with that of keeping a hotel of this description.

The south-eastern portion, said to contain about 90 acres, has a farm house and the necessary out buildings, with a wagon maker's and a blacksmith's shop. The south-western portion, said to contain about 50 acres, has on it a store and dwelling-house attached, farm house and barns, and is a most desirable property for any person wishing a small farm. Each farm has on it the proper proportion of woodland, and the whole is of the best quality for farming, there being no waste land, and in the highest state of cultivation. The situation is high, commanding a most beautiful and extensive prospect in all directions.

The sale will be positive and without reserve, to the highest bidder, and perfect titles will be given. The terms will be 5 per cent cash, to be paid to the auctioneer at the time of sale; 50 per cent may remain on bond and mortgage for five years, or a longer term, at 6 per cent interest, payable half yearly in the city of New-York, on the first of May and November, and the balance to be paid in cash on the delivery of the deeds. For further particulars, apply to **JOHN W. THOMPSON**, Esq., Ballston Spa, or **J. OAKLEY**, No. 77 Nassau Street, New-York.

Dated New York, Dec. 9, 1844—3t.

FARM IN ILLINOIS.

FOR SALE—A good farm, with valuable improvements. The subscriber being about changing his business, will sell a great bargain. Also has in immediate vicinity, 2,000 acres choice land, which he will sell at a discount from government price. Address **ISAAC HINCKLEY**, P. M., Audubon, Montgomery Co., Illinois.

Dec. 1, 1844—tf.

THE CULTIVATOR,

NEW SERIES, VOL. II, FOR 1845.

GRATEFUL for the liberal patronage his paper continues to receive in every section of the United States, the proprietor has determined to add a new and attractive feature to the volume for 1845, by giving two or more beautiful **STEEL PLATES**, engraved in the first style of the art. Various other improvements are also contemplated, which, with the constantly increasing list of correspondents, will, he trusts, render "**THE CULTIVATOR**" a most welcome visitor with every farmer and horticulturist.

Each number of the Cultivator contains 32 large octavo pages, and is published at the low price of $1,00 a year—Seven copies for $3—Fifteen copies for $10.

"We do no more," says Rev. Dr. Bond, editor of the Christian Advocate and Journal, "than strict justice when we say we believe the Cultivator is considered the best work of its class in the United States, and we have seen nothing equal to it from Europe." —"THE CULTIVATOR is," says the Auburn Journal, "by all comparison the best agricultural paper in the Union."—"We speak advisedly," says the Northern Advocate, "when we give *The Cultivator* the pre-eminence in point of maturity of agricultural knowledge, in every thing which appertains to the farmer or the farming interest."

☞ Any person wishing to obtain the Cultivator, can do so by handing a dollar to his Postmaster, who is authorized to forward it, free of postage, to the proprietor.

All orders must be accompanied with the cash, and be addressed to **LUTHER TUCKER**, Ed. Cultivator, Albany, N. Y.

Drawn & Engraved by Jordan & Halpin.

MOUNT HOPE.

The residence of E. P. Prentice Esq. near Albany.

[illegible]

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

Vol. II. ALBANY, FEBRUARY, 1845 No. 2.

THE CULTIVATOR

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OFFICE IN NEW-YORK CITY, AT
M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,
where single numbers, or complete sets of the back volumes, can always be obtained.

THE CULTIVATOR.

MONTHLY NOTICES.

☞ We have the pleasure of acknowledging the receipt of over *eight thousand* subscribers during the past month, exceeding the receipts, during the same time, last year, more than 2,500. For this handsome increase we are indebted mainly to the disinterested labors of those who have voluntarily, and in most cases gratuitously, so far acted as agents as to get up classes in their towns at the reduced rates at which the paper is furnished to Agents. Truly grateful as we are for these continued manifestations of approbation from the friends of agriculture, it will be our great object to render our paper more and more worthy the favor with which it is so liberally received.

Communications have been received since our last, from John F. Dauphey, J. P., James Hall, Ellwanger & Barry, D. G. Mitchell, L. B. Langworthy, T. H. Hyatt, W. H. Whiting, L. W. Washington, E. V. W. Dox, S. Tillotson, S. D. Martin, G. L. Beckith, A. Wiltse, L. F. Allen, Rambler, Wm. Summer, E. Comstock, P., M. P., C., E. N. Horsford, S. W. Jewett, R. L. Pell, J. M. Harlan, L. Durand, E. Hammond, E. R., C. Butler, Alex. McDonald. H. Hull. L. Smith.

☞ Dr. Martin's excellent paper, for which he will please accept our thanks, will be given in our next—as also many other favors of correspondents, which are omitted this month for want of room.

Our thanks are due to Col. A. Petrie, for his Address at the late Fair of the Herkimer County Ag. Society—to some unknown friend for the Address of F. J. Betts, Esq. of Newburgh, before the Berkshire Ag. Society—to Hon. H. L. Ellsworth, Washington, for Prof. Morse's Letter to the Secretary of the Treasury on the subject of the Magnetic Telegraph—to A. Fitch, Sec. Washington Co. Ag. Society, for an admirable Report of the Transactions of that Society—to W. R. Prince & Co. Flushing, for their new "Descriptive Catalogue of Fruit and Ornamental Trees, Plants," &c., an interesting octavo pamphlet of over 100 pages.

D. T., Schenectady—By reference to the article again, you will see that the place, 'Boston,' is given.

H. S. W.—We do not know the price of Hay Presses. Will the makers of this article, give us their address, and the prices of their machines, that we may be enabled to answer inquiries on the subject.

W. M. wishes further information respecting the churn made in Saratoga, noticed in our last volume, p. 170. Will the inventor inform us where it is made, price, &c.

O. M. H.—The Skinless Oats have not, we believe, proved valuable in this country. A discount of 33 per cent will be made on the vols. mentioned. Thanks for your favor.

☞ Our friend at Bridgeport, Ct., who inquired for a remedy for scab in sheep, will find an article on this subject in the present number.

Capons.—"S." will find answers to his questions, at p. 197, vol. 9, and p. 67, vol. 10, of the first series of the Cultivator.

E. F. C., Providence—The 2 bbls. shall be secured for you. Thanks for your efforts.

Seedling Grape.—We have had several applications for cuttings of the seedling grape, noticed in our Dec. number, as in the possession of G. B. Emerson, Esq. of Boston, which, we are sorry to say it is not in our power to comply with, as we are not aware that any can be procured short of Boston.

Apples.—We have received from Ellwanger & Barry, nurserymen, Rochester, specimens of the "*Northern Spy*" and other apples, described by them in this paper. The Northern Spy is probably the most valuable variety added to our list of apples for some years. Trees or grafts may be obtained of Messrs. Ellwanger & Barry, Rochester, N. Y.—We have also samples from S. W. Jewett, Esq., Weybridge, Vt., of a seedling apple called "*Jewett's Best*,"—of medium size, fine flavored, nearly red, and covered with light specks—also, from S. B. Cushing, Esq. Ithaca, specimens of the "King Apple."

Cider.—We acknowledge the receipt of a sample of cider from H. & Geo. H. Rundle, of Greenvile, Greene county, N. Y. It is of excellent quality, almost equal to champaigne. Mr. Rundle made the last season, eleven hundred and fifty-three barrels. We are to receive his mode of manufacture for publication.

Maple Sugar.—We have received from our old friend Moses Eames, Esq. of Rutland, N. Y., a beautiful sample of maple sugar, for which we return our thanks. The article is pronounced by all, fully equal to the best loaf sugar.

Mr. Colman's Tour, Part III.—We learn from Mr. Colman, that he has completed his Survey of England, and is now busily employed in preparing the 3d Part of his Tour for the press. It will contain a chapter on Guano and other manures, and will be issued in March. This chapter will be of great interest at the present time, when so much inquiry is awakened on the subject of Guano in this country, and the facts and experiments detailed by Mr. C. will enable our farmers to judge as to the propriety of its use here.

Query.—A friend desires us to insert the following. How would the following composition answer for a coating for buildings, fences, &c. ? Water-lime, three-parts, sand and ashes, one part; to be mixed with water in which oil-cakes have been dissolved.

AGRICULTURAL PAPERS.

The Connecticut Farmer.—This paper, hitherto published at New-Haven, has been discontinued, and its proprietor has made arrangements with us to supply such of his subscribers as had paid him in advance, with the Cultivator, for the balance due them. This paper will accordingly be sent to them until the expiration of the time for which they had paid, when it will be discontinued, as we take no subscribers without payment in advance. Mr. J. M. Patton, the former publisher of the Conn. Farmer, will act as Agent for the Cultivator at New-Haven, and will be glad to receive subscriptions of such of his former subscribers, as [illegible] wish to become subscribers to the Cultivator.

New Genesee Farmer.—This paper commences its sixth volume under a new arrangement. B. F. Smith & Co., are still proprietors, and Dr. D. Lee, of Buffalo, well known as one of the ablest of the agricultural writers of the day, is editor. There is a horticultural department, conducted by P. Barry. The form is octavo, of sixteen pages each number. It is hereafter to be called the Genesee Farmer. Terms, fifty cents a year in advance.

The Albion, *or British Colonial and Foreign Weekly Gazette.*—This paper commences the year with an Agricultural Department under the charge of that founder of agricultural papers in America, John S. Skinner, Esq. Under the direction of this veteran in agricultural literature, we cannot doubt that the new department will greatly increase the interest and value of this paper. The number for Jan. 4th, has several excellent articles under the agricultural head.

New-York Farmer & Mechanic.—This paper is hereafter to be printed in the newspaper form, and is designed to be a "family and business paper, devoted to Agriculture, Mechanics, Manufactures, News, Education, Temperance and Religion." It will contain authentic reports of the New-York Farmer's Club, the Conversational Meetings of the American Institute, the Proceedings of the Mechanics' Institute, &c.—Published by Fleet & Starr, 135 Nassau-street, New-York, at $2 per annum in advance.

Southern Cultivator.—This monthly paper, published at Augusta, Georgia, (at $1 per annum,) has just entered on its third volume. An arrangement has been made with James Camak, Esq., of Athens, to conduct the editorial department. The name of this gentleman will at once be recognized by our readers, as associated with several excellent articles which have at various times appeared in our own Cultivator. We trust he will find the new field he has chosen, in all respects an agreeable one, and that the paper which is placed under his charge, will receive the liberal patronage which it will undoubtedly merit.

The Boston Cultivator begins the year with quite an ornamental new dress. Besides being a *pretty* paper, it is a *good* one.

British American Cultivator.—This publication comes out with the new year in the octavo form. It is published at Toronto, Canada West, monthly, at one dollar a year. It is a useful paper, and we recommend it to the patronage of the Canadian public.

American Rail-Road Journal.—The thirteenth volume of this valuable publication has just closed. The great increase of rail-roads within a few years, has rendered such a journal highly interesting. It is stated that since the publication of this work commenced, the railroad system has grown from less than *one hundred miles*, either in this country or Europe, to several *thousands* in *each* country. The work is hereafter to be published weekly in a quarto form of sixteen pages, at $3 per annum. D. K. Minor, editor. Office, 23 Chambers-st., New-York.

Rapid growth of a Pig.—According to the Maine Farmer, Ephraim Wood of Winthrop, lately killed a pig which weighed 357 pounds at only the age of 8 months and 15 days. This is nearly a gain of a pound and a half a day from the time of its birth to its death.

ENCOURAGEMENT OF AGRICULTURE IN CUBA.

From an advertisement which we find in the London papers, signed by the Spanish Consul-General in Great Britain, we learn that the Royal Board for the Encouragement of Agriculture in the Island of Cuba, have offered, among others, the following liberal premiums. They are well worthy the attention of our enterprising countrymen, whom we can hardly doubt will obtain their share of the honors and emoluments to be derived from the highly praiseworthy and patriotic efforts of the government and people of Cuba for the improvement of agriculture. The officers whose names are attached to this document, desire to notify all persons who wish to compete for these premiums that they may do so with the perfect assurance that they will be punctually paid.

One thousand dollars to the person who, during the month of December, 1845, shall soonest prepare, and put into the most perfect state of tillage, one "cababelleria of land, with the improved American plow, worked by mules, and managed by whites." *One thousand dollers* to the person who shall, on the first of December 1846, show two "cabellerias" of land well stocked with red clover of six months growth. *Twenty thousand dollars,* in annual instalments of $2,000, to the first person who, during the years 1845, '46 and '47, shall set up or establish a sugar estate or plantation, in which the cultivation of the cane shall be performed by thirty white families, consisting of a married couple each at least. *One thousand dollars* for the introduction of the bean used in the sugar estates of New-Orleans, as an article of food. *Four thousand dollars* to the person who shall show on the first of December, 1848, an artificial plantation of trees, of three years growth. *Six thousand dollars* to the person who shall introduce from the East Indies, 200 thriving and luxuriant stocks of sugar canes, &c. *Twelve thousand dollars,* in annual instalments of $2,000 to the person or persons who shall set up, during the years 1845 and '46, a permanent establishment for the improvement of the breed of horses—four stallions, viz: one of each of the following breeds, to be kept for public service, at prices to be fixed by the owner—one Andalusian, one Arab, one Norman, and one English—each to be of the genuine breed, of good form, size, &c. *Six thousand dollars,* in annual instalments of $1,000, to the person who shall import direct from England, one bull and six cows "of the finest and most reputed breed of that country." *Two thousand dollars* to the person who, on the first of December, 1846, shall show a herd of the "largest sized swine," introduced from the United States of America, or any other country. *One thousand hard dollars* to the person who shall, on the first of December, 1846, "present or produce, a breed of the largest domestic or barn-door fowls, (gallinas,) hatched or born on the Island, of a breed introduced from the United States of America, or any other country."

Great product of Whett.—Hon. E. Mack, in his address before the Tompkins county Ag. Society, states that Mr. E. J. Ayers, of Ulysses, raised the past season, *fifty-seven bushels of wheat* to the acre. He observes that several others, as he has been informed, have raised from forty to fifty bushels to the acre. "This equals," he remarks, "the improved yield in the best portions of England and Scotland, and shows what the soil of our country, with skillful management, is capable of producing."

Ribbon Houses.—We see in the Genesee Farmer, a description of a new mode of building houses. The sills are laid upon a wall. The boards or ribbons used for the superstructure are of hemlock, four inches wide and one inch thick, laid up in the manner of brick work, taking care to break joints. The partitions should be carried up and worked into the wall with the main body. The partitions are carried up to the roof and a plate dispensed with, though a ridge-pole is used. The boards are nailed with 8 penny nails, except four or five of the last courses which are nailed with 10 penny. The plastering of the inside is applied directly to the walls. It is said to make a very warm and cheap house, and the only alteration recommended from the plan here described, is to use boards an inch and a half, instead of an inch thick.

PLATE II.

MOUNT HOPE,

The Residence of E. P. PRENTICE, *Esq.*

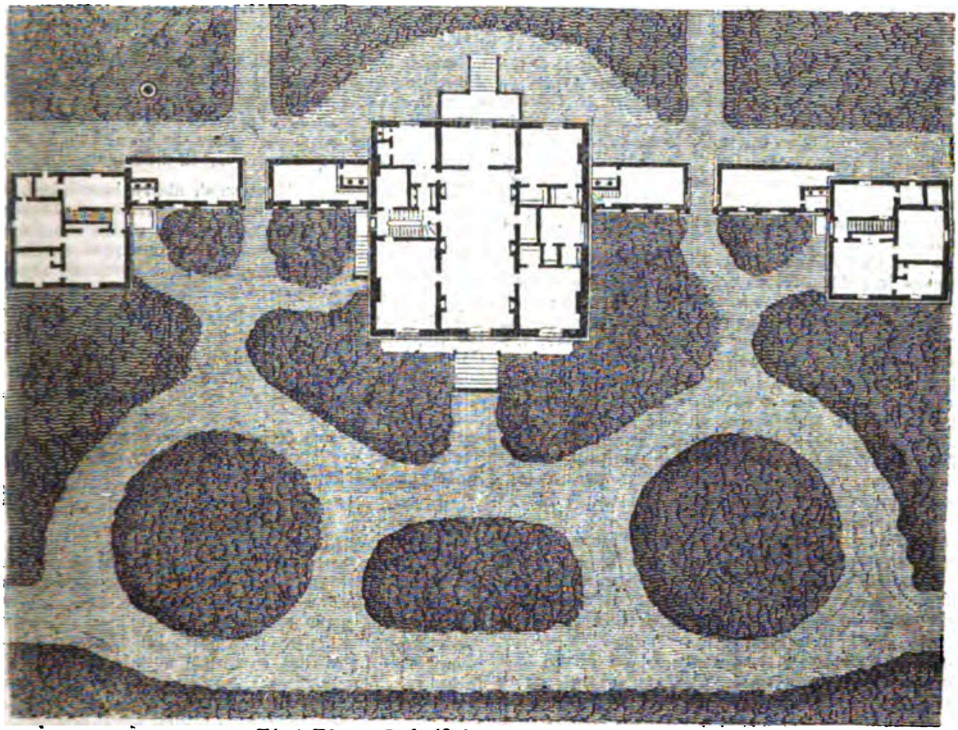
WE have the pleasure of presenting our readers this month, with a view of Mount Hope, the residence of E. P. PRENTICE, Esq., well known to the farmers of this State for his enterprising and successful efforts in the introduction of improved breeds of cattle—engraved on steel by JORDAN of New-York, from a drawing made expressly for The Cultivator.

Mount Hope is situated on the west bank of the river, about a mile below this city. It is a beautiful natural situation,—one of the finest indeed of the numerous beautiful situations on the Hudson,—much embellished by art, but not reduced to artificial stiffness. In front of the house is a fine lawn of ten or fifteen acres, descending from the house to the road, interspersed with trees, and flanked on either side by gently rising hills covered with scattered groups of trees and dense copses. In front, and about thirty rods below the house, is a fine elliptical sheet of water, 150 feet long by 100 wide, bordered by trees, and surrounded by a neat fence, and in the center of which a perpetual fountain, in the form of a fine delicate silvery jet, shoots upwards fifteen feet or more in height.

The view from the house is of uncommon beauty, and embraces the city on the left, and the Hudson for many miles below, until lost among the blue hills. The distant peaks of the mountains of Vermont and Massachusetts are distinctly visible. The surface of the river is constantly spotted, during the season, with white sails moving up and down its channel, and the scene enlivened by the occasional arrival and departure of steamboats, and of trains on the Boston rail-road, which is seen for many miles from this place.

On the right of the house is a well-arranged flower garden, and in the rear vegetable and fruit gardens, with a large and fine natural grove beyond on a greatly varied surface—the whole furnishing a most refreshing and lovely retreat from "the tumult and smoke of the city."

In the annexed figure, a view is presented of the first floor of the house, together with the adjoining grounds.



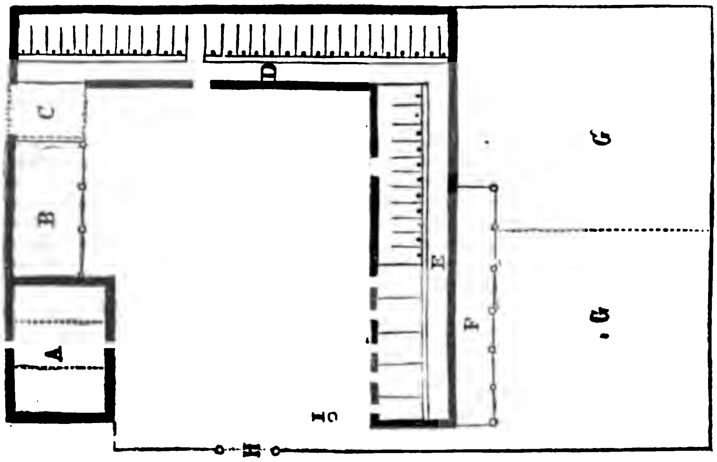
First Floor—Scale 48 *feet to the inch*—(Fig. 14.)

The farm at Mount Hope, consists of 127 acres, 25 of which are in wood. The whole of the cleared portion has been brought to a high state of fertility, as may be inferred from the fact that it maintains on an average over fifty head of neat cattle, (of various ages, from calves to full-grown animals,) six horses, and from fifteen to twenty swine. All this stock is actually supported from the farm. Grain or meal has sometimes been purchased, but the amount of hay, &c. sold, has been more than sufficient to balance this. In addition to supporting the stock, the farm and garden produce grain, vegetables and fruits, amply sufficient for home consumption.

The soil of the greater portion of the farm may be said to have been naturally of not more than medium quality, and its extraordinary fertility and productiveness have been caused by the application of manures. Besides the manure made from the stock of the farm, Mr. Prentice makes use of the animal matters, and other waste, from a large manufactory of various articles of fur. The waste from the factory is a very powerful manure, and being mixed with earth, the scrapings of the streets, &c. constitutes a valuable dressing for all crops. The barn yard is well calculated for preserving the manure, and the cattle are kept constantly well littered, either with straw, or fine shavings and dust made by a planing machine. The litter absorbs much of the urine, which would otherwise be wasted.

Fig. 15 exhibits the ground plan and the internal arrangement of Mr. Prentice's barns, and the apartments for stock, which it will be seen are convenient and judiciously contrived.

Among the attractive objects about Mount Hope, is the beautiful herd of Improved Short Horn cattle. Many individuals of this herd have at various times received the highest premiums of the New-York State Agricultural Society, and portraits of several of them have appeared in former volumes of the Cultivator. The first of Mr. Prentice's herd, were a pair, Leopard and Trim, purchased of the late Hon. Stephen Van Rensselaer in 1834. To these were added Susan, imported by Mr. G. W. Smith in 1832, Matilda, out of Heart, which was imported by Thomas Hollis, Esq., and the following animals import-



Plan of Barn, Yard, &c.—(Fig. 15.)

MR. PRENTICE'S BARN.

Explanation.

A. Barn 30 by 40 feet, with threshing floor.
B. Shed with hay loft, 21 by 40 feet.
C. Gateway with hay loft over it.
D. Passage 120 feet long, with 29 cattle stalls on the right, each stall with a post and sliding ring for fastening the halters.
E. Passage with stalls & rooms for calves, &c.
F. Shed for sheep.
G. G. Sheep yards with high close board fence.
H. Entrance gate, thro' picket fence 12 feet high for confining hens.
I. Pump.

ed mostly by Mr. Prentice, direct from England, viz: Appolonia* and Splendor, imported in 1838, 9—Princess, Miss Scotson, Flora, Aurora, and Snydus, in 1840—and Moss Rose, Violanta, Esterville and Catharine, in 1841. These were selected from the noted herds of the Earl of Derby, Samuel Scotson, Esq. of Toxteth Park, Messrs. Whitaker, and R. C. Lowndes. The animals above named, are all registered in the Herd Book, and they, with their progeny, constitute the present Short Horn stock at Mount Hope.

At the first Cattle Show of the N. Y. State Ag. Society at Syracuse in 1841, Mr. Prentice received the second premiums on bulls, cows, two year old heifers, and the first premiums for yearling heifers and bull calves. At the Show of the same Society at Albany, in 1842, the first premiums for the best bull, two year old bull, bull calf, and heifer calf, and second premiums for cows, yearling heifers, and heifer calves, were also awarded to Mr. P. At the last State Show, holden at Poughkeepsie, Mr. Prentice only exhibited from his herd three heifers, for two of which he received the highest premiums in the class. Of one of these heifers, "Esterville," we present our readers with a very accurate portrait at page 56 of this number.

This herd of cattle cannot be large consumers—after making due allowances for the fertility and production of the land, the quantity of stock kept is certainly remarkable. Though no particular trials have been made with any of the cows to ascertain the quantity of butter they would yield, it is known that several of them are extraordinary as milkers. *Appolonia* is one of the best dairy cows we have ever seen. She, and several others have each given from twenty-five to thirty quarts of milk per day, for several weeks in succession, with only grass feed.

In 1842, Mr. Colman gave the following account of Mr. Prentice's stock, in the New Genesee Farmer, of which paper he was at that time editor:

"If any man, however, chooses to see this stock in perfection, let him go to the farm of E. P. Prentice of Albany; and if he has any prejudices of any kind against the stock, and is not then prepared to yield every one of them, I can only say he is differently constituted from what I am. Mr. Prentice has about forty animals of the Improved Durham Short Horn, of pure blood and of the highest pedigree. He has one cow with seven heifers of her own progeny along side of her, six of which were in milk. A stock of larger size, of more symmetrical form, of equal beauty, of finer feel, of more thrift, of greater productiveness, I never have seen nor never expect to see; nor do I expect to see a herd better kept, nor better arrangements for their keeping. To an amateur, to an inquisitive farmer, who desires to see what skill, intelligence and care can effect in moulding and improving the animal frame, it is worth a journey from Rochester to Albany on foot to see this stock. It is worth almost as much to see Mr. Prentice's stable arrangements and the tidy manner in which every thing is kept. Some few farmers among my acquaintance, in going there, would hardly know that they were not in their own parlors."

Besides the Short Horn stock above mentioned, Mr. Prentice has a few very superior Ayrshires. These are a cow imported in 1842, and a heifer which she dropped on the passage, with one or two others produced since. They are beautiful animals, and have evidently superior qualities for the dairy.

The community is also indebted to Mr. Prentice for the importation of choice flocks of South Down and Cotswold sheep. These were imported in 1837. The South Downs were selected from the flocks of Messrs. Riga and Putland, Sussex, and the Cotswolds from the flock of Mr. Riga, Cross-hands, Wiltshire. Finding the breeding of sheep in connexion with cattle, rather inconvenient, Mr. P. disposed of the former to Mr. J. McD. McIntyre, in 1841.

IMPROVED PLOWS.

THE improvements in agricultural implements of various kinds, within the last twenty or thirty years, has been very great. In the PLOW, particularly, there has been almost an entire revolution, both in the kind of material used, and in the general form and construction. A single example of the manner in which, within the memory of the writer, (thirty years,) the operation of plowing was performed in a New-England neighborhood, not by any means behind the age in agricultural advancement, will serve to show in a striking light, the improvement which has been effected in this most important implement of husbandry. In plowing "green-sward," the force commonly employed was three yoke of oxen, with a horse to lead, or two yoke of oxen and a pair of horses, with two drivers, one man at the plow-handles, another at the beam to "bear on" in hard places, and, if the ground was at all rough, a man to follow the plow with a stout hoe to mend "baulks," and turn over furrows. An acre was considered a good day's work. Now mark the contrast. On the same farms, the same fields, with a tougher sward, are now plowed with one yoke of oxen, (sometimes with the addition of a horse,) and often with only one man, who is both plowman and driver. An acre and a half is plowed in a day, in a style infinitely superior to the former mode. Besides, notwithstanding the superior excellence and durability of the new implement, its cost is at least one-fourth less than that of the old one.

This modern improvement in plows, it may be safely averred, originated in the encouragement offered by agricultural societies. The Massachusetts Society for the Promotion of Agriculture, early manifested a deep interest in this matter. The institution of plowing matches in this country, the credit of which belongs to this Society, it is believed gave the first decided impulse to improvement in this direction. Their first plowing match took place at Brighton in October 1817. The offer of premiums for the best plow, by this, and other associations, soon followed; and by the competition which was thus in various ways created, improvements were started and pushed on, till at the present time a degree of perfection has been reached in some of the best constructed plows, to which it seems almost impracticable to make any farther additions.

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* With Appolonia, there was shipped a beautiful and celebrated cow, called Wood-Nymph, which unfortunately died on the passage.

As Massachusetts took the lead in the institution of plowing-matches, and the offering of premiums for the best plows, a brief sketch of the progress of improvement in that State, will be read with interest.

At some of the first trials of plows under the direction of the State Ag. Society, at Brighton, those made by Jesse Warren, of Dedham, Charles Howard, of Hingham, and —— Hall of Sutton, attracted particular attention. The first premium at the first trial, (1817,) was awarded to Mr. Howard and his partner. At this trial, the once famous English *Beverstone* plow, was brought into competition with those of American manufacture, by the late John Prince, Esq. of Roxbury. For several years, the plows used at these trials, were made of wood, ironed in the old mode. A cast iron mold-board, the share and other parts being made as before, was after a while adopted by Mr. Howard, and about the same time, some plows wholly of cast-iron were introduced. The latter were Tice's and Wood's. Some cast iron plows were also imported from Scotland. But the iron plows were slow in coming into use. Those of the Tice and Wood patterns, were frequently used at the Brighton trials. They were admitted to run with less resistance than most of those made of wood, but from their extreme shortness, and the abrupt position of the mold-board, they did not turn a sod-furrow so well and handsomely as was desired, and on this account were not very successful in obtaining prizes. The castings were also bad—the plows broke a great deal, which created a prejudice against cast iron plows, not very easy to be overcome—and various circumstances combined to throw the Wood and Tice plows into disuse.

In the mean time the mechanical principles on which the plow should be constructed, engaged the attention of men of the strongest minds. The late Hon. Timothy Pickering, who, after his retirement from an important political post, the Secretaryship of State, to which he had been appointed by Washington, engaged in agricultural pursuits with great zeal, laid down the following rule for the construction of the mold-board:

"Having fixed a straight line, by one cut of a saw from the upper corner of the mold-board behind, to its point forward, cut away the wood above and below that line in such a manner that when finished, if you carry a straight rule from the fore to the hind part, keeping it all the way at right angles with the straight line, it shall touch the face of the mold-board, in its whole breadth, in straight lines, through its entire winding, so that its upper corner behind shall overhang the lower sufficiently to effect a complete turning of the furrow slice."

The above rule is in accordance with the principles advanced by Mr. Jefferson in his letter to Sir John Sinclair, and which have been and are still adhered to, in all modern improvements of the plow.

As the trials of plows by the Massachusetts Society, annually brought the various competitors together, a progressive improvement was every year observable. Mr. Warren, by study and practice, greatly improved the construction of his plow. It made beautiful work—many premiums were awarded to it at the Brighton plowing-matches, where for several years it was much esteemed. Mr. Warren finally got out patterns for iron plows, on the general principle of his wooden one. Some of these we have held with our own hands. They were good plows, though destined soon to be eclipsed by better ones.

Mr. Howard continued to add improvements to his plow, and was very successful in obtaining prizes. About the year 1825, Messrs. Prouty and Mears, with various patterns of the "Hitchcock" plow, became conspicuous among the successful competitors. The Hitchcock plow may be considered the basis on which has been engrafted the various improvements that in these days have rendered the plows of Messrs. P. and M. famous over the whole country.

Other competitors also appeared in the field. Prominent among these, were Messrs. Ruggles, Nourse and Mason, who were not long in securing a share of the honors to be gained in the contest. For several years past, it may be said that the competition in Massachusetts, has been between the plows of the three last named firms—that is, between those of Howard, Prouty & Mears, and Ruggles, Nourse & Mason.

Each of these concerns manufacture a large number of plows of various patterns, and there are large ware-houses in Boston, where all of them, as well as other implements, are extensively sold. We have before spoken of the establishment of Messrs. Breck & Co., (where Howard's plows are sold,) and that of Messrs. Ruggles, Nourse & Mason. In our visit to Massachusetts in October last, we visited the warehouse and manufactory of Messrs. D. Prouty & Co., successors to Prouty & Mears. Their store is in Boston, and their manufactory in South Boston. The latter is a very large establishment. The building is 120 feet long, 36 feet wide, and four stories high. They manufacture plows of various patterns, though they are mostly on what is called the "centre-draft" principle—that is, the beam is placed over the center of the weight of the plow. These plows have acquired an extensive reputation, and orders are constantly received for them from all parts of the Union.

Messrs. P. & Co. also make many subsoil plows of different kinds—also harrows of very superior construction—sowing, or planting machines—straw-cutters, and most other farming implements. Every tool is made of the best material, and in the most finished style of workmanship. All their operations seem to be conducted with much system, and great regularity and neatness are observed throughout.

CORN-STALK SUGAR AND MOLASSES.

Mr. William H. Deaderick, of Athens, Tennessee, gives a communication in the Tenn. Agriculturist, on the manufacture of corn-stalk sugar. Mr. Deaderick has made more or less of this article for the three last years. During the last season he made over 100 gallons, or one hogshead of sugar. By planting corn at various times, the molasses season, he observes, can be prolonged in that State from the middle of July to the middle of October. He directs that the mill for grinding the stalks, be made with three rollers, at least twenty inches in diameter, and twenty-six inches long, and four inches above the cogs. The cogs four inches wide, and eighteen inches below the cogs. The necks about three inches long, and six in diameter, with a smooth iron band fitted on to prevent their wearing. The stem of the middle roller, should be twelve or thirteen inches in diameter, and five or six feet long, the neck to be received in a corresponding hole in a transverse beam resting on two posts about twenty-five feet asunder. This arrangement will cause the mill to run more equally than if there was no support above. There should also be some contrivance of wedges and keys, with which to adjust the outside to the middle roller.

Mr. D. remarks, that for the sake of convenience, it may be proper to assign to the corn-stalk two stages in its growth, as the most suitable for making molasses and sugar: 1st. When just in roasting, or boiling ears. 2d. When it has passed out of the roasting-ear stage, and become too hard for cooking. The syrup made during the first or roasting-ear stage, if boiled moderately thick will very much resemble honey, both in appearance and taste. In the second stage, which Mr. Deaderick considers on the whole the proper one, or when the corn has become too hard for cooking, the syrup will more nearly resemble that made from the sugar-cane, and is the age of the stalk at which the syrup is most disposed to granulate. As the stalk ripens, the molasses will become darker and not so agreeable to the taste. In the roasting-ear stage, it requires ten gallons of juice to make one of syrup. In the second stage, or two weeks later, eight gallons will do the same. One gallon of syrup, boiled to the point of granulation—that is, when on taking a small portion (as warm as it can be borne) between the thumb and fore finger, it can be drawn into a thread an inch and a half long—is equivalent to ten pounds of brown sugar for any of the purposes for which that article is commonly used. Stalks from which the ears have been pulled in their embryo state, will afford one-fourth more syrup than those on which the ears have been permitted to arrive at their full growth. Large stalks are preferable to small ones, as it takes nearly as much time to strip and prepare for the mill the latter as the former.

The same difficulties have been experienced in regard to speedy granulation, as heretofore. It is evident that superabundant mucilage in the juice, retards the granulation of the syrup, but it is hoped more mature experience will remove this and all other obstacles to complete success. It is satisfactorily ascertained that if the syrup is properly made and placed in shallow vessels, in a moderately warm situation, it will granulate, if sufficient time be allowed it for that purpose. Last season a small portion was set aside, and five months elapsed before the chrystalization was completed, leaving, however, at last, little or no molasses. Mr. D. has several parcels which until August last have been slowly undergoing this process, some of which, he observes, are ready for drawing, and that doubtless the whole will be completed in a few weeks.

Mr. Deaderick thinks it all important that the juice be pressed out and set to boiling as speedily as possible after the stalks are cut; not more than two or three hours should elapse before this is done, for if the stalks are permitted to lie, or the juice to stand longer than the time mentioned, fermentation will commence and infallibly injure the quality of the molasses. As soon as a sufficient quantity of juice is received from the mill, it should be allowed to stand for a few minutes for the coarser particles to settle, and then be strained through a coarse cloth, and a table-spoon full and a half of clear lime-water added to each gallon of juice, and then poured into the kettle and carefully watched and skimmed during the whole process of boiling. Care must be taken that the iron vessels used are entirely free from rust.

Mr. D. states that the molasses thus produced has been pronounced over and again, by persons who have partaken of it, superior to the imported article; all, without exception, were fond of it, whilst among them were several who reject the use of cane molasses altogether.

Mr. Deaderick thinks the manufacture of corn-stalk sugar and molasses, is susceptible of being made a matter of the greatest importance—that which has been accomplished by a few, can be done by every farmer in the State—and that "it is as absurd and unnecessary for a farmer to purchase his sugar and molasses as it would be to import his soft soap, candles, or any other article of ordinary domestic production."

HOT BEDS.

Those who intend raising early vegetables, either for domestic use or for market, had better make some preparations for the business, this month. Cabbages, tomatoes, cucumbers, egg-plants, &c., may be had three or four weeks earlier, if started in a hot bed in early spring, and put out after the weather has become steadily warm. In making a hot-bed, mark out the ground the size of the frame to be used, and make an excavation to the depth of a foot, or if the ground is quite dry, eighteen inches; put in good horse manure to the thickness of two feet, and put on the frame and glasses. When the heat is sufficiently raised, put on six or eight inches of good mould; that made from clean grass-sods which have been piled and become entirely rotted the year before, is best; and when this is warmed to the proper degree, which can easily be told by applying the hand to it, plant the seeds. Care should be taken that there is not too much heat, especially when the sun shines. If there is too much, raise the glasses; and always let in as much air as practicable with keeping up the requisite degree of heat. Hot-bed plants require a great deal of water, which should be supplied from a watering-pot. If the weather should be so cold as to render it necessary, the bed should be protected by mats and straw.

Permanent hot-bed frames may be made of bricks. A false bottom is laid two or three feet from the ground, made of cast-iron, or iron bars, laid so closely together as to answer the purpose, on which is placed the earth for the plants. A door is left at one end of the brick-work, under the floor, to throw in manure, and another door at the opposite end, for taking the manure out. Thus a constant and regular supply of heat may be conveniently kept up, by only putting in fresh manure as the decomposition proceeds.

MODEL AND EXPERIMENTAL FARM.

Several newspapers have suggested that the Smithsonian bequest, which, together with the interest up to the present time, it is said amounts to six hundred and ninety thousand dollars, should be appropriated to the establishment of a Model Farm. It appears that a bill was introduced by Senator Tappan, of Ohio, towards the close of the last session of Congress, for the purpose of effecting this object, and we are informed that petitions are now in circulation in various parts of the country for the passage of that bill.

The design of the benevolent donor, Mr. Smithson, in making this bequest, was the founding of an institution at Washington, for the "increase and diffusion of knowledge among men." One cause of the delay of our government in acting on this matter, has undoubtedly been the difficulty of fixing on a plan of an institution by which the original design of the donor might in the best manner be carried out. The very general terms in which that design is expressed, seem to admit of considerable latitude in the choice of a plan. The particular *kind* of "knowledge" which it was especially designed to "increase" and "diffuse," is not mentioned. It may, however, be safely claimed that the bestowment of the *greatest good* on the human family, was the grand aim and intent of Mr. Smithson in this disposition of his property. And how, we ask, can this philanthropic and praise-worthy object be better accomplished, than by the endowment of an institution for the "increase and diffusion of knowledge" in relation to that art which constitutes the very foundation of national independence, and individual support?

We have not been so fortunate as to meet with a copy of Mr. Tappan's bill, but we understand that the proposed Model Farm is to consist of "ten acres of ground in the vicinity of the Capitol," the general direction and management to be vested in twelve citizens appointed by Congress. Students to be instructed in the institution gratuitously, &c. The trial of plants, and the distribution of such fruits, seeds and vegetables as shall be found useful and adapted to the various sections of the country, to be among the leading objects of the institution, while other means of usefulness will undoubtedly be improved.

It strikes us that the quantity of land, ten acres, is less than would be expedient, having in view all the objects to which such an institution should be devoted. It should be remembered that there are many important questions which it is desirable to settle by practical *tests*. In addition to the trial of plants, it is important to decide the relative value of manures, and their particular operation in promoting the growth of plants on various soils, and under different circumstances as to heat, moisture, &c.—the comparative expense of production and the value of different crops for feeding animals, whether for slaughter, for the dairy, or for labor. Careful and long-continued experiments are requisite, and should be carried on for the purpose of deciding these points. The most careful trials should also be made to ascertain as far as practicable, the comparative advantages of different breeds of domestic animals for special purposes, and their relative adaptation to different modes of feeding, &c. A sufficient quantity of land for successfully prosecuting all these and other necessary experiments, it seems to us should be secured in the outset; especially when it is considered that from the cheapness of land within a convenient distance of the proposed location, the addition of fifty or a hundred acres would make but a small item in the expense.

The subject of a Pattern or Model farm, in connexion with an Institution for the instruction of youth, in the State of New-York, has been at different times considerably agitated, and two or more bills granting charters for this purpose, have been passed by the Legislature, but different circumstances have combined to prevent any active measures being taken for the commencement of the enterprise. The difficulty of bringing into operation an institution, embracing in its plan and design *all* that it is desired to effect, has induced the suggestion that it is better, for the present, to attempt something on a less extended scale, but with a greater certainty of its practicability and accomplishment. We allude to the proposition of purchasing a farm for making experiments and deciding doubtful points in husbandry. The project need not involve an expensive outlay—the farm may consist of about fifty acres—and all that would be requisite to carry it on, after the first expense of putting it in order, would be the hands to perform the labor, and a competent superintendent to conduct the experiments and all operations, under the direction of a suitable board of officers.

The proper object of all inquiry, is the establishment of FACTS—such only being of practical utility—and by no other means within our knowledge, can this object be so well promoted, as by some plan like what is here proposed. It is certain that much good has already been effected by various laudable exertions which have been made in behalf of agriculture; but there are questions of the most important consideration—questions involving points on which the prosperity of the farmer actually depend, that have not been, and cannot be decided by any thing short of systematic and careful experiment. By the aid of an establishment like this, a series of experiments might be instituted that could be *relied* on—we need not be left to *guess* at the results, as is too often done in what are *called* experiments. The operation of different manures, and the application of substances for the prevention of diseases in plants, or to ward off the attacks of insects, would here be tested on the same soil and under precisely the same circumstances. Comparative trials would be made with plows and other implements. The superiority possessed by one breed of animals over another, if any really exists, would be demonstrated in the the actual *profits* given under an impartial and just experiment. Free from the bias of individual selfishness, or preconceived and favorite theories, the trials would be fairly conducted, and the results as fairly made known. The grand object being the acquirement of TRUTH, *Nature*, in every operation would be asked a question—her answer would be promptly noted and treasured up in the storehouse of knowledge for the future benefit of all.

For an object like this, we think there can scarcely be a doubt that the Legislature would grant the necessary appropriation. The trifling sum required would certainly be but a small return for the liberal aid which has been received from the agricultural class, in support of institutions from which they have derived but little comparative advantage.

HORTICULTURAL NOTICES.

ALPINE STRAWBERRIES.

C. M. Hovey, in a late number of his Magazine, speaks of the abundant supply of this variety of strawberry, in the markets of Paris, during the early part of *autumn*. He states the price at about 15 cents per basket; the basket containing a quart or more. We infer from his remarks that it is not well known in this country; its merits as a free grower and a great bearer, should make it more known. As with the Wood strawberry, there is a red and white sub-variety, which it also strongly resembles in the peculiar sweetness of the fruit, too much so to please some palates. It differs from the Wood in its more oblong fruit, and by its long continued season of bearing. It often yields but little during the heat of summer, but with proper culture, bears freely during a large part of autumn. We have seen good fruit picked in a rare case, on the sixth day of 12 month, (Dec.,) and a good dish of them on the table the first of the same month, in both cases from a garden in Western New-York. They often succeed best when partially shaded, as under a high fence, or fruit trees. Hovey says, "In the gardens of Luxembourg, we saw nearly quarter of an acre, planted out in rows, three feet apart, and a row of dahlias between every other row, the alternate spaces answering for walks. The dahlias afforded some shade, though it is less needed in the climate of Paris, and the vines [stalks] were loaded with fruit." From a long acquaintance with this variety, we venture to recommend their very general culture.

NEW ORNAMENTAL SHRUB.

A new and handsome shrub is noticed in the Botanical Register, a new species of Ceanothus, (*Ceanothus thyrsiflorus,*) "a perfectly hardy shrub [or small tree] with evergreen foliage of a beautiful glossy green, and dense panicles of bright blue flowers," from California. Though hardy in England, it might not be wholly so here. "The plant grows freely in any good soil, and is readily increased by cuttings [under glass ?] of the half ripe wood. Those who are familiar with our common native ceanothus, or *American white fringe tree,* can easily conceive the beauty which a large evergreen species with dense panicles of bright blue flowers would present.

GRAFTING CURRANTS.

The Gardener's Chronicle recommends, for the pretty appearance presented, as well as for improved flavor, to graft currants of different colors, as the red, black, and white, variously intermixed, on stocks trimmed up to a single stem three or four feet high. The tops may be headed down to a dense compact head, or trained as espaliers in the horizontal or fan method, the two latter modes of training, by the free exposure to sun and air, much improving the quality of the fruit. The importance of trimming the bushes up to a single stem to improve the fruit and facilitate clean culture, instead of suffering two hundred and fifty suckers to shoot up all round into a dense brush heap, is very obvious to those who have tried both.

BUDDING ROSES.

A correspondent of the Gardeners' Chronicle is very successful in budding roses, by "leaving a *small piece of wood,* as a protection to the bud when cut from the branch." This prevents drying before adhesion. He finds white worsted the best ligature, and the common Boursault a good stock.

BARREN AND PRODUCTIVE STRAWBERRIES.

The fact that many varieties of the strawberry, without being strictly diœcious, have, from imperfect fructification, distinct barren and productive plants, is more or less understood among cultivators. Some interesting facts, relative to this point, are given by S. S. Jackson of Ohio in a late number of Hovey's Magazine.

He says, "the first that I planted of Hovey's Seedling, I put no male [staminate] plants with them. They grew and blossomed very fine, and I thought I should have some mammoth fruit; but there was not a perfect berry on them, and very few imperfect. The next year I put male plants among them, and they bore beyond my expectation; and I now think Hovey's Seedling is the best market strawberry that we have; but they would not be worth growing here without the male plants among them. Last spring I had about one hundred Hovey's Seedling in a border, without any male plants near them. They flowered as fine as could be wished, but there was only three perfect fruit on them, and those three I impregnated."——"I do not think that an acre of ground, planted with Hovey's Seedling, Keene's Seedling, Hudson, and Elton, without male plants among them, would produce a bushel of fruit. I one year picked *thirty bushels* of the Hudson strawberry from *thirty square rods* of ground; they were about one-tenth male plants."

It is to the general knowledge of this property of the strawberry among the market gardeners of Cincinnati, according to the same writer, that they are there indebted for the perfection, abundance and cheapness of this fruit in the markets of that city. "It is," says he, "a knowledge and practice on this principle, that enables one of our market gardeners to bring *one hundred bushels a day to our market.*"

DEPTH OF SOWING GRASS SEED.

No. 1, covered ¼ inch deep.		No. 2, covered 0 to 3 inches deep.													
KIND OF PLANT EXPERIMENTED ON.	Total of each kind.	0	¼ inch.	½ inch.	¾ inch.	1 inch.	1¼ inch.	1½ inch.	1¾ inch.	2 inch.	2¼ inch.	2½ inch.	2¾ inch.	3 inch.	Total of each kind.
Lolium perenne, (perennial rye-grass,)........	348	29	30	27	19	16	19	14	12	11	9	8	4		198
" *Italicum*, (Italian rye-grass,)........	276	24	21	20	13	13	10	11	8	9	6	5	5		145
Dactylus glomerata, (Cock's-foot or Orchard,)........	300	30	22	15	15	10	9	7	5	2					115
Festuca elatior, (Larger fescue,)........	312	29	24	20	16	13	13	11	9	4	2	1			142
" *pratensis*, (Meadow do.,)........	324	28	28	16	12	10	6	9	4	2	2				117
" *heterophyllas*, (Various leaved do.,)........	348	31	23	20	18	12	9	6	4	1					124
" *diriuscula*, (Hard do.,)........	360	30	23	10	15	10	8	5	3	1					114
Alopecurus pratensis, (Meadow fox-tail,)........	192	17	17	16	15	12	7	6	3	1					94
Phleum pratense, (Timothy,)........	528	52	39	37	19	16	15	7	5						190
Poa nemoralis, (Wood meadow grass,)........	228	24	14	4	1										43
Plantago lanceolata (rib grass or plantain do.,)........	252	22	25	19	17	14	11	10	8	6	2				134
Trifolium pratense, (Red Clover,)........	192	17	16	14	11	11	8	4	4						85
" *repens*, (White Clover,)........	144	13	11	6	4	3	1								38
Medicago lupulina, (Yellow Clover,)........	96	12	10	8	6	4	2								42
	3,900	358	303	241	181	144	118	90	65	37	21	14	9		1581

The above table, showing the results of an experiment given in the Journal of Agriculture, for the purpose of proving the best depth for burying the different kinds of grass seed, cannot fail to be interesting and valuable to our farmers. It was performed as follows:—Two boxes, each one foot wide, and five feet ten inches long, were filled with soil; No. 1, to within a quarter of an inch of the top; No. 2, to the top on one side, regularly sloping to within three inches of the top on the other side. Both boxes were then divided across by slips of wood a foot long and two inches broad, so as to leave fourteen spaces 1 foot long in each box. Fig. 16 will show these divisions, box No. 2 being filled to the top on the side A, and three inches from the top on the side B. The same weight of seed was sown in each box, the slips of wood were removed, and the boxes filled to the top with soil. The seed in box No. 1, would thus be all buried a quarter of an inch deep; and in No. 2 from no depth to three inches. They were placed in a green-house, for the first ten days, to prevent the risk of heavy rains, which would have crusted the surface. This may have caused the seeds to spring from a greater depth than under other circumstances.

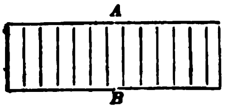


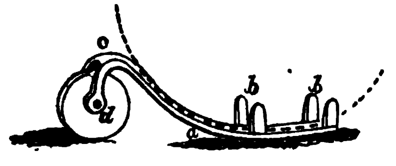
Fig. 16.

The quantities of each sown, (except Timothy, which was about double the rest,) were such as would have produced about the same number of plants to an equal surface, but the experiment being performed in summer, (Aug. 1,) the different kinds had variously diminished in vegetative powers. This diminution with clover is such, that the experimenter, S. D. Stirling, remarks, that clover seed "kept over one summer, would be dear at half price."

The whole furnishes a striking exhibition of the loss sustained in all cases by harrowing grass seed deeply into the ground. This is especially the case with very small seeds, as Timothy and Wood grass, none of the latter vegetating an inch beneath the surface, though this remark would more strongly apply to a heavy than to a light soil.

The writer also makes the excellent recommendation to "all who would avoid disappointment, to prove *all* their grass, clover, and turnep seeds before sowing, by sowing a small weight in a pot, and placing it in a warm situation, and counting the plants which come up," by which they will often find that 30 pounds in some cases will be cheaper than 20 pounds in others.

The scientific names of the plants are given to prevent mistake where different common names are known in different districts, and which have enabled us to add or substitute some common names in place of those which are nearly unknown to our farmers.



WELSH WHEEL-DRAG—(Fig. 17.)

This drag is described in the Journal of Agriculture; and from its convenience, simplicity, and ingenuity, is worthy of the attention of our farmers and mechanics. It consists of a sole or shoe, *a*. with two pairs of ears, or projections, *b*. *b*. to hold the wheel to its place while resting upon the shoe. The neck *c*. is forked at its extremity for receiving the small roller or wheel *d*. which is about nine inches in diameter. The curvature of the neck and shoe is such as to fit the outside of the wagon wheel, represented by the dotted line.

The peculiar convenience of this drag is, that it requires no chain to attach it to the forward part of the wagon, forming a distinct and independent carriage of itself. For the neck *c*. rising a foot above ground, prevents the wheel of the wagon running over it, the moment the wagon wheel begins to mount, its weight is thrown on the small wheel which then immediately rolls forward. The wagon wheel is thus partly supported by the small wheel and partly upon the shoe *a*.; and the drag cannot escape from it, being held by the ears *b*. *b*. When not in use, it may be thrown into the wagon.

The wheels cast at our furnaces for plow-wheels would doubtless answer for the wheel of the drag.

FEEDING BOXES FOR COWS—(Fig. 18.)

The annexed figure represents a cheap and good feeding box for cows, which has been found very convenient in foddering them with hay, or other winter food. It is six or seven feet square; the height is about two feet and nine inches, for cows of common size—it must not be too high for them to reach easily over the side, and not so low that they can jump into it. The depth of the *box* is about fifteen inches. There are 2 cross pieces only, morticed into the posts, to stiffen the whole and to support the bottom boards. Four cows will eat from it at once; and it will be impossible for them to tread the hay under feet and waste it. A common workman will make one in two or three hours.

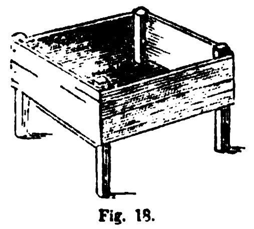


Fig. 18.

ROOT SLICERS—(Fig. 19.)

Fig. 19.

PERSONS owning large farms, and having many cattle to feed with roots, will doubtless find it cheapest to have good root-slicing machines, costing from ten to twenty dollars. But for farming on a more moderate scale, the owners will find them by no means necessary. Fig. 19 represents a tool, not costing more than a dollar, which by a single stroke on a turnep or potatoe, will chop into four pieces; and if the roots are placed in a square plank trough or box, rapid strokes with this tool will cut nearly as fast as some of the most costly machines. In the absence of this, a well ground spade, or what is better, a steel shovel, will cut rapidly. We find that horses generally prefer to gnaw down ruta bagas uncut, and cows seem to care very little about having their food thus previously carved up. At all events, therefore, don't be in too great a hurry to buy a slicing machine at fifteen or twenty dollars—try a subsoil plow first, at any rate.

SCAB IN SHEEP.

THE scab in sheep, the mange in cattle, horses, dogs, &c., and the itch in man, are well ascertained to be caused by parasitic insects, (though of a different class from lice or ticks,) belonging to the *Acari* or mite tribe—exceedingly minute in size, and living in the skin of the animals with which they are brought in contact. The origin and economy of this class of insects have attracted from naturalists considerable attention. That their origin is sometimes spontaneous, owing to the neglect or mismanagement of the animal, is known; yet when once brought into existence, they have the same difference of sex, and in their propagation are governed by the same laws, as animals of the higher orders. In relation to the mysterious but interesting question as to how these animals first have existence, Mr. Youatt eloquently observes:

"Physiologists are fast acknowledging the work of a mysterious but noble principle—the springing up of life under new forms, when the component principles of previous beings are decaying, or have seemingly perished. Thus if we macerate any vegetable substance, the fluid will teem with myriads of living beings, called into existence by the process we are conducting; or rather by that power of nature, or that principle bestowed by the Author of Nature, that life, ceasing in one form, shall spring up in others, and this while the creation lasts! Thus we have probably the hydatid in the brain of the sheep, and the fluke in its liver—parasitical beings which we recognize in no other form and in no other place. *They were the product of the diseased part.* In like manner, the acarus of the scab may be called into existence by the derangements which our neglect, or unavoidable accident, or disease, may have made in the skin of the sheep; and having sprung into life within the pores of the skin, obeys the laws of all living beings as to its after existence and multiplication."

Walz, a German veterinarian, made some curious experiments with the acari. He found if some of the females are placed on the wool of a sound sheep, they quickly travel to the root of it, and bury themselves in the skin, a minute red point, scarcely visible, distinguishing the place where they penetrated. The tenth or twelfth day afterwards, a slight swelling may be discovered, the skin changes its color, and has a greenish blue tint. The pustule forms rapidly, and about the sixteenth day breaks—the mothers again appearing, with their little ones attached to their feet, and covered by a portion of the egg from which they have just escaped. The little ones immediately penetrate the neighboring skin, find their proper nourishment, grow and propagate, till the poor animal, under the torment occasioned by the myriads which prey on him, rapidly sinks down, and at last dies.

Walz also placed some of the *male* acari on the sound skin of a sheep. They burrowed into the skin, and in due time the pustule arose; but all indications of the scab soon disappeared with the employment of any remedy. He therefore concluded that the disease can be communicated from sheep to sheep only by means of the contact of the sound animals with the diseased, or, as they lie near others, impregnated acari traveling from the infected to the sound sheep. The itching which diseased animals suffer, induces them to rub themselves much against posts, or any projecting substances, and these rubbing places become undoubtedly fruitful sources of infection.

We here give cuts of the acari, as delineated by Walz, highly magnified.

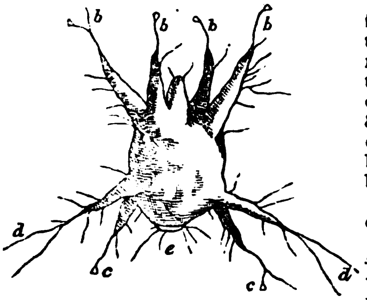


Fig. 20.

Fig. 20.—The female, of 366 times the natural size, larger than the male, of an oval form, & provided with eight feet, four before, and four behind.

a.—The sucker.

b. b. b. b.—The 4 anterior feet, with their trumpet like appendices.

c. c.—The two interior hind feet.

d. d.—The two outward feet, the extremities of which are provided with some long hairs, and on other parts of the legs are shorter hairs. To these hairs the young ones adhere when they first escape from the pustule.

e.—The tail, containing the anus and vulva, garnished by some short hairs.

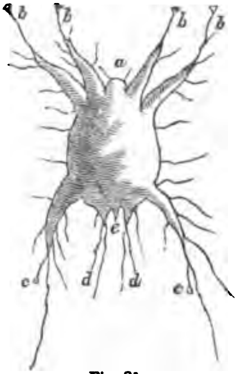


Fig. 21.

Fig. 21—The male on its back, and seen by the same magnifying power.

a.—The sucker.

b. b. b. b.—The fore-legs with their trumpet-like appendices, as seen in the female.

c. c.—The two hind legs, with the same appendices and hairs.

d.—The rudiments of the abdominal feet. *e.*—The tail.

From what has been said it must be obvious that the cure of scab lies in the destruction of this insect. Washes of tobacco, hellebore, &c., are sometimes used, but as the insect lies within the skin, we can never be certain of reaching it with these remedies. They may sometimes prove successful, but in general they only mitigate the disease, which, though it may be thus kept for some time in a latent state, will at length break out to the disappointment and vexation of the shepherd.

A safer method is the application of some substance that will be sure to poison the acari. An ointment compounded according to the following recipe, has proved in our own practice, entirely efficacious.

Let one pound of pure quicksilver, Venice turpentine, and common oil, of each half a pound, and four pounds of hog's lard, be triturated in a mortar till the quicksilver is thoroughly incorporated with the various ingredients.

In using so strong a preparation of mercury, care should be taken that the sheep are properly protected from bad weather. It was in the depth of winter, and in a very cold climate, that we had occasion to use this ointment. Not being at that time acquainted with scab, the sheep became very seriously affected before the disease was identified. Some of the flock lost nearly all their wool, and their bodies, nearly covered with ulcers, presented a most disagreeable appearance. They were put into a barn, kept comfortably warm, and not allowed to go out, except for a short time in the middle of the pleasantest days. In using the ointment, a lump half the size of a hen's egg was used to each sheep, and particular pains were taken to rub it well into the large veins about the neck. It was also rubbed along the back, and in the worst cases in lines down the sides. Every sheep was saved, and in three weeks all were well; while some of our neighbors, who, from fear of the effects of mercury, trusted to other applications, lost many; and after having kept the disease lingering among their sheep for more than a year, killed them and burnt up the carcases to stop the infection.

NEW-YORK STATE AGRICULTURAL SOCIETY.

The annual meeting of this Society was held at the old State Hall in this city, on Wednesday, the 15th of January. The meeting was well attended—a general and spirited interest was manifested in the affairs of the Society, and all its business was transacted with promptness and unanimity. The President, Hon. J. P. **Beekman**, was in the chair. Reports were made by the Corresponding and Recording Secretaries, Treasurer, and several Committees. From the report of the Treasurer, it appears that the receipts of the Society during the last year, were as follows:

Interest on stock, - - - - - -	$210,00
Donation from John Greig, - - -	50,00
" " Geo. Vail, - - -	25,00
" " Robert Donaldson, - -	12,00
" " J. P. Beekman, - -	50,00
" " J. McD. McIntyre,	20,00
" " Joel Rathbone, - -	25,00
" " Wm. H. Seward, -	50,00
Receipts at Fair, - - - - - -	3,723,80
Appropriation from the State, - -	700.00
	$4,865,80

Payments.

Premiums, - - - - - - - - -	$1,600,50
Balance due former Treasurer, - -	114,23
Recording Secretary, - - - - -	550,00
Expenses at Fair, - - - - - -	300,00
Subscription to Colman's European Agriculture, - - - - - - -	100,00
Design for Diploma, - - - - -	50,00
Binding, - - - - - - - - - -	328,00
Printing and advertising, - - - -	409,34
Incidental, - - - - - - - - -	481,84
	$3,933,91

On motion of H. S. **Randall**, a vote of thanks was tendered to the Corresponding and Recording Secretaries and Treasurer, for the valuable services they have, in their several capacities, rendered the Society.

Hon. **John Greig**, Chairman of the Committee to whom was referred the subject of the introduction of books of agriculture into primary schools and school libraries, made a highly interesting and elaborate report, which was received with evident approbation.

On motion of Hon. Mr. **Denniston**, a Committee of three from each Senatorial District, was appointed by the chair to make a nomination of officers for the ensuing year, and to recommend a place for holding the next fair.

Several reports on various grain crops, roots, &c., were made to the Society, of which, not having room for them in detail, we give the following abstract:

Wheat.—First premium to Matth. Watson, Canandaigua, he having raised 215 bushels of wheat on 4 acres, 12 poles of ground, or nearly 52¼ bushels per acre.

Corn.—The first premium on corn was not awarded. The committee award the second premium on corn to J. F. Osborn, Port Byron, Cayuga county, his crop being 213 bushels and three-eighths of a bushel, on two acres of land.

Several other applications for wheat and corn crops, were rejected from defects in the returns.

Barley.—First premium to Stephen B. Dudley, of East Bloomfield, Ontario county, his crop, being 69 bushels per acre, on a lot of two acres. The second premium to Wm. Wright, of Vernon, Oneida county, his crop being 50 bushels and 47 lbs. per acre, on a lot of two acres. The third premium to Nathaniel Wright of the same place, his crop being 47 bushels 25 lbs. per acre, on two acres of ground. Bani Bradley stated that he had raised 55 bushels 3 lbs. to the acre. The rule of the Society requiring two acres, this crop was excluded, there being only one acre and two roods. Some other crops were not entitled to premium from defects in the returns.

Oats.—The first premium to Seth Lawton of Washington, Dutchess county, his crop being 120¼ bushels per acre. The second premium to J. F. Osborn, of Port Byron, Cayuga county, his crop being 104 bushels per acre, on a lot of two acres and nine rods. Several statements were necessarily rejected from the imperfections of the returns. There are no competitors for the premiums on rye, peas, and corn sown broadcast.

Butter.—Only two applications were made for premiums under this head. The committee award to Geo. Vail, Esq. of Troy, a silver medal. Mr. Vail's cows were Durhams. Six of them, kept on grass feed only, produced in thirty days, 262 lbs. 9 oz. of butter, averaging for each cow, 43 lbs. 12 oz. The milk of one of these cows was kept by itself for thirty days, and yielded in that time 52 lbs. 9 oz. of butter.

Clover Seed.—A volume of the Transactions for 1844, was awarded to Henry Brown, of Enfield. Ten bushels of seed, weighing 60 lbs. per bushel, one bushel and eleven pounds weighing 52 lbs. per bushel, and half a bushel of tailings, weighing 38 lbs. per bushel, were produced on three acres and ten rods of ground.

Ruta Baga.—First premium to John G. Smedberg, of Greene Co., having raised 1160 bushels on one acre, and 2173 bushels on two acres.

H. S. Randall, of Cortland, the second premium, his crop being 820 bushels per acre.

C. B. Meek, of Ontario Co., the third premium, his crop being 724 bushels per acre.

Carrots.—First premium to Wm. Risley, of Chatauque, his crop being 1059 bushels per acre. One applicant only.

Mangelwurtzel.—First premium to C. B. Meek, his crop being 1101 bushels per acre. One applicant only.

Sugar Beets.—To J. F. Osborn, of Cayuga Co., the third premium, his crop being 657 bushels per acre. One applicant only.

No application was made for the premium on potatoes or cabbages.

The Committee appointed to nominate officers, reported the following list, which was unanimously adopted:

B. P. Johnson, of Oneida, President.
James Lennox, of New-York, Vice-President
Thomas L. Davies, of Dutchess, V. P.
E. P. Prentice, of Albany, V. P.
H. W. Doolittle, of Herkimer, V. P.
Benjamin Enos, of Madison, V. P.
O. C. Crocker, of Broome, V. B.
Henry S. Randall, of Cortland, V. P.
George W. Patterson, of Chatauque, V. P.
Daniel Lee, of Erie, Corresponding Secretary
Luther Tucker, of Albany, Rec. Sec.
Thomas Hillhouse, of Albany, Treasurer.

Additional Members.—T. S. Faxon, of Utica; E. Kirby, of Brownville; Alex Walsh, of Lansingburgh; Geo. Vail, of Troy; J. M. D. M'Intyre, of Albany.

The Committee also reported in favor of Utica, as the place for holding the next fair.

In the evening, the Society met in the Assembly room of the Capitol, to hear the address of President **Beekman**. This was a valuable production, evincing sound judgment and practical observation. Its leading objects were, a description of the past operations of the Society, and its influence in improving the condition of agriculture, embracing also some excellent observations on the advantages of a proper course of agricultural education.

On motion of Judge **Jones**, a vote of thanks was tendered by the Society to Dr. **Beekman**, for the able manner in which he has discharged the duties of presiding officer, and requesting for publication a copy of his address.

On retiring from the chair, Dr. **Beekman** introduced the President elect, Mr. **Johnson**, who, on taking his seat, addressed the Society in a neat and appropriate speech.

On motion of Gen. Viele, of Troy, it was

Resolved, That a Committee be appointed to prepare a memorial to the Legislature at its present session, for the renewal of the act to promote Agriculture, passed in 1841.

The Committee to whom was referred the consideration of claims for premiums on Essays and Text-book, have not yet reported on that subject, but are expected to submit their report at the next meeting of the Executive Committee, which will be on the 13th of February next.

EXECUTIVE COMMITTEE.

The new board of officers met at the Society's room, Jan. 16, the President in the chair. Present, Messrs. Prentice, Walsh, Kirby, Randall, McIntyre, Faxon, Vail, Lee, Enos, and Tucker.

On motion of Major Kirby,

Resolved, That the next annual Cattle Show and Fair be held at Utica, on the 16th, 17th, and 18th days of September next.

On motion of Mr. Tucker,

Resolved, That a committee be appointed to make arrangements for a series of weekly agricultural meetings, to be held in the Assembly Chamber, and also to take such measures as may be deemed necessary in relation to the room assigned to the Society by the State authorities. The committee appointed, consists of Messrs. Johnson, Beekman, and Tucker.

After considerable progress in making out the Premium List, it was referred to a committee, consisting of the President, Messrs. Lee, Prentice, McIntyre, Hillhouse, and Tucker, to report at the next meeting of the board.

The regular meetings of the Executive Committee will be held at the Society's Room in the old State Hall, on the *second Thursday* of each month.

SOCIAL AGRICULTURAL MEETINGS.

The social meetings of farmers, Members of the Legislature, and others interested in Agriculture, which took place in this city last winter, and in which so much interest was manifested, have been resumed. A meeting was held at the Old State Hall, on Thursday evening, Jan. 16th, at which the President elect of the State Agricultural Society, B. P. Johnson, presided, and an organization was effected for the future. This organization is as follows: Hon. J. P. Beekman, (ex-president of the State Ag. Society,) President—Robert Denniston, E. P. Prentice, and Edward S. Salisbury, Vice-Presidents—D. Lee, Sanford Howard, and E. Mack, committee to prepare subjects for discussion. The Editors of the Cultivator were appointed to act as Secretaries.

At this meeting Dr. Lee made some interesting remarks on the necessity of, and the advantages which would be derived from, a system of thorough scientific and practical education, applicable to the profession of agriculture.

At the close of Dr. Lee's remarks, a desultory discussion was carried on for the remainder of the evening, in which Judge Leland of Steuben county, Major Kirby of Brownville, Messrs. McVane of the Assembly, Stuart of Rochester, Howard of Albany, Comstock of Rome, and the President, took part. Many useful facts were elicited, and the meeting was in all respects highly satisfactory to those present. We took some notes of the remarks made, but are obliged for the present, to postpone their publication.

These meetings will be continued every Thursday evening, during the session of the Legislature, and will in future be held in the Assembly room of the Capitol.

PREMIUM SHEEP BARN.

We are requested by Mr. L. A. Morrell to offer a premium of ten dollars, for the best plan of a *sheep barn*, adapted to feeding within doors, with drawings of the racks, yards attached, &c., with plans of deposit for roots, grain, &c., the quantity of hay it will hold, and a particular explanation of the whole, and the number of sheep it will accommodate; to be forwarded to him, addressed to Lake Ridge, Tompkins Co., N. Y. The award will be made by the President of the N. Y. State Ag. Society, and two members of the Executive Committee.

We are further requested to say that his object in this, is, to insert the same in the work he is now preparing for publication on Sheep Husbandry, which he hopes to have in readiness for the printer by about the first of May ensuing.

FIRE BLIGHT IN PEAR TREES.

An extended and elaborate paper on this subject, read before the Indiana Horticultural Society, by the author, Henry W. Beecher, appears in a late number of Hovey's Magazine. After many accurate observations, the writer comes to the conclusion, that whatever may be the cause of *fire-blight* in New-England, which he does not deny may be caused by an insect, the great blight the past season in the Western States was produced by the weather and season. The high source whence this paper originates, entitles it to great respect, and from the importance of the subject, a particular notice is demanded.

According to the theory laid down, the blight is produced by a warm, moist autumn, inducing late and succulent growth, followed by early and cold winter weather. Thus from a state of rapid growth, with unripe wood, the trees are at once forced as by a shock, to a sudden state of rest; the fluids are frozen, the tender vessels are burst or lacerated, and a succession of warm suns and severe nights, augments the disaster. After speaking of the effects of this freezing,—lacerated passages,—thickened and diseased sap,—torpidity of parts,—and obstruction of circulation,—he remarks, "At length, the spring approaches. In early pruning the cultivator will find in those trees, which will ere long develope blight, that the knife is followed by an unctuous sap, and that the liber is of a greenish yellow color. These will be the first signs, and the practiced eye will detect these long before a leaf is put forth." He further adds, "the leaf puts out, and no outward signs of disease appear nor will it appear until the leaf prepares the downward current. May, June, and July, are the months when the growth is most rapid, and when the tree requires the most elaborated sap; and in these months the blight is fully developed. When the descending fluid reaches the point where, the previous fall, a total obstruction had taken place, (from causes already mentioned,) it is as effectually stopped as if the branch were girdled. For the sap which had lodged there, would, by the winds and sun, be entirely dried. This would not be the case if the sap was good and the vitality of the tree unimpaired; but when the sap and vessels are both diseased, the sun affects the branch on the tree, just as it would if severed and lying on the ground. There will therefore be found on the tree, branches with spots where the bark is dead and shrunk away below the level of the surrounding bark; and at these points the current downwards is wholly stopped.' Only the *outward* part, however is dead; while the *alburnum* or sap wood is but partially injured. Through the alburnum, then, the sap from the roots passes up, enters the leaf, and men are astonished to see a branch seemingly dead in the middle, growing thrifty at its extremity." Thus the growth may in some cases continue late in summer.

In other cases, where the downward flow of the sap, is only partially, and not wholly obstructed, the downward current takes with it this thickened, diseased, and poisonous sap, and spreads the contagion gradually downwards.

Many interesting facts are adduced in support of this theory, some of which may be briefly mentioned. The two great blight years in the Western States, 1832 and 1844, were preceded by just such weather as has been spoken of; and a skillful cultivator predicted six months previously by an examination of the trees, not only the extent of the disaster, but what particular trees and what individual branches would first perish. In one case given, out of 200 trees, only *four* escaped. These four had been *transplanted*, had grown but little during summer and fall, and consequently the wood was well hardened. But another collection of trees, also transplanted, though growing but little in summer, made a vigorous growth in fall, and suffered severely from blight. In these cases names and dates are given. Another case was that of Mr. White, a nurseryman near Mooresville, Morgan County, Ia., in an orchard of from 150 to 200 trees, who had not a single case of the blight in the year 1844; although all around him its ravages were felt. What were the facts in this case? His orchard is planted on a mound-like piece of ground; is high, of a sandy, gravelly soil; earlier by a week than nursery soils in this county; and in the summer of 1843 his trees grew through the summer,—wound up and shed their leaves in the fall, and during the warm spell made no *second growth*."

In another place, he says, "Sometimes the bark bursts, the sap exudes, and runs down, turning black; and its acridity will destroy vegetation, on which it may drop; and shoots at a distance from the trunk, upon which the rain washes this ichor, will soon perish." This must be a case of unusual virulence, as we have never witnessed it.

The author of the paper points out the distinction between blight, and mere *winter killing* which destroys the tree at once.

He recommends, to prevent the evil, to select warm, dry soils, so as to ensure early, well ripened growth; to select such varieties as ripen their wood early; and to prevent late growth where necessary by *root pruning*. When blight has actually taken place, excision is recommended as a matter of course.

This theory, which accords with the views we have favorably regarded and frequently expressed for the last ten years, so far as most of the cases in Western New York are concerned, is supported by too many facts to be easily overthrown. In case of *apricot* trees, we have often noticed the dried and dead portions, caused evidently by severe weather on that tender tree, and the subsequent heat of the sun, while the branches above were in a state of rapid growth. But this rapid growth soon needed a larger supply of sap than the drying stem below could furnish, and sudden withering and death followed. We have also witnessed cases of the *poisoning* quality of such diseased sap, in the *peach* tree: For the sake of experiment, some buds were started after being set in summer, and made a very succulent, unripened growth of several inches. Next spring they commenced growing, but soon died suddenly, evidently from the effect of the winter on the tender and unripened wood, and the branch itself not only died, but the poison ran down to the very roots, which in every case of this experiment turned brown to their extremeties, showing the circulation of the poisonous fermented sap. The *Madeleine pear*, which is remarkably thrifty in its growth, as well as succulent in its texture, is peculiarly liable to blight, nearly all the cases which have occurred under our own immediate notice, being on this variety; while after the most rigid examinations we have never found the insect. The *Seckel*, a very hardy slow-growing variety, is rarely if ever affected. We have often seen discolored, diseased, or dead strips on the branches extending gradually downwards, until large portions of the tree were dead. Hence the importance of cutting off the affected limbs without a moment's delay, and also some distance below any indications of disease,—as the poison may have passed downwards, and not as yet produced any visible effect. With this care, we have never known the remedy to fail, if vigorously applied.

Against this theory, the following facts are stated by P. Barry in the last number of the N. G. Farmer. "In the Mt. Hope Nurseries, there are several thousand pear trees of various ages, from 1 to 8 years old, and highly susceptible of blight from this new cause, yet there has never appeared the slightest indication of it, while the disease has been committing serious depredations in the immediate vicinity on large trees, much less likely to suffer, because less excited to growth by high cultivation. We have seen many trees killed by this disease, that had not grown a foot in two or three years." Perhaps the cases of early and late ripening already given, may throw some light on this subject. Good, healthy, and vigorous trees, in the well cultivated nursery, may mature their wood early; others, though growing more slowly, may not as in case of the transplanted trees, which commenced growing in autumn. But it must be remembered that *blight is death;* girdle a limb, and it will wither and turn black, just as in fire-blight; and no one theory, nor no two, may explain truly all the cases or classes of cases which occur. In the nursery of the writer, the tops of several thrifty young pear trees, in a low, warm place, were observed to be dying last summer when in leaf; what the result would have been is unknown, as they were all immedietely cut off and burned, and the disaster no more appeared. Why the blight should in some cases destroy the whole tree; in others only a branch and proceed no further, may be hard to explain; but may possibly depend on different degrees of virulence of the poisoned sap, or various states of hardiness and vigor, on peculiarities of soil, or of seasons, or on all these more or less combined. Killing the tops of young peach trees by cold, does not usually destroy the whole tree, but this is sometimes done, as in the budded trees before mentioned. Further and accurate observations are needed.

SENECA CO. AG. SOCIETY.

We are indebted to John Delafield, Esq'r, of Geneva, for a copy of his address before this Society. It is a spirited and interesting production, containing many valuable historical remarks, as well as agricultural facts. He informs us that in 1780, the soil of Seneca county, was first trodden by the white man! That fifty years ago, the county contained only *seventy-five* inhabitants, exclusive of the red-men—and that probably at that time, not more than twenty acres of land were cultivated. "What a contrast," he remarks, "with the present day! Then, a sun-beam scarce broke the forest's gloom, nor did a Woodman's axe disturb the awful solitude of nature. What a contrast with the present hour and place! The land now pouring forth its wealth to bless and reward the farmer's toil—children and children's children, as the polished corners of the temple, gladdening his heart and leading him with happiness, and gratitude in every heart, toward the end of his most useful and virtuous life."

In relation to the errors of cultivation, Mr. D. remarks—

"We divide our labor over too many acres to afford sufficient culture to each—and we neglect the aid of science, which teaches us to concentrate the varied means always within our control, and their economical and appropriate application. This will perhaps be admitted, when we notice the small average produce of wheat per acre, of any section of our country, and compare it, with the products of wheat readily obtained from well cultivated fields."

The benefits of agricultural papers, in giving to farmers the results of each others' experience, are thus strikingly shown:—"The agricultural periodicals of this country, bring to the fire side, and leisure hour of every farmer, the tried results of experiments throughout the world—they give to him the practice of every section of our country—they open to him the science of his profession—making clear and intelligible all that heretofore has been deemed chance."

Mr. Lawrence's Address, before the Yates County Agricultural Society. The main object of this address, appears to be to induce farmers to qualify themselves for taking that share in the direction of political affairs, which, from their numbers and the proportion they contribute for the support of goverment, justly belongs to them. We give an extract:

"The time has arrived when farmers as a class should understand their true position, and should arise in their might to vindicate the dignity of their profession. We often hear farmers complaining that their class is not fairly represented in our national councils, and these complaints are often well founded, and who are to blame but themselves, for it is through their ignorance and apathy that they are made the tools and dupes of demagogues and politicians."

Erratum.—On the second column of page 327 of last year's volume, for "Musk," read *Musch*, the name of the city from which this variety of the Apricot was called.

Foreign Correspondence.

MR. NORTON'S LETTERS—No. VII.

Lab. of Ag. Chemistry Association,
Edinburgh, Nov. 28, 1844.

LUTHER TUCKER, Esq.—In my last letter I gave a report of Prof. JOHNSTON'S Lectures in Ayr; I will now notice some of the farms in that region, which struck me as worthy of attention. The country in the immediate vicinity of Ayr, is generally cultivated with much skill, and some portions of it would compare even with the Lothians.

For several days I was at the place of Mr. CAMPBELL of Craigie, who is proprietor of a considerable estate, about half a mile from the town, and who, by influence and example, has greatly contributed to the advanced condition of agriculture in his district. His farm is in fine order, and there are numerous experiments in progress. In one field the effect of guano upon the second year's grass, was very striking; not only was it more luxuriant than parts of the field where other manures had been applied, but sweeter, for the cattle evidently preferred it, and kept it eaten close to the ground.

The farm of Mr. JOHN TENNANT is considered one of the best in the neighborhood of Ayr. It is about three miles from the town, and comprises 600 acres. Nearly the whole is laid out in 40 acre fields. This gives the farm a beautiful appearance, besides saving a vast amount of labor both in working of the land and in making and repairing fences. Mr. Tennant has drained every field, and in answer to a question of mine respecting a certain kind of land, supposing it *undrained*, he said, that of undrained land, he could tell me nothing; with him draining was an indispensable preliminary to improvement. He has a fine dairy of 90 Ayrshire cows, considering them the best breed for milk. He has a cross with the Durhams, but it is only for fattening. The grain crops were all in the stack yard, but there were about 20 acres of turneps in one field that would average 30 tons to the acre. They were raised with guano and various other portable manures, in most instances combined with farm-yard dung. This is far the best method of applying these manures, as it has been found to unite economy with actual increase of effect.

About six miles from Ayr, I visited the farm of Mr. BURNETT of Gadgirth. It lies high, and is surrounded by a rather bleak unproductive tract upon which the crops looked sickly and the herbage of the pasture lands miserably scanty, except in the hollows of the ridges, where was a considerable crop of rushes. A few years since Mr. Burnett's land was in the same condition. By the judicious application of modern science and practical skill, within five years he has doubled its value, and made a farm that for neatness and evidence of improvement can scarcely be surpassed. The crops remaining in the ground were quite heavy, especially the turneps. In one of the fields is a kiln, where lime is burned for the farm, and in another a tile work, for the manufacture of draining tiles, which can easily supply the neighboring proprietors when they are prepared to follow Mr. Burnett's excellent example. He has made 200 miles of drains on his own farm, having laid 150,000 tiles in a single season. The stock as usual, in that district, is Ayrshire, and the dairy is a model of good order and neatness. At the time of my visit, the operation of clearing away a portion of the original Caledonian forests was going on, and the ground preparing for cultivation. Instead of putting in the plow at once, and running about among the stumps, as I fear most of our farmers would have done, every root even, was dug out as the work proceeded. The whole soil was thoroughly broken up and turned over by the spade to the depth of two feet, and drains put in 6 inches lower. This field at once, therefore, will be in a fit state for perfect cultivation, and will immediately bear remunerating crops. On this farm is also a coal mine worked at the depth of 200 feet, which yields coal of excellent quality. With his own lime kiln, tile works and coal mine, Mr. Burnett is in an extraordinary degree independent of foreign aid, and a look at his farm, would, I think, convince the most sceptical, that *book farming* may with advantage be combined with practical wisdom.

On visiting the fine farm of Mr. ALEXANDER of Southbarr, near Paisley, my attention was chiefly directed to the difficulty he has encountered in drainage. The subsoil, to an extraordinary degree, abounds in iron, so much so that it actually in some instances has choked the tiles. He has however, contrived in the worst places, to obviate this by occasionally letting in a powerful stream of water at the upper part of the drain which sweeps it clear. The sides and bottom of the open drains are thickly incrusted with iron. It is certain that the drains will in a few years diminish its quantity, but at present it is a most serious evil. Mr. Alexander pointed out to me a cross between a Southdown buck and Cheviot ewes, which he admires much, and intends raising extensively. This gentleman has another farm at Muirkirk, in one of the wildest parts of Lanarkshire, where he has made great and admirable improvements. At some future time I hope to visit it.

The last estate which I visited was that of Mr. FLEMING of Barochan, also near Paisley. Here I was much interested by the improvements which have been made on a portion of a large peat moss or bog, 150 acres in extent. The limits of my present letter forbid my giving an account of the excellent and economical method pursued; suffice it to say, that where peat was once 20 feet in thickness, are now firm beautiful fields, producing very heavy crops, in one instance nearly 80 bushels of oats to the acre. The whole moss will in a few years be converted into a fertile farm. Mr. Fleming has a very considerable knowledge of chemistry, and hence the numerous and varied experiments conducted under his superintendence, have been of great practical value. Many of the most remarkable results are to be found in the appendix to Prof. Johnston's Lectures on Agricultural Chemistry and Geology.

Were it not that I fear trespassing on the patience of your readers, my remarks upon these model farms, as they may justly be termed, might extend to a much greater length. In the hope that even these imperfect sketches may give an idea of some features of improved Scottish husbandry, I am, very truly yours,

JOHN P. NORTON.

LETTERS FROM MR. MITCHELL—No. II.

Liverpool, England, Dec. 3, 1844.

LUTHER TUCKER, Esq.—I walked out yesterday to have a look at the Liverpool cattle market, held every Monday about three miles from town, on the road to West Derby, where lie the seats of the Earls Sefton and Derby, which at some future time I will take occasion to describe to you. I noticed in the streets the first ice of the season; the air was fine, cool and bracing early, but clouded as usual, and was dull before I reached the ground. I met upon my way numbers of butchers returning to town with their purchases, or driving them to their fields, of which I spoke in my last. The market is situated immediately by the side of the great "London Road," upon level paved ground, containing pens for about 3,000 cattle, and 7,000 to 8,000 sheep. The beef cattle were mostly from 3 to 5 years old, bullocks and heifers, varying very much in color, form and weight. The average weight of a 3 year old bullock, I should judge to be 6 to 700 lbs. dressed (in New England way, with hide and tallow.) The best of the cattle were from Ireland; and nine-tenths of all there, were either from Scotland or Ireland. I noticed many of the Galloway polled cattle. The Herefords and Durhams are not known in this market, and none stand so high as the Scotch and Irish black cattle. I observed to a drover that the Herefords were perhaps the first in the Smithfield market. "Ah, sir," said he, "we wish the flesh that's on light bone, and care nothing for the breed."

"And pray, sir, what may such heifers be worth?" said I, pointing to a pair of smooth, black polled Scotch animals just then driven out. "Sure, sir, and nothing short of £27 ($120) could buy them." They would dress perhaps 680 to 700 lbs. each. Difference in "feel" made great difference in sale of cattle of apparently equal weights. The price of those sold under my observation, would range, I should think, at from 36 to 50*s.* a cwt. ($7 to $9.50.) There were no poor cattle, and few very fat ones; indeed it is not the season for fat beef yet. On the conclusion of a bargain for any particular drove, the cattle were driven into the road, where they were taken in charge by boys and dogs—admirably trained (the dogs I mean) for the purpose, selecting, by direction of the owner, an individual from a herd of cattle, and keeping a single one or more to the beaten track. They sell readily at from £2 to £10.

The sheep are wholly Scotch and Irish. The Scotch, small; most of them a black-faced, shaggy, long wooled animal, selling from 15*s.* to 25*s.* ($3 to $5.) The large Irish sheep—elegant mutton they were too, as our dinner to-day testifies—sold for 20*s.* to 36*s.* The Southdowns are not appreciated in this market. There were on the ground about 2,000 cattle and 7 to 8,000 sheep. A large part is bought by butchers, in small droves, from Birmingham and Manchester, this being the great receiving port of cattle from every part of Ireland. Still there are large butchers here who never attend the market, supplying themselves by regular engagements with their own drovers. No veal and but few milch cows come to this market. A good new milch cow sells at from 14 to £20. Veal is plenty in the town market at about 7*d.* the pound. Some I noticed beautifully dressed, a day or two since, weighing some 45 lbs. to the quarter. But I must leave the town markets, their number, their size, their display, their throngs, &c., for another letter.

Notwithstanding the increased importation of live stock from Ireland, not only to Liverpool, but also through Bristol to London, there have been, beside shipments of salted beef this year, thus far, to amount of 8,000 tierces and 600 barrels to this port, and 5,000 tierces and 282 brls. to London; beside 13,000 tierces and 20,000 brls. of pork to London, and as much more here. No wonder England cherishes her close relationship with Ireland! Who can sneer at her bogs and fens, with such evidence of her agricultural products?

The market prices for the past week, which it may perhaps interest you to know, have been: For potatoes (of which considerable quantities are being shipped,) 2*s.* 6*d.* to 4*s.* 6*d.* a cwt. Beef, 2*s.* 4*d.* to 3*s.* 6*d.* per 8 lbs. Pork, 2*s.* 10*d.* to 4*s.* Mutton, 2*s.* 8*d.* to 3*s.* 8*d.* Hay, coarse meadow, 3*l.* 15*s.* to 4*l.* 16*s*; fine upland, 5*l.* 5*s.* to 5*l.* 10*s.*

Hay has been imported in one or two instances from America, but for some reason, has not done well. The duty is 16*s.* per load. I will give you in my next a full schedule of duties and port charges on all American agricultural products.

Apples have of late come in, in considerable quantities—selling with duties paid (6*d.* per bush.) at from 12*s.* to 22*s.* per brl. All depends upon the packing. A brand known to open well, will fetch from 3 to 5 shillings more than a new brand. Some are packed in sawdust, some in straw. Fuller details on this subject in future. Salted beef has sold the past week, American mess, from 1*l.* 3*s.* to 1*l.* 18*s.* per brl. Pork, mess, 2*l.* 4*s.* to 2*l.* 10. Lard, American, sells quick at 1*l.* 15*s.* to 2*l.* 1*s.*

Imports of flour past week, from America, 3,515 brls.

You may expect in future a running comment on the weekly markets, so far as they relate to American produce. Also any thing that may come in my way of interest to an American farmer.

I will endeavor to send you by next steamer a sketch of an English farm house and out-buildings, to afford some presentment to the eye of the *air* of a British farmer's home. I send with this some letters of Mr. Mechi, and drawings of his buildings, on which he has expended great sums. He is a practical man, and I think you will find matter of much interest in the letters.

I should not omit to mention that the potatoe crop here, as well as with us, has been latterly subject to disease, called the "dry rot," attributable by many to the heating of potatoes in the heap, but vulgarly, and I think erroneously, attributed to the use of guano.

Respectfully yours,

D. G. Mitchell.

LETTER FROM MR. HORSFORD—No. I.

By the last arrival from Havre, we received the following letter from our friend Prof. Horsford, whose departure for the University of Giessen, we noticed in our November number. Though dated at London, the letter was finished at Giessen, where Mr. H. arrived on the 25th Nov.

London, Nov. 13, 1844.

Mr. L. Tucker—The Packet Ship Switzerland reached the Bill of Portland, Wednesday evening, the 6th inst. after an unusually long eastward passage of twenty seven days. The gale, which proved so destructive to vessels in the British Channel, and along the coast, came upon us, the Saturday and Sunday previous; but having abundant sea-room and a staunch ship, it was the occasion only of a fine display of seamanship among the officers and crew.

The passengers were landed in a pilot boat at Weymouth, one of the favorite watering places of the nobility; and early the succeeding morning we were greeted with English scenery and English life. I shall attempt no expression of the feelings with which I looked upon every thing, so unlike what I had been accustomed *to*; for I should fail, as others have, in writing what I have read—to give a just idea fully appreciable by an American, and besides, at the best, it would be a more than thrice told tale. Every thing seems constructed with the motto "to last;" every thing seems so old and established; and every body seems so happy and contented, that one from the young, enterprising, progressing, anxious New World, feels bewildered in the contemplation of objects about him.

The "Bill" of Portland is a promontory of rock jutting two or three miles, I should judge, into the channel. It is so called from its resemblance to the bill of a duck, when seen from some distance at sea. Weymouth rests upon the outcrop of rocks which underlie the chalk basin; and the inhabitants have taken advantage of their location to erect a great number of fine blocks of buildings overlooking the bay and harbor. In front of some of these edifices are garden and court-yard walls of irregularly shaped sandstone blocks, to which a very fine effect is imparted by laying them up in a striped mortar; or perhaps I should say grooved mortar. After looking some time at the structure, I came to the conclusion that in the creation of the wall, two pots of mortar were employed, one of which was readily decomposable, or suffered ready disintegration from atmospheric exposure, while the other did not. Between each two layers of stone there were three layers of mortar, the middle one of them being of the first kind. Upon this supposition I could see, how in the progress of a few months after the erection of the wall, the fine grooved effect might have been produced.

From Weymouth we proceeded by "The Magnet," an English coach, over the undulations of the chalk basin to Salisbury, five and forty miles. The road was of flint and graded with such care, that the gallop or trot of the horses was uninterrupted through each stage. As we drove from Weymouth, there was nothing in English agriculture or husbandry of any description particularly commending itself to my attention. The soil upon the chalk was so shallow, as long since to have been quite exhausted. Extensive grass plains, mottled here and there with patches of furze, and flocks of South Downs, were frequently in view.

No fences, and very indifferent hedges, except in the immediate vicinity of villages, were seen, separating larger or smaller tracts of land. Somewhere on our way we passed the county line of Wilkshire, altogether unique in character—a ridge of earth succeeded by a ditch. The height of the ridge must originally have been some twelve or fifteen feet.

In the vicinity of this ridge, and scattered all along the road from Weymouth to Salisbury, and abounding especially in the vicinity of Stone Henge, are circular mounds and amphitheatres like those attributed to an unknown race, before the Indians, in America. I learned one fact here, which, taken in connection with the correspondence form, may serve to aid antiquarian investigations. It is, that the same kind of flint arrow-heads or arrow-points

—alike in form and material, are found in these mounds that are found in Western New-York. Now there have, as yet, no chalk beds been discovered in the United States, and of course, no flints. Indeed, there have to my knowledge, none been discovered in North America. This being true, and the arrow-points being composed of a material found abundantly in England, where, also, similar arrow-points obviously wrought from the chalk cliffs near, are also found, it furnishes an interesting fact for the antiquarian, one that without much effort of credulity, would induce the conjecture that these two systems of mounds and two suits of arrow-heads had a common origin.

The plowing was all along very beautiful, the "lands" having been laid out with such mathematical exactness, and the furrows cut of such uniform width; at the distance of the coach, however, the plows seemed less skillfully constructed than some I had seen. The holding of a plow was shared between a pair of wheels, and a holder proper—while the driving of three horses or one horse and a pair of oxen, was entrusted to two other persons; in some instances to but one. Sowing by drills had given to the newly sprouting grain, the finest effect. The crops of turneps were tolerably good in some instances, but very rarely abundant. I was told in view of this fact, and some others of the same description, that our tour lay through a very indifferent specimen of English agriculture. This I found emphatically true, as we approached London, where the surrounding country is on the Surrey side, for a distance of some twenty miles, a vast, magnificent garden.

The effects of landscape gardening were illustrated in two or three instances on our way, which were exceedingly beautiful. Plats of larch and fir, the one now brilliant yellow, and the other bright green, cover a hill side here, while at the conclusion of a lawn, there are tall, slender oaks of uniform height, and equal intervals between, encased to the branches with ivy; and here again are mounds of shrubbery of every kind of branch and foliage, so disposed as to fill the eye, when viewed from the mansion at the foot of the valley yonder, while, there again, is a lone evergreen spreading its limbs in freedom on every side.

Salisbury Plain, is a series of broad mounds and gently sloping vales, as much like the surface of country between Albany and Schenectady, as any I have seen, if those sand plains were freed of their shrubbery. It is a great grass field, with here and there scanty remains of hedges. It appears to me a region, the soil of which is no longer productive, and which is therefore occupied only by shepherds and their flocks. Some account of Stone Henge, that most wonderful Druidical relic, and the conclusion of my journey to London, will constitute the introduction to my next letter.

Respectfully yours,
E. N. Horsford.

Foot Rot.—C. W. S. in the English Agricultural Gazette, directs that the hoof be cut away sufficiently at the lower part to permit the escape of any matter that may be confined, and that the diseased part be touched, by means of a feather, with a little hydrocloric acid, which may be repeated if any fungous flesh grows on the part; if otherwise, the sore may be dressed daily with a powder composed of equal parts of sulphate of copper, alum, fine charcoal, and Armenian bole. The sheep must be kept in a clean dry place—dirt and moisture are prejudicial.

To Sweeten Rancid Butter.—A foreigner, says an agriculturist in the neighborhood of Brussels, has succeeded in removing the bad smell and disagreeable taste of rancid butter, by mixing and beating with it chloride of lime. The operation is said to consist in beating the butter with a sufficient quantity of water, into which is put 25 to 30 drops of chloride to 2 pounds of butter. After being mixed till all parts are in contact with the water, it is left for an hour or two, then withdrawn and washed anew in fresh water.

☞ Putting hot water, say a couple of gallons, into a churn, and shaking it about a while before using it, will, it is said, make the butter "come" in a short time.

VERMIN IN ANIMALS.

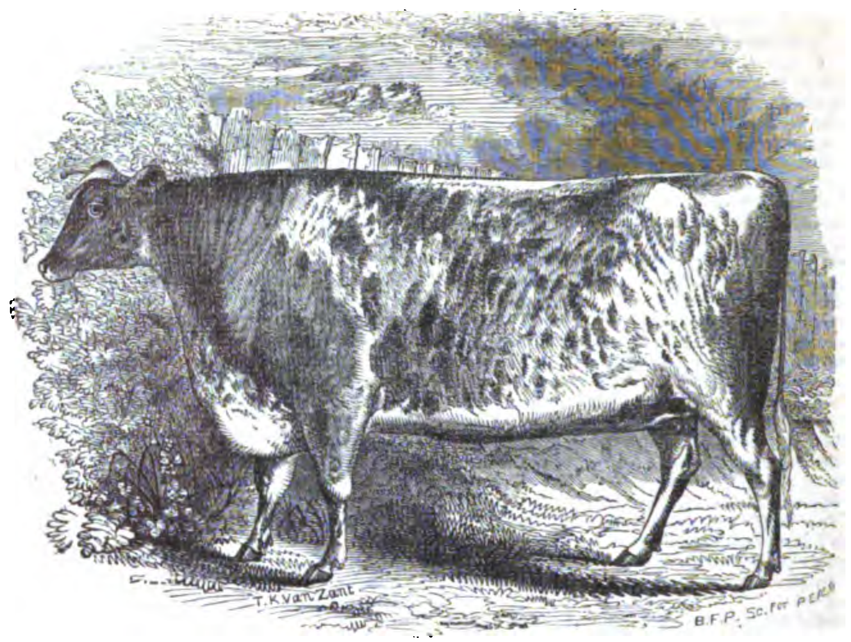
From man, down to the inferior tribes of animals, such as bees, grasshoppers and beetles, almost every species has its peculiar parasite. Each kind of domestic animals, including poultry of all sorts, is attacked by one or more species. We have heard it said that lice on cattle and ticks on sheep, "*don't do much hurt*," and from the myriads of those insects which are permitted to live, we might suppose some such idea was quite common. How many lice or ticks it takes to consume an ounce of blood in a given time, we don't know that any body has ever ascertained; but that they do actually support themselves from the bodies of the animals to which they are attached, is certain. Their beaks or suckers are almost always inserted in the skin, and their bodies are filled nearly to bursting with animal juices. By their attacks, the vermin keep the animals in a state of constant fretfulness and irritation; the consequence of all which, is, the stock become poor and weak. In endeavoring to relieve themselves, by biting and rubbing, from the intolerable itching which ticks occasion, we have frequently known sheep to pull out and and lose nearly all their wool, and lice induce cattle to rub off much of their hair. Exposed to storms and inclement weather, in this naked and feeble condition, both cattle and sheep often contract diseases which carry them off—the owner, perhaps, satisfying himself by attributing the loss to *bad luck.*

The application of various substances will kill vermin. Tobacco-water, strong soap-suds, spirits of turpentine, oil, or any kind of grease, will kill them if brought in contact with their bodies. Preparations of mercury, (such as unguentum,) by affecting the blood and being thus carried through all parts of the system, are more effective; but their use is not unattended with danger. Salivation is sometimes produced, and if the animal while under its operation is exposed to cold and wet, its death is frequently the consequence. Sulphur also operates through the blood, and is a useful and perhaps harmless application. Strong decoctions of tobacco are sometimes injurious by making the animals sick and weak for a time.

In the winter season, when the animals are clothed with a full coat of hair or wool, the entire destruction of vermin is attended with some difficulty. If cattle are kept under cover, or are *fully protected* in bad weather, we see no objections to a moderate use of unguentum. We have often used it under such circumstances, with perfect safety. For stock that are kept out of doors, or are much exposed, we should prefer whale oil mixed with spirits of turpentine.

The best mode of killing sheep ticks, when the wool is long, is by fumugation with tobacco. Take a cannister, of copper or sheet iron, made at one end to fit the nose of a bellows, and having at the other end a small pipe for the escape of the smoke. Fill the cannister with tobacco, put in a coal of fire, and fasten the cannister to the bellows-pipe, around which there should be wrapped some damp tow, to make it fit tight, and commence operations. It takes two men, or a man and a boy, to work to good advantage—one to hold the sheep and open the wool, and the other to blow in the smoke with the bellows. The wool should be opened in lines or furrows around the body from six to eight inches apart. As the wool is opened the pipe of the cannister should be applied close to the skin, the wool immediately closed around, and slightly compressed at the surface with the hands, and at the same time a puff given with the bellows. This will keep the smoke close to the animal's body. The work may be done very expeditiously, and nearly every tick will be killed.

This is the best course when sheep get over-run with ticks in the winter season; but if the *lambs* are properly attended to, after the sheep are sheared, no necessity for smoking will ever occur. Three or four days after shearing, the ticks being deprived of protection on the sheep, resort to the lambs, whose wool is then generally started enough to give the vermin sufficient covering. If, at this time, the lambs are dipped in a decoction of tobacco, the ticks may be exterminated at once. The decoction need not be so strong as to hurt the lambs.



IMPROVED SHORT HORNED DURHAM HEIFER ESTERVILLE.—(Fig. 16.)

Esterville, the property of E. P. Prentice of Mount Hope, received the first prize for two year old heifers at the Cattle Show of the N. Y. State Ag. Society at Poughkeepsie, 1844. She was sired in England by the Daniel O'Connell, (3557)—dam, Esterville, by Sir Alfred, (6469)—g. d. Amethyst, by Prince of Northumberland, (4826)—g. g. d. Amazon, by Crusader, (934)—g. g. g. d. Amazon, by Sultan, (1485)—g. g. g. g. d. Belona, by Mars, (411)—g. g. g. g. g. d. Rolla, by North Star, (458) own brother to Comet, sold for £1,000. Sir Alfred was, in 1840, sold to the King of the French.

CHOICE APPLES.

Description of the "Northern Spy" Apple, and a few other choice varieties from Western New-York. By Ellwanger & Barry.

No. 1. **Northern Spy.**—This fruit is above the medium size, fair specimens measuring over 3¼ inches in diameter. *Form* somewhat conical, regular and slightly ribbed. *Stalk* of medium thickness, ¾ of an inch long, inserted in a large, deep and regular cavity. *Calyx* generally about half closed, deeply set in a large regular basin. *Skin* smooth, shining and thin, of a dark red color with crimson streaks, dotted with pale yellow on the sunny side—pale green, changing to a rich yellow when ripe, in the shade—those that are fully exposed to the sun with a good aspect, are completely covered with a beautiful deep pink, with purple streaks and minute yellowish specks. *Flesh* yellowish white, breaking and tender, very juicy and fine flavored, with just enough acidity to suit almost any taste. It possesses a strong and agreeable perfume, quite peculiar to it; by placing your head over an open barrel of the fruit, you can at once distinguish them, in the dark, from any other. It is fit for use from December till June. We sent a few of them to the Massachusetts Horticultural Society on the 23d of May last as sound and as perfect in beauty and flavor as it was possible for them to be; in this respect, they fully equal, if not surpass, any apple we know of. The tree is of rapid, upright and beautiful growth, and attains a large size. The young wood is of a reddish brown color, quite glossy, and covered with whitish dots. Young trees bear immense crops, and moderate ones, alternately; as they advance in age, they become more regular.

We are of the opinion, and so are all who are familiar with the fruit, that it is one of the most valuable kinds we possess, either of native or foreign origin. Its superior qualities as a table fruit, together with the great length of time that it is in use, render it peculiarly desirable for limited orchards and fruit gardens; and it cannot be too highly recommended to persons embarking in the culture of fruit for distant or foreign markets; some 10 or 12 barrels have been brought into our market the past fall, and were promptly sold at $2.25 per barrel, while ordinary kinds were selling for $1. In the spring they sell readily for $1.50 per bushel, even in our abundant market.

The history of this fruit, as far as known, is this: The orchard in which the original tree stood, (it is now dead) the property of the late Oliver Chapin of Bloomfield, was planted, as we are informed, when the country was first settled, over 40 years ago; the trees were all seedlings, and when they came into a bearing state, those that were bad were grafted; those considered good were left in their natural state. This variety was of the latter class. Some 14 years ago, a person came into the neighborhood who practiced grafting in the spring, around the country. He, in the course of his researches, discovered the good qualities of this fruit, and gave it the name it now bears; perceiving that the old tree was in a decaying condition, he dug up a number of suckers that had grown up around it, and sold them to a few persons in the vicinity. One man who raises fruit for market, purchased some of them, and they bore for the first time, three years ago, a quantity of magnificent apples, which he carried to market, and thus the fruit was introduced to notice. We have taken particular pains to examine personally, all the particulars, and we are fully satisfied of its being a seedling variety. We have noticed suckers growing up around the young trees we have alluded to, and the appearance of the wood, in every point, is identical with the tree.

No. 2. **Norton's Melon Apple.**—This is an apple entirely new to us; and which, we strongly suspect, is a "native;" we found it in the same neighborhood where the "Spy" originated. We have been informed that it has been cultivated in that vicinity for a great number of years, but we could not trace out its origin satisfactorily. It is a great bearer, and is esteemed in Bloomfield, one of the best table apples they have for fall and winter use; to our taste it is a *first rate* fruit, and eminently worthy of cultivation. It is commonly called the "Melon Apple," from its excessive juiciness; we have added "Norton's" to designate it more particularly, having received it from a gentleman of that name. It is about medium size. *Form* inclining to conical, slightly ribbed. *Stem* one-half to three-quarters of an inch in length in a pretty deep hollow. *Calyx* usually closed and set in a smooth regular basin of considerable depth. *Skin* smooth and glossy, and exceedingly thin, of a light red color, with stripes and blotches of crimson next the sun, and of a pale delicate flesh color in the shade. *Flesh* white as snow, tender, breaking, fine flavored and sprightly; juice very abundant, as much so as in a luscious peach. In use from November to April.

No. 3. Detroit Apple—*(Black Apple.)*—This fruit is partially known and cultivated in several sections of the country; we do not recollect having seen a description of it particularly, or any account of its origin. It is supposed by some to have been introduced to the neighborhood of Detroit by the French, and thence distributed to other places. We have had many inquiries made recently, respecting it, and are therfore induced to give the following description from samples now before us, grown here.

Fruit rather above medium size, three to three and a half inches in diameter. *Form* round, very regular and flattened. *Stalk* three-quarters of an inch long in a deep cavity. *Calyx* closed, and set in a hollow of moderate depth, and considerably wrinkled. *Skin* rather thick, smooth and shining, of bright scarlet, changing to dark purple, marbled and dotted with yellow in the sun—dull red, with an occasional blotch of green in the shade. *Flesh* white, crisp, very juicy, agreeable flavor and perfume; those that are exposed to the full glare of the sun, are tinged inside with red almost to the core. This apple is highly prized with us. It is as yet, however, very scarce, and seldom seen in market. But we have reason to believe it will soon be widely disseminated as it deserves to be. It is in use from Nov. till March. There is an apple cultivated in this vicinity called the "Jersey Blue," very much resembling the "Detroit;" and we recollect having seen one quite similar, exhibited by the Messrs. Downing in 1842, at Albany, called "Grand Sachem."

No. 4. Blush Apple.—This apple we recently found in Ontario county, where it is held in the highest estimation. We can say nothing with regard to its origin. It is not known by any one we have seen, how it came into the neighborhood; at any rate, it is but very little known or cultivated, and is certainly of superior excellence. It is of large size, and when fully ripe, resembling considerably in form and appearance, the "Sweet Bough." *Stem* very thick, fleshy and short, set in a somewhat irregular cavity of moderate depth. *Calyx* quite open, in a smooth regular basin of considerable depth. *Skin* smooth and glossy, of a beautiful blush in the sunny side; green, changing to yellow, when ripe in the shade. *Flesh* greenish white, tender, breaking, juicy and pleasantly acid. Fit for use from October till March.

No. 5. Wax Apple.—This apple is cultivated by Judge Strong of Rochester. He does not know where it came from; and his family, who prize it very highly as a desert fruit, on account of its fine keeping qualities and beauty, have given it the name of "Wax Apple," from its clear, delicate, waxlike appearance. *Size* medium. *Form* oblong. *Stalk* one-half to three-quarters of an inch long, inserted in a minute hollow, nearly even with the surface of the fruit. *Calyx* closed, quite prominent, even with the surface. *Skin* smooth and glossy, bright red, with small yellow dots, on the sunny side; parting abruptly from a pale yellow on the shaded side, similar to the Lady Apple. *Flesh* white, juicy, and of agreeable flavor; keeps till June; retains its beauty and flavor admirably.

King Apple.—One of your correspondents inquires where grafts of this apple can be obtained; we would state for his information, that they can be had in Rochester; we have a large number of the trees in our nursery, propagated from fine bearing trees of Wm. Pitkin, Esq., who cultivates this fruit extensively. He thinks it unsurpassed. He sent all his crop of the past year to New-York city, we believe. It is thus described in the "New Genesee Farmer," vol. 3, page 57. "*Fruit* large or middle sized, roundish or conical, inclining to flat. *Eye* small, closed in a narrow, shallow basin. *Stalk* an inch long, set rather deep, in a wide cavity. *Skin* a light yellow on the shaded side, streaked or blotched with red next the sun, and where much exposed, passing into a full red, sparsely marked with brown dots near the stalk, but more thickly dotted near the eye. *Flesh* whitish yellow, sub-acid, but more sweet than tart; of a fine flavor."

Mount Hope Garden and Nursery, Rochester, Dec. 1844.

MANAGEMENT OF BREEDING EWES AND LAMBS.

Mr. Tucker—Your private request that I should give you my experience in the management of breeding ewes, has been some time delayed. A full account would require too long a chapter for your paper. The accompanying notes are hastily and briefly given.

The nature and combinations of the various points and parts of the ram, should of course be well considered, and impressed on the mind of the breeder, in order that he may always rear and preserve those animals to the greatest advantage, paying the strictest attention to build and constitution, and to the preservation of the quantity and quality of the fleece.

It is very hard to find and retain all of the following qualities in one ram, or a stock of sheep, viz: Round build, wide chest, large belly, round and full behind, wide tail near the body, large but short legs, long body, short back, large but short neck; wool fine, very thick, and very long and oily; wool thick on the belly; the inner part of the legs mostly covered, and run quite even from the shoulder to the ham, free from jarr or long coarse hairs, of good length and thickness on the outer part of the fore and hind legs down to the knees and gambrel joints; short head, but wide between the eyes, which should be full and bright. In my judgment, a stock getter of this description is worth his weight in silver to any breeder that keeps one hundred ewes.

There is a great difference in the disposition of the merino race. Some of them are naturally more tame and docile than others. It is quite important to obtain a stock getter of a gentle and quiet disposition. An improved disposition indicates an aptitude to convert their food into flesh or fat. A good disposition is very meritorious in the breeding of ewes as well as wethers; those most gentle are in the best state at lambing time. There are several circumstances which are supposed to form or contribute to this goodness of disposition in these animals. They must be well bred, or come from such as have good properties; breeding in-and-in, or in the same line, greatly contributes to form disposition. Ewes should be carefully selected before put to breeding. Choose such as are the most perfect, and that possess in the highest degree those properties or qualities which are wanted. If the ewes produce wool of a short staple, breed from a buck of a different character. A judicious selection as regards build, should also be attended to at the time they are turned to the ram, if it has not been done before.

Ewes of good age, and the best milkers, should be selected first for the ram, leaving the younger ones to be placed with him about ten days later. Sixty ewes are enough for a young ram, and 150 to 200 may be put to an older one. It is best to throw out the ewes as fast as they are tupped. The ram should be grained some time previous and during service. Early lambing is mostly advantageous where the circumstances of the farm will admit of it. In Vermont, the month of May is considered the best month for the lambs to drop. Ewes should have the wool well clipped away from the udders previous to the dropping of the lambs, and they will rear their lambs better to shear them as early in June as practicable, according to the weather. It has a tendency to dry up the milk, carrying their fleeces into the hot days. Ewes should not be allowed to range in long pastures while the lambs are young; forty at this season is as many as should be kept together, and if the flock is less, it would be better for various reasons. Ewes should be examined early in the morning, and see that the lambs just dropped, are capable of sucking, which is commonly readily decided by the distention of the belly. When the lamb becomes chilled, it may be resuscitated by placing it in warm water, and next, rub it with cloths till dry; give him no milk until he calls for it, and then he may have all that nature requires without injury; milk from a farrow cow is not suitable to feed young lambs. Ewes may give too little milk, especially when they drop their lambs early in the spring. In such cases, it well pays to aid the lambs by milk fed from a bottle a few days. Their milk may be greatly increased by feeding them turneps, potatoes or similar green food. Given to those that drop their lambs early, the growth of the lambs is greatly promoted, which is of much future importance, for when they are stunted at this early period of their existence, they never turn out so well afterward. With the root crops may be fed preserved after-grass or rowen; oats, corn or oil meal may be made use of for the winter food of breeding ewes. Red and white clover are of much consequence as spring food for breeding ewes; no sort of pinching sheep stock answers any good purpose; food in abundance should always be provided, and good water should constantly be at hand. Those ewes that first take the ram, it is profitable to mark off, that they may be early selected and extra care taken with the early lambs.

Merino ewes in good order are apt to give a plenty of milk, and will take care of their lambs. In case she does not own her lambs, shut her into a small pen, and make her stand to suckle the lamb a few times, which will generally bring her to natural affection. Some recommend tying up the ewe and let a dog bark at them, which frightens them into obedience and affection for their offspring.

It sometimes happens that ewes with an abundance of milk lose their lambs. It may be profitable to provide her with another that does not fare as well; to effect this, place the skin from the dead lamb over the body of the live one, and the unfortunate mother will own it. The skin need not remain on more than a day or two.

As soon as a lamb becomes smart, his tail should be taken off; the best way is to turn the animal on his back and hold his hind legs. The operator takes hold of the tail with the left hand, but is cautious not to pull it. Then place the knife across the tail about one inch from the body, near the intersection of the two cords with the tail; then with the edge of the knife, shove up the skin about one-third of an inch; when the edge strikes between the joint, immediately cut it off. By this process, the skin will project beyond the bone, and of course heal much sooner. By cutting off the tail as the lamb stands on his feet, the wool prevents the cutting readily, and by pulling the tail as is usual, it leaves the bone to project beyond the skin, and thus prevents the healing some days. The ewe lambs should be cut shorter than the wethers.

In respect to the business of castrating or gelding the lambs, it should be performed early, as there is less danger of too much inflammation taking place. The pouch should be taken off pretty close to the body, and when the operation is attended to early, there is no need of any application to the wound.

The lambs should be immersed in a decoction of tobacco water, say five pounds of good tobacco steeped in a sufficient quantity to dip one hundred. This should be attended to about one week after the ewes are clipped, to destroy all the ticks which have by this time found shelter in the lamb's fleece.

Three months and a half or four months is as long as is profitable for the lamb to draw milk from the ewe. Turn them into fresh and sweet feed reserved for the purpose, either pasture or meadow, at a distance from the ewes, out of hearing; if possible, there should be no water in the lot, as they may over satiate and injure themselves. In order that the young stock suffer no check, they should have good feed and a plenty of it. The milk should be drawn from the ewes within four or five days after weaning, to prevent any bad consequence by the udder swelling

The best way to get a smart and even lot of lambs is to put out the buck *only in the day time* with the ewes. I sometimes put out the bucks two or three hours each day with the flock, stabling them the remaining part of the time.

The method of turning a number of rams into one flock is highly exceptionable, as tending to prevent the main object and injure both sexes.

Sheep are very sympathetic animals, and have more to do in making their progeny than any other species. Therefore to insure the lamb to be struck off after the fashion of the sire, he should be placed with them in the day time only.

By placing ewes in full vigor with rams deficient in constitution, you will produce more females than males. To effect the contrary, let your rams be of full age, and robust, placed with old or young ewes that are not in full maturity, and bucks will be multiplied more than ewes.

Merino ewes should not be allowed to breed until the third year. Their time of gestation is about five months, and are able to produce three births within two years. Those that are backward in taking the ram, the best means to be employed, are those of good stimulating keep.

Covered sheep folds are often of very great advantage in securing and protecting both ewes and their lambs. Lambs should by no means be winter stocked with the ewes; being weaker, they cannot have an equal chance at the food.

In order to guard against the injury of the sheep fly, which is more troublesome to breeding ewes, many breeders in this vicinity, make use of Scotch snuff, thrown up the nose by a common syringe; a pound of snuff is mixed with eight quarts of water; one-half gill is sufficient for each nostril. It requires two hands to operate expeditiously. The head of the sheep partly enters a frame constructed for that purpose, and secured fast to receive the injection. The time selected for this operation, is the fall season. Those sheep that are affected with the grub in the head, occasioned by this fly, may be sought out during the winter and spring months. They exhibit a general stupidity and dullness; stand rather drooping. The viscid matter that flows from the nose is sometimes of a bloody color. Good keeping during the summer months is the greatest preventive for this and most diseases that trouble the sheep family.

Respectfully yours, S. W. JEWETT.

Weybridge, Vt., Doc. 7, 1844.

ROT IN THE POTATOE.

I read in your December number, page 371, with much interest, the letter of Prof. JACKSON on the disease in the potatoe. It is of much importance that all the facts in relation to the subject should be correctly stated; I therefore trouble you with this note, to correct one error in the Professor's letter. He says—"No balls are formed on any of the diseased plants." This is undoubtedly true of those that he examined, but on my plants many *were* formed.

I do not think that the disease is attributable to the honey dew exclusively, because we have those dews very frequently, but they have never affected potatoe vines before. Perhaps some disease existing in the growing potatoes *predisposed* them to be affected by the honey dew.

There are two facts which I observed in my field, which I have not seen noticed in your paper. The first is, that the disease was confined to the tubers nearest to the surface; those lying deep were unaffected. The second is, that the rotten potatoes were full of long white worms. I saw nothing which looked like fungi, with the naked eye, but it did not occur to me to examine them with a microscope. The odor was intolerably fœtid.

N. N. D.

Land being capable of greater cultivation, and great quantities lying entirely uncultivated, the idea of abundancy of labor is erroneous.

The most profitable farming is the highest and best farming.

FOOD OF PLANTS—SALT FOR POTATOES.

	WHEAT. 25 bu. per acre.			BARLEY. 40 bu. per acre.			OATS. 70 bu. per. acre.			RYE. 25 bu. per acre.			PEAS., 32 bu. per acre.			POTATOES. 332 bu. per acre.		
	Grain.	Straw.	Total.	Grain.	Straw.	Total.	Grain.	Straw.	Total.	Grain.	Straw.	Total.	Grain.	Straw.	Total.	Roots.	Tops.	Total.
Potash, ...	3.3	0.6	3.9	5.6	4.5	10.1	3.7	32.7	36.4	8.0	1.3	14.3	16.2	12.2	28.4	80.5	327.3	407.8
Soda, ...	3.5	0.9	4.4	5.8	1.1	6.9	3.3		3.3		5.0		14.7		14.7	46.6	0.3	46.9
Lime, ...	1.5	7.2	8.7	2.1	12.9	15.0	2.5	5.7	8.2	1.8	7.3	9.1	1.2	163.2	164.4	6.6	517.0	523.6
Magnesia, ...	1.5	1.0	2.5	3.6	1.8	5.4	1.7	0.8	2.5	0.7	0.5	1.2	2.7	20.2	22.9	6.5	70.0	76.5
Alumina, ...	0.4	2.7	3.1	0.5	3.4	3.9	0.3	0.2	0.5	0.4	1.0	2.0	0.4	3.6	4.0	1.0	0.2	1.2
Ox. of iron,.					0.3	0.3	1.0		1.0	0.6			0.2	1.2	1.4	0.6	0.8	1.4
Ox. manga..					0.5	0.5				0.5		0.5		0.5	0.5			
Silicia, ...	6.0	86.0	92.0	23.6	90.0	113.6	50.0	172.0	222.0	2.5	92.0	94.5	8.2	60.0	68.2	1.7	196.0	197.7
Sulph. acid,.	0.8	1.0	1.8	1.2	2.8	4.0	0.9	3.0	3.9	0.4	7.0	7.4	1.0	20.2	21.2	10.8	16.8	27.6
Phos. acid,..	0.6	5.0	5.6	4.2	3.7	7.9	1.5	0.5	2.0	0.7	2.0	2.7	3.8	14.2	18.0	8.0	78.3	86.3
Chlorine, ...	0.2	0.9	1.1	0.4	1.5	1.9	0.2	0.2	0.4	0.1	0.7	0.8	0.8	0.3	1.1	3.2	2.0	5.2

L. TUCKER, Esq.—Above is a table, by which you may at a glance, ascertain what materials are requisite for the production of such crops as are generally cultivated in this region of country. It is condensed mostly from "Prof. Johnston's Agricultural Lectures." His Analysis gives the contents in a hundred or thousand parts; but in order to make it more convenient for reference, I have collected the facts into one table, and adapted them, according to his estimates, to a single acre, giving the amount of each requisite material in pounds and its decimal parts.

It will be seen by the above that the grain crops require but a small quantity of material for perfecting them, beside the vegetable matter with which the soil should abound, which is doubtless the only permanent source from whence plants derive their carbon—the most, indeed the whole of this material may be found in four substances, very common, and within the reach of every one, namely: ashes, salt, lime and plaster.

I will mention one experiment with salt, which it will be seen by reference to the above, is very essential to the growth of the potatoe. Three years ago I had a field in excellent heart, planted with potatoes, which gave an excellent crop, averaging three hundred bushels per acre. The next year it happened that it became necessary to plant the same field again with potatoes; but I feared lest the worms should destroy the crop, as they appeared quite numerous at the first digging; but I proposed to remedy this by sowing salt, which I did about a fortnight before planting, at the rate of a barrel per acre. The salt I supposed would kill the worms, nor did I calculate upon any other effect from it; but it did not kill the vermin, for the ground was as thickly infested by them as in the previous year; and upon digging the potatoes, the crop exceeded my expectations, and to my surprise gave an average of 420 bushels per acre over the field. The potatoe being a very exhausting crop, I did not then know why the second crop should be the largest of the two; but since I have seen an analysis of the potatoe and of salt, the wonder is easily explained, and I am constrained to believe that had I put on, beside the salt, 20 bushels of unleached ashes per acre, the crop would have been increased to 600 bushels per acre.

Salt is not so destructive of vegetation as most people imagine. From some small experiments that I have made, I should judge that it would take sixty bushels per acre, of our common fine salt, before vegetation would be materially injured. In conclusion, allow me to recommend Professor Johnston's Agricultural Lectures to every farmer, as a book particularly interesting to him, and worthy of a place in his library.

P. S. Would the potash in leaves and twigs be available to plants, without their being first burned, and in what time?

As the cause of the potatoe rot has created considerable discussion of late, I will state a fact that may not be altogether unworthy of notice. I had a new variety raised from the potatoe ball, two years ago, that was worse affected than many of the old varieties. Yours, &c.

La Fayette, Onon. Co., Dec. 1844. E. V. W. DOX.

HUSSEY'S REAPING MACHINE.

MR. EDITOR—I believe that if there was a more general correspondence between the farming community through the medium of agricultural journals, and their experience more generally imparted to each other, with regard to seeds, their qualities, varieties, &c., we should be much benefited thereby. There is nothing perhaps, from which greater results would accrue, than a general information as to the constant improvement in tools and machinery generally applicable to agricultural operations. We here abouts, see in some of the northern papers, about once a year, that they have had a plowing match, and that some maker receives the premium for his plow, possessing many advantages over others. This is generally the last we hear of it.

Of all the agricultural implements which have come under my notice for some years, I think there is none more worthy of special notice than Hussey's Grain Reaping Machine. I have used one for two years, and am satisfied that it is competent to perform what Mr. Hussey sets forth. Since his improvement in adding the fore wheels, it can cut twenty acres of wheat in a day, and the work is perfectly done. Another great recommendation is, that the machine is permanent in all its parts. I have used mine for two years, without having previously prepared the ground by removing stone and other obstacles, and have broken no part, and find nothing giving way. Many of our farmers were prevented last year from procuring machines from Mr. Hussey in consequence of understanding that some of McCormick's would be sent to the county on trial. They were sent, and as readily taken on trial. I did not see them work, but inquired of the gentlemen who used them very particularly as to their operation, feeling interested myself in the result of the trial, and was in every case informed that McCormick's were not comparable with Hussey's. One very serious objection to McCormick's was, that the hand who pushed off the grain, follows the machine on foot; necessarily the machine must go very slow; and then, from the manner in which the grain falls on the platform, it is much tangled when it is pulled off in the sheaf. This objection does not apply to Hussey's; the raker rides on the machine, and can with ease do very good work. I am ignorant whether it has been tried in your fine Genesee country. If not, it should be next harvest, and I think without doubt, it would give general satisfaction.

Respectfully yours, L. W. WASHINGTON.

Halltown, Jefferson Co., Va., Dec. 19, 1844.

A beneficent Providence has so ordered the affairs of this world that we cannot do good to others without directly or indirectly doing good to ourselves.

THE "YELLOWS" IN PEACH TREES.

Mr. Tucker: Sir—About the year 1795, peach trees, in the neighborhood of Philadelphia, began to die without any apparent cause. Soon after, they began to perish in like manner more and more remotely from that city. By 1810, few peach trees were left alive in the State of New-Jersey. They began to die around New-York about 1801, and in the State of Connecticut, about 1815. The unknown cause of this strange death of trees, before considered as hardy as other fruit trees, has been termed the "*Yellows;*" and has been called a *disease*, in analogy to those epidemics which at times lay waste human life. It is, perhaps, the first and only instance of any affection in the *vegetable* kingdom, that can be called with propriety, *disease*. It has all the appearance of being constitutional; bearing no resemblance to the decline and decay caused by bad soil, unsuitable temperature, or local injuries.

Hitherto, all efforts to discover the cause of this fatal malady, have been made without success. What produces the "Yellows," is as much unknown as what produces the cholera. One circumstance has doubtless prevented a very general and thorough search for the cause of the Yellows. Every where we have occasionally seen an insect (Ægeria excitiosa) that eats into the bark of peach trees, near the surface of the ground. Whenever a person discovers this insect at work, he imputes the death of his trees to that. Most persons stop here, merely looking about for some mode of keeping out or destroying the peach worm. Now the effects of the Yellows are as different from those of the boring of the peach worm, as the small pox is different from the cut of a knife. If every body could be made aware of this difference, research would be universally awakened, and receive a direction that might lead to the most valuable results. A great step will be gained, if a hundred thousand readers of the "Cultivator" would all understand alike what is meant by the term *Yellows* in peach trees; would all understand distinctly, that it does *not* mean *peach worm*. For this reason I deem it of great importance to present in the Cultivator a clear, unmistakeable description of this fatal disease.

There are two marks or symptoms, by which the presence of the disease is indicated. One is, the shooting out from the body or limbs of the tree of very small, slender shoots, about the size of a hen's quill. The leaves upon these shoots are commonly destitute of green color, as if blanched, or as if grown in a dark cellar; and like the shoots which bear them, are of diminutive growth—rarely exceeding an inch in length. These shoots do not usually start from the common, visible buds at the points where the leaves join the stem, but from unseen latent buds in the bark of the trunk or large branches. The other symptom is, the ripening of the fruit two to four weeks before its natural season of maturity. Most generally also, the fruit, whatever be its natural color, is more or less spotted with purplish red specks. If shoots, such as are above described, appear upon a tree, or without them, if the fruit upon any part of it (not wormy) ripens before the proper time, it may be certainly known that the tree has the Yellows.

These are not the only marks or symptoms of the disease; but they are those which are the most readily discovered. The ordinary leaves of the tree, or at least those upon the diseased portion of it, commonly undergo a slight change of color. Instead of a bright glossy green, they take on a dull yellowish tinge. The wood also, when the disease is considerably advanced, becomes unelastic, so that its branches, when moved by the wind, instead of the graceful waving of health, have a stiff, jerking motion. These two last mentioned symptoms will not readily be seen but by a practiced eye.

What I have further to say concerning this disease, may most conveniently be stated in separate sections.

Sec. 1. The slender shoots spoken of above, do not appear to ripen their wood perfectly. They continue in a great degree herbaceous till frost comes. For this reason, or because no buds are formed on them, they perish the succeeding winter.

Sec. 2. The fruit may exhibit marks of disease, when the other symptom (slender shoots) is not discoverable. But, on the other hand, I have never seen the slender shoots on any part of the tree, without the fruit, if there was any, being affected.

Sec. 3. The fruit, the first season of attack, usually grows to its proper size. The second season, it is uniformly small—not more than a half or a quarter of its proper size.

Sec. 4. Whatever be the natural color of the fruit, red, yellow, white or green, it is more or less, when diseased, colored with purplish red; generally in specks or coarse dots. The flesh, quite to the stone, is often colored, and most deeply around the stone. By the colored specks, a person may easily distinguish by the eye, diseased from healthy fruit, as it is offered in market.

Sec. 5. The taste of diseased fruit cannot be exactly described, for want of appropriate words. The word insipid almost describes it. There is an absence of all agreeable flavor, and there is not much that is disagreeable. A few sorts retain, in spite of disease, some of their exquisite peach flavor.

Sec. 6. In the first summer of disease, it is not always that the whole tree appears affected. The slender shoots may show themselves on one branch only, the rest of the tree having every appearance of health. In like manner, the fruit upon one branch may ripen four weeks too soon, upon another two weeks too soon, and upon the rest of the tree at the natural time. The second season, all the fruit will ripen three or four weeks too soon.

Sec. 7. The tree sometimes dies the next year after the apearance of the disease, and sometimes lingers along with a feeble life for two or three years. Sooner or later however, it is overcome by the disease. I have never known, nor have I heard authentically, of any tree recovering from it.

Sec. 8. Soil, whether of clay or sand, whether moist or dry, whether cultivated or in grass, manured or unmanured, does not appear to me, clearly, either to increase or diminish the liability to disease.

Sec. 9. Trees standing in exposed and sheltered situations, walled and in open ground, on hills and in valleys, seem alike and equally liable to the Yellows.

Sec. 10. Trees standing in places where people are passing to and fro very often near them, though not exempt from the disease, appear less liable to it than others. This is strikingly exemplified in the city of New-Haven, where trees standing close by the sidewalks, outlive all others. The same fact I have observed upon my own premises.

Sec. 11. Luxuriant and vigorous growth is no protection against the disease. Trees have grown 5 feet in the same season when they have shown in the body and fruit the marks of the Yellows. On the contrary, slow growth is *perhaps*, (I cannot speak confidently) favorable to health. On this point I give the following fact. Five years ago this fall, I dug a hole in my meadow, a foot square and 18 inches deep, threw back the earth, and planted a peach stone. It came up next spring, and has grown very slowly. It is now only 45 inches high, but perfectly healthy; while every other tree planted at the same time in my garden, a few rods off, grew vigorously, bore fruit, took the Yellows, and have been dug up.

Sec. 12. When the disease commences in a garden or orchard containing a considerable number of trees, it does not attack all at once. It breaks out in *patches*, which are progressively enlarged, till eventually all the trees become victims to the malady. Thus in an orchard of two and a half acres, all the trees were healthy in 1827. The next year 2 trees on the *west side* of the orchard, within a rod of each other, took the Yellows. In 1829, six trees on the *east side* of the orchard were attacked; five of them standing within a circle of four rods diameter. In 1830, fifteen more were attacked; fourteen of which stood within a circle of four rods diameter. A similar fact is now apparent in my neighborhood. A fine lot of 200 young trees, last year in perfect health, now show disease in two spots, near the opposite ends of the lot, having exactly six diseased trees in each patch, contiguous to each other; while all the other trees are free from any marks of disease.

Sec. 13. Young trees, even in the first summer of their growth, and before they have blossomed, sometimes take the Yellows. For this reason, many suppose the disease to be hereditary. Upon this point, my observation has not furnished me with facts that seem conclusive. Young trees from a diseased parent do indeed take the Yellows; so do those from a healthy parent; and one, as appears to me, is as liable to do so as the other. At present, it may be best to consider this point not settled.

Sec. 14. Whether the disease is communicated from tree to tree through the medium of the blossoms, as is believed by many, is also an unsettled point. I have not known a case where such a communication of disease was clearly proved. On the contrary, there is some negative evidence that throws a doubt upon the correctness of the supposition. I took a blossom from a diseased tree, and applied the dust (pollen) to the blossom of a young tree in my garden. The tree, thus exposed to infection, showed no mark of disease, either in that or the succeeding year.

Sec. 15. If a bud from a diseased tree is innoculated into a healthy stock, whether peach, apricot or almond, the stock will become diseased and die. As this is a fact of some importance, I will furnish some evidence of it. I took some buds from a tree, having symptoms of the Yellows, and inserted part into peach, part into apricot, and part into almond stocks. Some of the innoculations took well, but all showed marks of disease the next season. The peach and almond *stocks*, with their buds, *died* the second winter after innoculation. One apricot stock lived five years, but its peach top grew in that time to be only about 3 feet high. Further proof is furnished by a communication to the "New-York Farmer," some years ago from David Thomas, of Western New-York, I believe Cayuga. "In 1823 I procured," he says, "a box of peach trees from the neighborhood of New-York. I observed *some* of these to be of feeble growth; and fearful of losing kinds so rare and so high priced, I budded some into a *most thrifty stock* in the nursery, and some into *thrifty trees* in my peach orchard. On the young stock, two buds *took*, but never sprouted; and in less than a year it *dwindled like the tree whence the buds were taken, and died. Every tree in my peach orchard so budded, has been long since dead,* and no other peach trees have died in that orchard."

Sec. 16. In an orchard or garden, containing both old and young trees, the young trees will generally be diseased first, the old trees last.

Sec. 17. From the very limited opportunity which I have had, to compare the liability to disease of different varieties of peaches, I incline to the opinion that the Connecticut Red Rareripe and the Early Ann, are the last to take the Yellows. Dr. Monson of this city, thinks a White Cling, of natural growth, "endures the longest of any in a healthy state." With the exception of those three varieties, all, whether old sorts originated in times beyond the memory of man, or new ones sprung the very last year from seed, appear equally susceptible of the disease.

Sec. 18. Peach trees budded on apricots, plums, and sweet almonds, are liable to the Yellows.

Sec. 19. Plum trees are not subject to any disease analogous to the Yellows. But the apricot, *standing in the neighborhood of diseased peach trees*, is subject to a sudden decline, ending in death, which I can trace to no visible cause. The growth of the branches becomes feeble; manuring, digging, pruning, all have no effect upon the vigor of the tree. Nothing will save it. Yet I have not seen upon the apricot, the slender shoots and premature ripening of the fruit, which mark the disease of the peach. Nectarines are subject to the disease, and show it in the same manner as the peach.

Sec. 20. The following fact gives reason to believe that the disease commences in a tree, between the month of September and July following. In the month of September, I took buds from a tree apparently in full health. The buds, inserted into young stocks, grew thriftily and without disease for three years. But the tree, from which they were taken, showed marks of disease in July following the time they were taken.

Sec. 21. There is no connection that I have been able to discover between the *Yellows* and the *curled leaf*, except that the leaves of trees, much diseased by the Yellows, do not curl.

The phenomena attending the development of the Yellows as detailed above, seems to authorize two or three inferences—to be made, however with some distrust. Mrs. Marcet (Conversations on Vegetable Physiology,) thus explains the formation of the green color of leaves. "The direct rays of the sun are necessary to enable plants to decompose carbonic acid. In this process, the oxygen of the carbonic acid is exhaled by the leaves, and the carbon deposited in the plant: now, it is *this deposition which produces their green color*. Mr. Sennebien is of opinion that carbon is not positively black, but of a dark blue color. The cellular tissue of plants is of a yellowish white; consequently, when those minute blue particles are lodged within the yellow cells, the combination of the two colors produces green, in which the blue or yellow tint prevails, in proportion as the carbon or cellular tissue predominates." Assuming this to be correct, and taking into consideration that the slender shoots, which are the marks of disease, grow without forming solid wood, (Sec. 1,) and considering that their leaves are destitute of green color, though exposed to the light, we conclude that they do not *decompose carbonic acid*, as healthy shoots and leaves do—*their particular vital power seems to be prostrated or greatly debilitated*. Then, as to the fruit; according to Lindley, (Theory of Horticulture) the food, upon which fruit subsists and by which it is perfected, requires to be elaborated, first in the leaves, and then in the fruit. As far as I have observed, the *leaves of the terminal branches in the early stages of disease* perform their functions regularly, (Sec. 6.) They have a healthy color, are of natural size, and the branches grow with unimpaired vigor. The fruit also appears to be abundantly supplied with food, (Sec. 3.) Hence it seems probable that it is the elaboration of food *in the diseased fruit*, which is imperfect. Lindley says,—"among the immediate causes of the peculiar changes that occur in the secretions of fruits, are heat and light; without which the *peculiar qualities of fruits are imperfectly formed*." He further says, that fruits owe the production of their sugar, their sweetness, to exposure to bright light, *decomposing their carbonic acid and expelling their oxygen*. Therefore, as the fruit of diseased trees is exposed to the usual light and heat of our climate, and yet has an unnatural *purplish red* color (Sec. 4,) showing that the oxygen is not properly expelled; and forms *very little sugar or flavor*, (Sec. 5,) showing that it *does not decompose carbonic acid*, as it should do; we conclude that the *particular vital power of the fruit*, also, is *prostrated or debilitated*, in the same manner as that of the shoots. What has produced this prostration or debility? For myself I must answer, I do not know. Whatever it be, it seems not to pervade the whole tree at once—to be local in its beginning, and to become general by degrees, (Sec. 6)—and capable of passing *by contact*, perhaps in that way only, (Sec. 14,) from one tree to another, (Sec. 15.) Can it be a poison? So little is known of the action of poisons upon plants, that we can hardly be justified in pronouncing positively this *unknown something* to be poison. But there is some analogy, not very striking however, between the action of this something upon the vital forces of the peach tree, and that of *narcotic* poisons upon the functions of the animal system. On the supposition that it is a poison, whence can it be derived? I think not from the soil, (Sec. 8.) I think not from the atmosphere, (Sec. 12.) This breaking out of the disease in *patches*, seems to negative the idea of an atmospheric origin. I think it is very doubtful whether the disease springs from contagion, disseminated by blossoms, (Sec. 14.) It cannot, I think, be owing to particular sorts of peaches having been propagated for a long period, and beyond their natural term of existence, (Sec. 13 and 17.) It may be remarked that the Early Ann mentioned in Sec. 17, is one of our oldest sorts. I think the disease cannot be ascribed to defective cultivation, to injudicious pruning, or injury to the roots of trees; for there was abundance of such cultivation, pruning and injury to roots, long before the "Yellows" made its appearance. The peach worm, cannot, I think, be charged justly with this mischief; for thousands of trees have had the Yellows, which were untouched by the peach borer. What then, causes this disease—whence comes this poison, if it be such? On this point I will hazard a *conjecture*, that it is derived *from some unknown insect*. My reasons for this conjecture, I shall give as briefly as possible.

Animal matter, in contact with living portions of plants, causes, under some circumstances, a modification of the vegetable functions. Thus the egg of a small fly (cynips confluentus,) deposited in the leaf of the oak, causes the leaf to grow into the oak apple. In like manner are produced numerous excrescences, such as galls, cedar apples, honeysuckle apples, black knots, &c. There is another effect of the same cause, not producing an excrescence, but hastening the maturity of fruit. Thus the egg of the apple moth and the worm proceeding from it (carpocapsa pomonella,) cause apples and pears to ripen prematurely; and we see the same effect in the cherry and peach, caused by the plum weevil. So, as we are informed, the ripening of figs is hastened by the process of *caprification;* which consists in exposing the young fruit to small insects found in the wild fig. Now in the case of the Yellows, something operates upon the vital functions of the tree, causing latent buds to start and grow, not, it is true, into excrescences, but in an unnatural manner—causing the fruit to ripen 3 or 4 weeks too soon: in this last particular being quite analogous to the effects of worms in apples, pears, peaches and cherries. May it not be inferred that effects so similar, have a similar cause? To this it may be added, that the spreading of the disease, by degrees, from Philadelphia to other parts of the country; its appearing in patches (Sec. 12;) its seizing young and thrifty trees in preference to old and unthrifty ones (Sec. 11 and 16;) the escape from disease of trees standing where persons are constantly passing (Sec. 10;) the appearance of disease first in a part of the tree and then becoming general (Sec. 6;) are circumstances which seem to me to strengthen the suspicion that some *new, unknown, shy* insect has been gradually extending itself from place to place, over the country, and poisoning our peach trees.

Hitherto no means of warding off or curing the Yellows, has come to my knowledge. Most of the applications for the cure of the disease, have been made on the supposition that it was caused by the peach worm. Such are ashes, scalding water, charcoal, lime, salt, saltpetre, fish oil, and urine. All of them have more or less agency in excluding the borer, but are not all *effectual* even for that purpose. Some of them have seemed to promote for a time, the growth of the trees, and to give a deeper green to their leaves; but none, that I have ever observed, have at all checked the progress of the Yellows. I have tried some applications to the *bark* of diseased trees, such as diluted oil of vitriol, aqua fortis, strong ley of potash, and chloride of lime—not much expecting success; for it is probable trees absorb nothing through the bark. But until we know, as we never shall know, all the processes of nature, we cannot be sure beforehand, what is to be the effect of any application to a living plant. Since the discovery of the means of infusing into living wood various substances, calculated to preserve it from decay or to give it desirable colors, by placing solutions of them in contact with the sap vessels, which are cut across, it may lead to a useful discovery, if diseased peach trees should be made to absorb a variety of matters. Some one *may* be found, that will modify or change the diseased action of the tree—decompose the poison, if there be any. It is my intention next summer, to institute a series of experiments upon this plan, if I can find a sufficient number of suitable *subjects* to operate upon. Others perhaps may find it convenient and be disposed to try the same experiments. If they do, it will be gratifying, I have no doubt, to many of your readers, to see the result in the Cultivator. NOYES DARLING.

New Haven, Ct., Dec. 2, 1844.

MAKE YOUR OWN CANDLES.—Take 2 lbs. of alum for every 10 lbs. of tallow, dissolve it in water before the tallow is put in, and then melt the tallow in the alum water, with frequent stirring, and it will clarify and harden the tallow so as to make a most beautiful article for either winter or summer use, almost as good as sperm.

INTERESTING SUGGESTIONS TO FARMERS.

MR. EDITOR—Since yours of the 5th ult., I have, much to my regret, been unable till now to comply with your request, for an article interesting especially to farmers of "the Granite State." And I must now, in a hurry, write just what comes to hand, or not at all.

I beg the privilege of dropping an apology for my attention to agriculture, when the business of a Christian minister and a general educator, embraces the chief concerns of my life.

Amidst mountains and streams in "the old Bay State," I was raised a laborious farmer, till the age of twenty-one; the employment has always interested and pleased me, for its nature and importance; and I have needed its aid for recreation, health, and my support in my two other professions. Hence I have been, a large portion of my time, from graduating from college in 1808, a practical, experimental, though a moderate farmer, till I quit in the spring of 1843.

There are many subjects of practical interest to New Hampshire agriculturists, common to all in the same business. I will just name some of these, sometimes dropping a hint or two as I pass along, and dwelling some on the production and application of manures, and then say a little on some things more appropriate to this State, and other northern, cold, rocky, mountainous and broken tracts of country, hoping that each item will be in due season, by abler hands, taken up and discussed in separate articles.

I. MATTERS OF GENERAL CONCERN.—These are many; some of them are greatly important, and some, though of much consequence, have seldom, if ever, been suitably noticed and discussed in our agricultural papers. As,

1. Economy in agricultural expenses.—I found means to get along comfortably with, I think, less than two-thirds of the outgoings to which most of my neighbors were subject for the same income. I saved much in agricultural tools, and shoeing oxen and horses. Such is the provision of nature, that none, except for long journeys, and for slipperiness, need be shod at all.

2. The management and application of labor.—Here I probably saved as much more; by expending sufficient labor in proper season, by strict economy in the arrangement of business, that time and labor may not be lost, or misapplied; by using children's help to save that of men; and by laying out no more time and labor than necessary on any one business. This is a matter of great importance. I once saw one of our first rate Cheshire farmers using two yoke of oxen, a horse, two men, and a great boy, in plowing, where *I alone* could plow as well or better, and as fast or faster, with one good yoke of four year old cattle, or a stout horse! Now see the difference in one item; and so of many others.

3. The seeding department.—This is a material affair; including the quality, quantity, and acclimation of seed, the proper season of seeding, the manner of planting, and the preparation of the ground.

4. Due attention to the preservation and growth of all articles between planting and harvest.—Till dry ground flat; but not wet ground. Prepare against drouth and frost, insects, vermin, and cattle.

5. The subject of enclosure and fencing, of green fodder for cattle in summer.

6. The concerns of harvest.—Proper time; care in saving. The same produce of soil will avail much more with some than with others, by savingness. Save weeds, potato, pea and pumpkin vines, for hay. The seed of many weeds makes good meal for cattle. Foxtail, or barn grass, is a wild millet, and the seed should be saved and used.

Allow a few couplets for boys to learn and sing, when harvesting:

I.
In harvest, be saving,
Or farewell to thriving.
Save every potato,
Nor slight a tomato;
An apple or pumpkin
Is surely worth something;
Even acorn or nut
Should ne'er be forgot.

II.
He that won't stoop for bean or pea,
Is not a man or boy for me.
Whoso slights a small ear of corn
Is not to wealth or honor born.
The man who cares not for saving,
Must soon beg or else be starving.
It is always foolish to crave,
When idle and careless to save.

7. The grand affairs of storing safely, and in good or

der for domestic use or future disposal; of selling or bartering raw produce, and of exchanging it into other articles, by manufacture or feeding, call for much attention.

8. The appropriation of proper articles of produce to different soils. This subject should by no means be lightly passed over.

9. Winter business of farmers, appropriate to them as such.

10. Personal temperance, and temperance in agricultural industry.

11. Suitable work a suitable portion of the time on a farm, for children.

12. Redeeming swamp lands and worn out and sterile soils. A man near the Grand Monadnock, at the cost of less than six dollars the acre, drained swamp land, before about useless, and rendered it arable and astonishingly productive, worth at least a hundred dollars the acre! Much so I have seen " the Yankees" do on the old worn out lands of Maryland and Virginia.

13. The production and application of manures. On this subject I must dwell at large. This is a matter of chief concern with husbandmen, especially of this State. This is the means by which you may be always cropping, and yet your soil will be forever gaining.

Farmers of New-Hampshire, I lay it to your charge, that you have tilled and mowed on an average, full twice as much ground as you ought, and not made half the manure you might and should. Now I hope that you, my fellow-citizens, will examine patiently and thoroughly into the merits of this charge. If it be just, then confess and forsake your agricultural sins; if unjust, then defend your practice like men. In either case, probably both you and the world will be benefited. Of what service for us to be writing and printing on this old subject, unless it set you a thinking and acting?

All animal manures should be housed from the weather and never be frozen. Its fetor should be all absorbed from the air by gypsum, or other fit substances, put on or about it. If the bad smell, as you call it, go into the air and be driven away with the wind, you will lose the best part of your manure. Just so of the urine of all animals, man among the rest. One pound of it, saith a German chemist, is worth more for manure than a dozen pounds of the other excrescences. Then do not let a drop be lost. See that it all be absorbed, by saturating turf, peat, oats, straw, leaves, saw-dust, rotten wood, shavings, ferns, bogs, swamp-mud, pond-mud, spent tan, any dead or decaying vegetable substances, which will rot before or after being mixed with the soil. Let your pens, your necessary, your sink-spout, your carrion pit, your hen roost and clay or marl pit, above all, *your hog-stye and yard*, as well as your barn and your farm yard, have a chance to help greatly to increase your stock of manure. You could cause every hog to work enough, in making manure, to pay all his expenses! Then don't allow him to be idle.

You can treble your manure,
By means now in your own power.

In applying your manures and compost, appropriate different kinds to different soils. On deep wet soils, put coarse and long manures; on light sandy soils, put those manures which tend to gather and retain moisture, or such as have a large portion of swamp-mud, clay or ashes. Put from 30 to 50 loads on an acre, where you manure at all, and plow it in very deep on dry soil, and not so deep on wet.

A farmer not far from me, turned barren worthless upland into first rate land, by applying about 100 loads of swamp-mud to the acre.

I will now say a little on matters some more appropriate to New-Hampshire.

The first object of the independent farmer, is the sustenance, comfort and satisfaction of himself and family. With this object in view, many are willing to use endeavors to grow on their own soil some articles for table use, at an expense that would not be justifiable for other objects, such as Indian corn, beans, rye, wheat, turneps and onions. This matter of fancy and pleasure, I by no means condemn. For what we raise, we have; and what we don't, we may miss of, especially that of good quality.

But if increase of property, and laying up money, be the object of the New-Hampshire farmer, then he should turn his attention to the growing and proper use and disposal of grass, potatoes, barley, oats, peas, beets, and comfrey, a new article of agriculture, and of domestic consumption; for these suit the climate and soil.

Barley has been quite too much neglected. It is easily raised on our high-lands; its crop is very sure and abundant; it is very nutritious; its fattening qualities are good, and if mixed in due proportions with rye, oatmeal, a mixture of potato and beet meal or comfrey flour, it would make excellent bread, puddings, &c. &c., and would be a good substitute for wheat, if not equal to it. Then turn your thoughts more on barley.

On the late disease of the potatoe, I state just two facts and one opinion. On the sea-shore the disease was not so bad by far, as back in the country. On a farm in Jaffrey, near me, on upland mixed with remains of black growth, the crop was perfect, and on old land of good tilth, other things being equal, the destruction was perfect. My opinion is, that it is an unaccountable epidemic, prevented by some causes and increased by others.

Yours respectfully, EZEKIEL RICH.
Troy, N. H., Dec. 7, 1844.

TO THE BREEDERS OF SHORT HORN CATTLE in the U. S.

In the month of May last, I proposed, through the columns of the Cultivator and American Agriculturist in N. Y. to publish an American Herd Book, provided a sufficient demand for a work of that kind should be made in the manner there indicated. At the time I wrote the proposition I had little confidence that it would be met with any *general* zeal, or approbation even, by the breeders of short horns throughout the country: and in this I have not been disappointed. It is apparent that a lethargy pervades too many of our once spirited cattle breeders on the vitally important subject of preserving in an enduring form the genealogies of their individual herds; a course, which, if persisted in, will ultimately lead, not only to their destruction, but to a large pecuniary loss to themselves, and awaken, when too late, deep and lasting regrets.

But the zeal of our American breeders is not altogether lost. A considerable number of enterprizing and spirited gentlemen have manifested strongly their desire that the work shall proceed; and with characteristic liberality proposed such a patronage as shall procure its publication.

I propose, therefore, to commence the compilation of the Herd Book as soon as sufficient material shall be transmitted to me for a commencement; and I now request all those gentlemen who wish their animals registered, to make out plain and distinct pedigrees of their stock, with all necessary references, and particulars that may be important touching their lineage; and if foreign animals, the date of their importation, and by whom made, together with such other facts as will best illustrate their history, &c. It is to be observed that the object of this work is not to *establish* pedigrees, but to *perpetuate* them; and it may at once be remarked, that any animal whose purity of blood is not properly sustained, cannot be admitted within its pages. The English Herd Book was first published in 1822. Previous to that time, and for a few years immediately following, many valuable animals from among the best families of well descended short horns in England were imported into America, whose names and pedigrees are not to be found in its columns. Many breeders in England, not then appreciating the value of such a work, neglected to register their cattle; and these remained thus unnoticed in many instances, altogether, and in others, until the supplementary volumes were published. The descendants of those importations, preserved in their purity, and their history properly authenticated, will be admitted. But in all cases where references cannot be made directly to the English Herd Book, such facts and references as will place the lineage of the animals named beyond dispute, will be necessary to accompany the registry.

In one particular this will differ from the English registry. That work has neither note nor comment. To all but the initiated in Short-horn-lore, the pages of the Herd Book are as a sealed volume in all that relates to their origin, history, and present condition. Names of animals are often inserted without any reference whatever, apparently for no other purpose than to establish them as "Herd Book Cattle." It will be otherwise in this. Interesting facts and illustrations will accompany pedigrees as they may occur, throwing light and information, such as to place every thing relating to this noble breed of cattle in the most attractive form, and develop in the best manner their advantages to the American farmer.

In all cases where the parties are unknown to the subscriber, either personally, or by correspondence, they will please to give the name of some distinguished breeder, or citizen of their own, or a neighboring State, as a reference. This is not required through any suspicion of the entire integrity of any gentleman who may offer his cattle for registry, but as a rule for the mutual protection of each one who desires a true and unimpeachable record of short horns, (as far as it goes,) in America.

As the magnitude of the work (in pages,) will not be known till the materials are all collected, the price cannot be exactly stated: but at all events it will not exceed three dollars per copy, as noted in the prospectus last May, deliverable as there stated.

All pedigrees, &c., are requested to be transmitted, (if by mail, post paid,) to me at Black Rock, N. Y., or if more convenient to the parties, to A. B. Allen, at the office of the Am. Agriculturist, 205 Broadway, N. Y. city, or to Caleb N. Bement, American Hotel, Albany, N. Y., who will duly forward them to me. The terms for registry will be one dollar for a single animal; and fifty cents each for any larger number; to persons having 10 or more animals, with simple pedigrees, a liberal deduction will be made from this last price, according to number; the money to be enclosed with the pedigrees. Accompanying the pedigrees, the number of volumes subscribed for is also requested.

All papers to be forwarded as soon as possible; at all events, before the first of April next, as the work will be put to press to be delivered to subscribers by the first day of June ensuing.

The insertion of this notice is respectfully requested in the Agricultural papers generally, one of which to be sent to me, for which a copy of the book will be presented, and any gentleman who feel an interest in this subject will do a favor by giving information of this proposed publication to any neighboring breeder of short horns, who may not otherwise obtain it.

LEWIS F. ALLEN.

Black Rock, January, 1845.

"BALANCE OF ORGANIC NATURE."

The Chemical and Physiological Balance of Organic Nature—an Essay, by M. J. DUMAS *and* J. B. BOUSSINGAULT, *members of the Institute of France. Edited by* D. P. GARDNER, M. D., Lecturer on Agricultural Chemistry, New-York. Published by Saxton & Miles, 1844—12 mo. pp. 174.

THIS excellent little work which opens new fountains of knowledge, practical as well as theoretical, appears to have been delivered as a lecture by M. Dumas, on concluding his course at the Ecole de Medecine in Paris. It contains the opinions and result of the joint labors of Dumas and Boussingault in chemical and physiological investigations. What is meant by "*The balance of organic nature*," we learn from page 61, where the author makes the following summary of his doctrines:

"If we recapitulate we shall see that the primitive atmosphere of our globe has formed itself into three great parts or masses; one constituting the atmospheric air of the present time; a second, represented by plants; a third by animals."

"Between these three masses continual changes are effected; matter descends from the air into vegetables, penetrates in this way into animals, and returns to the air in proportion as they consume or apply it to their purposes."

"Green vegetables constitute the grand laboratory of organic chemistry. They are the agents which, with carbon, hydrogen, azote, water and oxide of ammonium, slowly form the most complex organic substances."

"Under the form of heat, or of chemical rays, they receive from the sun the force which enables them to accomplish this great work."

"Animals assimilate or absorb the organic substances which plants have formed. They alter them by degrees; they destroy or decompound them. New organic substances may arise in their tissues, in their vessels; but these are always substances of greater simplicity, more akin to the elementary state than those they have received."

"They decompose then, by degrees, the organic matters created by plants. They bring them back by degrees towards the state of carbonic acid, water, azote and ammonia, a state which admits of their ready restoration to the air."

"In burning or destroying these organic substances, animals always produce caloric, (heat) which radiating from their bodies into space, goes to supply that which vegetables had absorbed and fixed."

"*Thus all that the atmosphere yields to plants, plants yield to animals, animals restore to the air. Eternal round, in which death is quickened, and life appears, but in which matter merely changes its place and its form!*"

"The crude and formless mass of the air, gradually organized in vegetables, passes without change, into animals, and becomes the instrument of sensation and thought; then vanquished by this effort, and as it were broken, it returns as crude matter to the source from whence it had come." (p. 61.)

This carries us back to the Creation, Ev αρχῃν, to the beginning, when "God said let there be light, and there was light." It accounts philosophically for the succession of events as related by Moses. With light came heat, and heat developed vegetation, and vegetation prepared the way for the subsistence, and the after creation of animals.

But our business is not with speculation, but with practical affairs. The food of plants, and the best method of giving them a vigorous growth, are the subjects which are most interesting and most important to farmers. "Every plant (says Dumas) fixes nitrogen during its life, whether it obtains this element from the atmosphere, or from manures added to the soil."

And again,

"One of the first problems in agriculture, is to procure supplies of nitrogen at a cheap rate. With regard to carbon, there is no cause for solicitude; nature has provided that in ample abundance; the air, and every shower of rain are charged with it. But it is otherwise with reference to nitrogen; the azote of the air may be unassimilable, and the ammoniacal and nitrogenous salts which rain-water contains may not be in sufficient quantity. It is indispensable therefore, to surround the roots of almost every plant whose culture is of importance to mankind, with manures rich in azote, as enduring sources of ammonia or of nitric acid, which the plants appropriate in proportion as they are produced. To do this, as is well known to all, is one of the grand causes of expense in agriculture, one of the grand obstacles to its progress; for we are generally dependent upon, and have only access to, the manure we can severally produce. But chemistry is so far advanced in this direction, that the problem requiring the production of a purely nitrogenous manure, cannot long remain unresolved." (p. 43.)

It is elsewhere shown by our author that plants also fix carbon, hydrogen, oxygen, and certain earthy particles or ashes, (p. 37) as well as nitrogen, as a constituent element in their composition. It is therefore doubtful whether a "*purely nitrogenous manure*" be necessary. All compost heaps composed of animal and vegetable substances, furnish nitrogen, and other ingredients capable of promoting vegetation. It would be better therefore to give to our cultivated crops a composition containing various materials congenial to plants, than to offer them one only. How many have been disappointed in the use of lime alone, or salt, or saltpetre, and other single fertilizers? These and other saline and alkaline ingredients may be added to compost heaps with advantage, and increase their activity as fertilizing agents. We are sometimes apt to be carried away by speculative views in farming as well as in other occupations, and to be captivated by something new, while we neglect the more common and useful things. Human excretions form a powerfully azotized or nitrogenous manure, and they compose the fertilizing ingredients in *Poudrette*, which has been highly extolled as a great fertilizer. This is doubtless so when it is not too much diluted or adulterated. But those who have embarked in its production, have done so for the purpose of making money by the sale of it. The consequence is that it is losing its character, because it is too much diluted with peat, or saw-dust, or coal ashes, rendering it feeble or comparatively inert. The excretions of birds from the coasts of Peru and Africa, are now imported by the name of *Guano*; and those interested in its sale give glowing accounts of its fertilizing qualities. Some are captivated by its recommendations and novelty, and are buying a dear article, (which is not universally applicable like barn-yard manure,) and which may be cheaply imitated by chemical combinations.

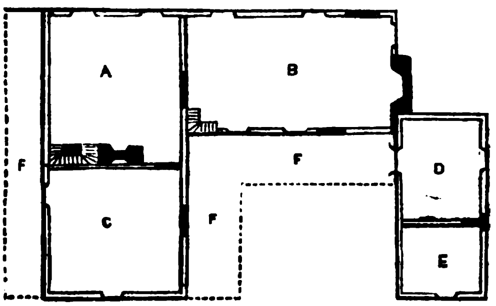
Now I insist upon it, that farmers in this and the adjoining States where manure *must* be used, should look to, and make the most of, their domestic supplies before they purchase factitious or imported manures. If a farmer raises poultry, his hen roost will furnish materials similar to guano. He may have the temple of Cloacina emptied and its contents made into poudrette, as I know was practiced by a neighboring farmer. In 1843 he had the contents of his sink mixed with sand and chip manure, together with a large cask of plaster of Paris, and a quantity of wood ashes which he had saved. These ingredients when mixed together, and dry enough to shovel over, made 20 or more ox-cart loads of good manure. Again in the spring of 1844, the excretions from the same sink were mixed with sand, some ox manure, chaff, a cask of plaster, and some wood ashes as before, making 24 loads of good compost. In 1843 the compost was employed to manure potatoes and turneps, and in 1844, potatoes alone, causing a vigorous growth in both instances.[*]

We cannot raise hogs with advantage in this part of the country without keeping them shut up in pens all the time, and well supplied with straw or sea-weed, and soil or muck, and then the manure made is part of the profit. Here swine are fed both with animal and vegetable substances, and their excretions are rich in nitrogen or azotized materials, or as Dr. Mitchill would have said, replete with "Septon." Hence it is that hog manure is more powerful than the excretions of horses or cattle. But when we mix all these together in the barn-yard compost, we have wherewith to supply all the wants of cultivated plants with carbon, hydrogen, oxygen, azote, &c. Let farmers therefore look around their own premises, collect, mix and manufacture for themselves as much as they can before they buy any manure.

The lecture or essay of M. Dumas occupies but 64 pages of the work under consideration. The remainder is made up of documents illustrating in detail the subjects touched upon in the essay. There is also an appendix by Dr. Gardiner, to whom we are indebted for bringing before the American public the lecture of M. Dumas as translated from the French. We had marked some passages to guide the reader, but must refer him to the work itself as worthy of attentive perusal, hoping it may give him as much satisfaction as it did

A PRACTICAL FARMER.

Staten Island, Nov. 23, 1844.



PLAN OF A HOUSE—(Fig. 22.)

MR. TUCKER—I transmit for your consideration, the above plan of a boarding-house, which I have been erecting, and which I think convenient, for the accommodation of 12 or eighteen boarders, i. e. for children attending school.

It is one story and a half, as that is sufficiently high for the placing of beds around the chambers, where most of the beds are put up, and which makes them quite pleasant. The sitting-room (A.) and parlor (C.) have a stone chimney erected between them, with a fire-place to each room—also the dining-room (B.) has a good stone chimney. That room answers for the purpose of domestic labor, such as carding, spinning, knitting, sewing, &c. beside being occupied for a dining-room. Our cooking is mostly done by a cooking stove. Stairs go up into the chambers from the sitting and dining rooms. The chambers are partitioned off into sleeping rooms, just according to the fancy of the occupant. A. Sitting room and library, 19 by 20 ft.—B. Dining room, 14 by 33—C. Parlor, 18 by 20—D. Kitchen, 12 by 14—E. Bed room, 10 by 12—F. Piazza, 7 ft. wide. A SUBSCRIBER.

Choctaw Nation, Dec. 27, 1844.

THE CULTURE OF THE SWEET POTATOE.

The Sweet Potatoe, (*Convolvulus batatas,*) was introduced into England previous to the Irish potatoe, and was in those days supposed to possess the qualities of restoring decayed vigor to the human frame; and consequently more frequently found in the shop of the confectioner, than in the larder of the cook. It is a native both of Spain and the Canary Islands, and was, as an edible, in such *bad repute*, that the renowned *Evylin*, in his work on Gardening, as early as the year 1699, recommends that potatoes should be planted in the worst ground. We are glad that we live in an age and country, where we can say, plant sweet potatoes in your best land; though in all probability, in the days of the author above quoted, the promise of this root was such that it held forth no inducements to the cultivator; and certainly time has shown that England's climate and soil, has proved uncongenial to its improvement. There are many, even in our southern country, at this day, who take his advice and neglect this crop, from the sole fact perhaps, that they themselves are not fond of potatoes, not consulting the tastes of voracious hogs and cows, who, squealing and lowing for corn and hay, would be happily regaled with a satisfactory meal from the potatoe pile.

In the south, we regard the successful cultivation of the sweet potatoe as an easy attainment. It delights in a sandy, rather light, deep, and well stirred soil, which must be located on a dry subsoil, though in some instances we have seen good potatoes raised on clay lands. A moist atmosphere, the temperature of which is warm, appears most conducive to the early growth and pleasant flavor of the sweet potatoe.

From its great use in culinary concerns, it deserves more attention at the hands of our southern planters than it has as yet received. The climate south of 36 degrees, has been found admirably adapted to its growth; and no crop can be planted which will yield more to the acre. The fine effect which they give when fed to milch cows, should make it a favorite with all who delight in good milk and butter. When dried in a brick oven, they furnish the material for making a delightful and wholesome beverage in the shape of potatoe beer. The sweet potatoe also furnishes a large amount of the vegetable food of slaves in the southern States during the winter months, and though they are generally cultivated as a provision crop by most planters on almost every plantation, the negroes cultivate them in the ground which is allotted to them for their own private use. Such is the partiality of the plantation negroes for potatoes, as an article of food, that as soon as the season for digging arrives, they prefer an allowance of this root to any of the cereal grains. Indeed, it seems they were relished by our revolutionary ancestry, for when an embassy was sent by the British commander at Charleston, to Gen. Marion in his swamp encampment, that chivalrous commander, with his characteristic hospitality, invited the Royalist to dine with him; the table was arranged, when he found "flesh, fish, and fowl," to consist of sweet potatoes alone. He straightway returned to the British quarters, and expressed his opinion that it was hopeless to expect to conquer men who could fight for *liberty* on *such fare* as *roasted potatoes*. Mr. John B. White, a talented and gifted son of Carolina, has made this scene the subject of a national painting which stands high in the world of art. In this picture, the negro seems delighted, more at the style in which his potatoes were roasted, than at the amazed countenance of the tory officer.

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[*] We do not give this as a correct recipe to make poudrette, nor is an invariable one necessary, because it may be made in different ways. Two materials are necessary in its composition; one to make bulk, and one to render it inodorous. The bulky articles may be soil, or muck or peat, tanner's bark, saw-dust, spent wood ashes, coal ashes and other things. To render night soil inodorous, diluted sulphuric acid may be used, or ground plaster of Paris, wood ashes, fine charcoal and sulphate of iron. My neighbor, among other things used sand to make bulk, because he had it in abundance, and his soil was a stiff clay.

To the negro, the potatoe is a blessing; for, to the known improvidence and carelessness of this race, it is particularly adapted, as it requires no culinary skill to make it both edible and palatable, simple roasting in the ashes being the best preparation the cook can give them. It is frequently prepared for the table by baking, and makes good custards, puddings and pies; the latter equaling rhubarb pies, and made much in the same manner.

If the soil has been exhausted by previous culture, the land should be manured. My father, Mr. John Summer, who has always been successful in the culture of potatoes, observes the rule to manure broadcast, and for this purpose, has prepared in the farm yard a compost, made by hauling in oak leaves, which with the admixture of the manure of horses and cattle, furnishes the proper material, and this, when sufficiently rotted, is spread broadcast over the surface of the soil. The general plan, however, in the south, and that which is considered easiest, is to *cow pen* the ground intended for potatoes, late in the summer. When the latter plan is followed, it should be continued during the early part of the winter, and followed with frequent plowings, so that the manure deposited may not evaporate, or be washed away by rains. Plow up the land very deep in January, to which we would recommend a subsoiling to those who have the proper implement. Plow again in February, and in March repeat with a like plowing, immediately after which, bed up the land with a suitable plow four feet wide; upon these beds drop the potatoe slips, six or seven inches apart, covering them with a hoe, one and a half inches deep, with good mellow soil.

It should be remembered that the proper preparation of the soil, is of very great importance to the future crop. This mode of planting in beds is usually termed ridging, and simply to cross the beds into equal squares with their width, we can form potatoe hills by drawing up the corners of the squares with a hoe. We have tried both hills and ridges, and have no preference, though the soil when planted in hills is most likely to be washed away by heavy rains. From three to four slips should be planted in the hill. As soon as the slips begin to sprout, the ridges or hills should be scraped off with the hoe, which will enable the young plants to come up readily, and immediately after they have appeared above ground the beds should be plowed down carefully, and the plowing to be performed as close to the plants as they will bear, so as not to disturb the parent slip. This will yield to the young plants that warmth which is so much desired in this culture, and potatoes thus cultivated will stand the summer drouths better than those which have been cultivated otherwise. Frequent plowings, with a few times hoeing, is all that is necessary, until the vines attain a length which interferes with the plowing, at which period the ridges and hills should be drawn up with the hoe, fuller than they were originally, and in such a manner that they should be hollow at top. Great care should be taken not to draw any soil on the vines, and therefore whilst drawing up the beds they should be gently raised by the hands. Just before the vines reach the bottom of the beds, a plow should be run twice through the rows in order to give them mellow earth to root in. This will serve to sustain the vines in extreme drouth; and as the leaves are almost the only organs which feed tuberous roots, I would earnestly recommend an abandonment of the practice of topping potatoes or of tearing the vines with a plow, and particularly the practice of making a calf pasture of the potatoe patch late in summer.

Potatoes for planting should always be raised from cuttings, as they are generally more succulent, and vegetate better in the spring than those which are raised from small potatoes, and hence large potatoes bringing stouter plants, are preferable to very small slips.

The product per acre may be variously estimated. From two to three hundred bushels are commonly produced. My father has raised upwards of five hundred bushels of good potatoes to the acre, and from two to three hundred bushels has been an average crop with him. They were of the dark mottled variety usually called the Spanish potatoe, which for a general crop, we consider best, though any and every sort should be cultivated, which are regarded of good quality, and as there are perhaps more than twenty approved varieties, we are not advocates of any particular one. The yams suit a sandy location, whilst the dark Spanish would succeed better on clay soils. There are several varieties with a red skin, which are much esteemed by some. The variety known as the "Bermuda," are perhaps the best early variety, and for this reason, a portion of the crop should be planted of them, or some other favorite early variety. There appears to be only two distinct varieties of the yam, the yellow and white. Both should be cultivated by putting the slips in a bed, and drawing the sprouts as they appear above the ground, and planting them in ridges. In this way, but a comparatively small number of slips are required of this variety; for all other varieties of the sweet potatoe, we would advise to plant the root itself. The yam is easier preserved during winter, and late in spring; is of better flavor than any of the other varieties.

My friend, Col. R. F. W. Allston of Georgetown, during the past season, tried an experiment, which, as it is new, and upon the whole, has succeeded admirably, I will notice here. The land was laid off in beds four feet apart, and upon these the seed were planted, by laying them on the level ground eight inches apart, and covered over with "tailings," (the straw, &c. blown off in winnowing rice,) to the depth of a foot. In consequence of the severe drouth of the past spring, the stand proved a very bad one, the sprouts appearing at the distance of one, two, and three feet apart. The prospect, he says, for a crop, was very meagre, until the month of July, when the plants which were standing, grew off with a vigor quite remarkable. In consequence of the drouth, a little earth was drawn upon the beds once, and the grass which showed itself was once picked off. The potatoes were taken up the second week in November, and they yielded 283 bushels of excellent roots to the acre, several of which were exhibited at the Anniversary meeting of the State Agricultural Society, weighing from 4 to 6 pounds. They were yams.

Our plan for preserving potatoes is simple. A circular bed is formed 8 or 10 feet in diameter; this is raised a foot above the surrounding surface to ensure its being dry; on which we place dry pine straw, corn stalks, or pine bark; in the centre of this, we set upright a plank tube with a great number of holes bored in the sides; around this tube the potatoes are piled up until the cone is completed within a few inches of the top of the tube, when they are covered up with corn stalks, pine straw, &c., and lastly with earth five or six inches thick. The tube may be closed in frosty weather by a wisp of straw. During mild weather it should be opened in order to allow the heated air arising from decayed or bruised potatoes to escape. With this, and the addition of a temporary shelter, we have always succeeded in saving potatoes during the winter.

We unhesitatingly recommend that the same land be planted in potatoes each succeeding year, believing that the culture of this crop adapts the soil for the increased reproduction of the root, and that the covering of the vines when potatoes are gathered, restores to the soil a larger supply of nutrition, than is consumed by the production of the crop. Wm. Summer.

Pomaria, S. C., Dec. 18, 1844.

THE HORSE SPECTRE.

Mr. Editor—I love a good Horse—in fact, *I love them that love Horses.* I once rode fifty miles on horseback to see a broken down Racer, and was amply repaid for my labor. Indeed, he was a remarkable animal on many accounts; and although thorough bred, with a pedigree of the greatest purity, he was as heavy as many a wagon horse. His color was a deep chestnut; bordering on black, with eyes of light brown, that seemed to be planted in the cheek, about midway between the nose and ears, giving him an appearance quite unearthly: his action also, quick and hurried, and of the most eccentric character, was calculated to inspire a sort of terror in the beholder, leading him to be careful how he ventured into the enclosure where he was confined. And yet, withal, he was perfectly gentle and manageable, and of the most generous disposition. At the time of which I write, he was in possession of the Messrs. Badentram, of Presteign, Radnorshire, Wales, (England) and there I saw him. Indeed, his history throughout, is so remarkable, that I feel a desire to relate it, with your permission, for publication in the pages of the Cultivator; true to the letter.

One day, a stranger called at a farm-house in that part of the country to inquire for board? He was a citizen of London, a Jeweller, and had been ordered into the country by his physician, for the benefit of air and a mild diet. The farmer observed they had not been accustomed to take boarders, but thought perhaps he might as well remain where he was, and try how he liked their accommodations. On the stranger inquiring the terms, the farmer said that depended upon how they liked each other; and at the end of a month, when the stranger offered to pay, the farmer said his wife and he had not yet determined upon what it should be. In another month, the health of the stranger being reinstated, he again asked for his bill, when the farmer informed him that he and his wife calculated they were about quits, as his society and conversation had been to them of quite the value of what he had received; and finding that nothing he could say would alter that determination, the stranger took his leave, promising, that he would, some day, send him a present from London.

Not long after, a man led into the farm-yard, an old blind mare of the highest blood and pedigree, heavy in foal by the best horse in England, Phantom; an accompanying letter requesting that she might never be sold, but be returned, if the farmer should grow weary of keeping her; hinting also, if the foal should prove a horse colt, that his name be called Spectre. In due time the mare brought a horse foal, which, with the extreme care bestowed upon him, grew up a remarkably fine animal, being entered to run for a plate at two years old, which he won with the greatest ease to himself. Not so however to the rider, who, with the utmost difficulty could manage to keep himself on his back by holding on to the pommel of the saddle; bridle, whip and spurs, being totally useless and out of the question; for with nose to the ground, and his feet at every stroke appearing above his head, the back a semicircle at one moment, and an inverted ellipsis at the next, it would have been easier to sit a camel in full trot! no other person being able to accomplish the feat of *sitting* him—to *guide* him, being a vain and useless attempt. After this, he, with the same rider, won every thing he started for, until on the eve of a very important race, in which he was backed by the whole country at immense odds, a stranger offered one of his owners (there were two persons who had shares in him) a very large sum of money, if he would permit his horse to be beaten? The temptation was too great to be withstood, although the man knew that his partner had risked his all upon him, as also many more of his personal friends: the only way to accomplish it being to overweight him. This was accordingly done, and on striving against a saddle full of shot, the generous and noble animal sprained his shoulder and broke down, his rider afterward declaring, that even then, he had more work to make him lose, than he ever had to make him win. And while in this broken down condition, he won three silver cups at three different meetings; the last at the great race of Worcester, still fresh in the memory of thousands, where he distanced almost the whole field.

After this, he was withdrawn from the turf, and was kept as a stud horse; and as such I saw him with his blind dam, in an adjoining paddock again in foal, at the age of 28 years! Many noble horses, the best in that part of the country, were produced from this stock, the owner making an annual sale by auction, chiefly of match horses for the carriages of the nobility, many pairs bringing from $1500 to $2000 at three years old; the last lot put up being *Spectre* himself, with the intent however, of buying him in privately, and this was done more than once, at the price of $5000.

When the stranger left the farm-house for London, he desired the servant girl to inform him when she should be about to get married: this she did, and received as a present, a valuable diamond ring; which, if you will allow me to *suppose* she sold for a sum of money sufficient to stock a small farm, upon which she and her husband resided for many years in contentment and happiness, you will then have a *finale* in keeping with the main story, for the truth of which I will vouch. J. P.

THE JERUSALEM ARTICHOKE.

(Helianthus Tuberosum, Linn.)

Mr. L. Tucker—My attention was directed to the history and culture of this plant, in consequence of flattering experiments made with it by Mr. Gunnell and others in Greenville in this State, and as it is rapidly obtaining in some parts of the State, a few remarks in connection with its superior advantages as a root crop, may not be objectionable to the readers of the Cultivator. Although it is called so, it is botanically, in no way allied to the Artichoke, but is of the same genus as the sun flower, which it much resembles. The term Jerusalem, is, according to Webster, a corruption of girasole, the Italian name for sun flower; and it derives the appellation of Artichoke from some fancied similarity in the taste of the tubers with the artichoke bottoms. It is a native of Brazil, and was first carried to England about the year 1620, and before potatoes were so generally in use, was extremely popular as an edible root. Mention is made of it in old agricultural treatises, as the *Canada potatoe*, to distinguish it from the common potatoe, and it was sometimes called the *Virginia potatoe*. It was regarded as wholesome, and is of an agreeable taste, though it is never dry and mealy like the potatoe, being rather moist and soft in its texture, and is nutritious. Being hardy and perennial, they succeed in almost all kinds of soil. It was almost lost sight of in agriculture, until within a few years. Latterly it is obtaining as an article of food for domestic animals.

Twelve to fifteen hundred bushels have been obtained from an acre, when properly cultivated, and being relished by horses, cattle and hogs, it is undoubtedly the most profitable root crop which can be planted in the south; and perhaps it might succeed in more nothern regions. It is rich in farrinaceous substance, and all animals do well and improve when fed upon them. Last spring a friend sent me about a quart of tubers. I did not think this small quantity worth planting, as they were much injured and dried up by their long exposure. On the 3d of May, fully two months after they should have been planted, I had a small space of ground, about a rod, prepared, and put them in. A drouth ensued, and they did not come up soon, and consequently lost a great deal by their being so late. They were planted in drills two and a half feet apart, and twenty inches in the drill; but the seed being so badly injured, the plants were very irregular. They were plowed once, and the grass and weeds afterwards removed with the hoe. In November I had them plowed up, and upon gathering them, found I had ten bushels; and it is my opinion that if they had been picked clean from the land, the yield would have reached twelve bushels. The tubers filled all parts of the soil, and some of them were two feet long, consisting of small bulbs connected by succulent roots. The roots are white, and extremely tender, whilst the tubers are slightly tinged with red. The roots make the best slips for planting, and if cut up, leaving an eye to each slip, they readily vegetate. When it is intended to feed this crop to hogs, they require no harvesting, for they readily withstand our mild winters; and if the hogs are turned in on them, they usually provide for themselves. For calves, sheep and horses, they must be gathered and washed, but unlike other roots, they require no cutting up. They might be fed to sheep, by merely plowing up a few daily, and letting the sheep eat them immediately from the ground. In consuming this crop, the hogs give the ground a thorough plowing, and by turning under the stalks and leaves, they add much to the soil. Some have asserted that it is an exhausting crop, but from the genus of the plant, I infer it is not. The leaves are large, and the stalks are crowned with beautiful yellow flowers.

I shall plant them at the rate of three bushels to the acre next year. I think that quantity sufficient. They grow here on all dry soils, but will not succeed well on damp locations. Very respectfully, A. G. Summer.

Pomaria, S. C., Dec. 1, 1844.

PRODUCTS OF THE DAIRY.

Our article in the January paper having introduced this subject to the readers of the Cultivator, we shall now proceed to give some statistics relative to the quantity manufactured, and endeavor to show that the market which is now opened to our cheese in foreign countries offers great inducements to our dairymen not only to continue in the business, but to improve the quality of the article until it will be sought for in all foreign markets as well as in our own country. The census of 1840 gives the aggregate value of butter and cheese manufactured in every town in the United States. From the statistics thus gathered much valuable information may be obtained, although, if the number of pounds of each had been given, we might have arrived much nearer to correctness, as the price in different parts of the union differs materially. We doubt also whether entire confidence can be placed in the correctness of the census, although it may approximate as near correctness as any information within our reach. The amount at which the products of the dairy were valued in 1839, in the State of

New-York, was	$10,496,021	New-Hampshire,	$1,638,643
Ohio,	1,848,869	Massachusetts,	2,373,299
Pennsylvania,	3,152,987	Connecticut,	1,376,534
Maine,	1,496,902	Vermont,	2,008,737
New-Jersey,	1,328,032		

The quantity made in the southern and western states is comparatively small. Virginia however shows an aggregate of $1,848,869. The aggregate value of the products of the dairy in the entire union is put down at the round sum of $33,787,008. The quantity of butter and cheese made in Ohio has greatly increased since 1840. Indeed without any evidence before us we should presume that the amount sent to market from that state has doubled in the last five years, while the quality has greatly improved. A correspondent in the city of New-York, largely engaged in the produce business and well qualified to judge upon these subjects, says,—"As to the quality of butter and cheese made in Ohio, it is rapidly increasing and greatly improving in quality, and I think bids fair to go ahead even of the Empire State in quantity manufactured. It will not be long before they will match us in quality. A large amount of the butter and cheese made in Ohio goes south and west, which is so far favorable for that made in our own State." That Ohio is to be one of the most important States in the Union in her dairy products as well as in every thing else which pertains to the agriculture of the northern States, there can be little doubt.

The State of New-York must, however, continue to furnish immense quantities of dairy products, and as we remarked in a former article, "the central and northern parts of this State must constitute *the dairy district*, from whence must be derived a very great proportion of the butter and cheese used in our large cities, and which is needed for shipment to Europe."

Of the ten and a half millions of dollars worth of dairy products in the State of New-York in 1839, more than three millions worth was produced in the eight counties of Oneida, Jefferson, Herkimer, Oswego, Madison, Otsego, St. Lawrence and Lewis. Chenango, Cortland, Onondaga, Steuben, &c. also produced large quantities. Orange, Duchess, Delaware, and other river counties produce large quantities, but as we have before remarked, a very great proportion of this is sent to market in small kegs, pails, &c. to supply the summer demand. That from the other counties named, as well as from the western States, is relied on for a winter supply.

The amount of butter, lard and cheese which arrived at tide water through the New-York canals in the several years, since 1841, is as follows: The butter and lard having been kept in the same account, we are unable to get at the exact amount of each.

	1841.	1842.	1843.	1844.
Butter and lard, lbs.	16,157,653	19,182,930	24,215,700	22,202,700
Cheese, lbs.	14,171,081	19,004,613	24,336,260	26,598,300

This table shows a constant increase in the quantity of butter and lard until the present year. This year, however shows a falling off in these articles, which may be attributed partly to the fact that the great increase in cheese has caused a corresponding decrease in butter, and in part to the limited amount of lard sent to market the present year. The increase in cheese is very great, being nearly double the amount in 1844, which was sent to market in 1841.

To show the increase and the relative proportions of butter and cheese, we give the amount of each shipped from this place (Rome, Oneida co.) in four years, with the average price in each year

	Butter.			Cheese.	
1841	1,411,266	lbs.	15 cts.	1,632,196	5 cts.
1842	1,626,069	"	10	2,192,753	5½
1843	1,496,044	"	9	2,795,489	5
1844	1,914,735	"	11	3,151,431	5

At Utica the amount cleared is probably about equal to the amount shipped here, and at Little Falls large quantities are also shipped. At Sacket's Harbor, Oswego, and several other points on the lakes, and also at many other places on the Erie and other canals, considerable quantities are also annually shipped.

It will be noticed by an examination of the above table that the increase in the quantity of cheese is far greater than the increase of butter. This is accounted for by the foreign demand which has sprung up during the last few years. The success of experiments in shipping to Europe has directed public attention to the advantages of a foreign market for the surplus produce of our dairies, and more care has been bestowed upon the manufacture of cheese, especially in large dairies. Circulars, addressed to dairymen by shippers and other dealers, giving directions for the modes of manufacture, and the size and shape of the cheese, &c., had the effect to arouse attention and encourage investigation, until many of our cheese makers now are as familiar with the method of manufacture required for the English market as our own.

From "Wilmer & Smith's European Times," (published in Liverpool) of Dec. 4th, we extract the following remarks: "The imports of cheese have been large during the month, and both as regards their condition on arrival, and the general quality and selections of the shipments, are proving decidedly superior *to those of last* season. Their sale is consequently much facilitated, and we have every prospect of a large and steady trade in the article during the winter. The demand in the *past month* was large, increasing towards the close in consequence of the advanced rates obtained at the Chester and other cheese fairs; a corresponding advance cannot be secured in America: but we quote the market fully 2*s*. to 3*s*. higher for all qualities, and with a firm tone on the part of the holders. A higher range of prices than usual is expected to be maintained throughout the season, owing to a deficiency in the make of English cheese, and the great advance in the value of butter." The same paper says: "Butter continues to advance in price, and in confirmation of our last advice, we can with confidence recommend shipments from the United States, and would suggest that the lower priced qualities (if fit for eating or for culinary purposes) would be the safest shipment. In the finer and milder sorts we would fear such a deterioration in quality on the passage as would bring them down to the level of the inferior."

These paragraphs are given here not so much to advise our readers in regard to price, &c., as to show what is the opinion prevailing in England in relation to the quality of our dairy products, and also that we can reasonably expect a good demand for these articles abroad.

Our New-York correspondent, from whom we have before quoted (J. E. Southworth, Esq., of the firm of Southworth & Beach, 31 Water-st. N. Y.) remarks in relation to exports as follows: "I do not think the quantity of cheese shipped to Europe this year much larger than last, although the shipments were made earlier last season than they have been this, consequently a large amount was damaged by hot weather. This has learned shippers to be more particular, and not to send cheese in warm weather. The shipments have been very heavy during November and December, and those heard from have all paid well. The cheese sent this season has been of much better quality than that sent last season; in fact no prudent shipper will now purchase any but the best quality. *The shipments are not half as large as they would be if we had a better quality of cheese to send to John Bull.* This ought to stimulate our farmers to make a better quality."

Thus we see that we have opened to us a foreign market for our cheese, which may be increased to almost any extent if the farmers of this country will so far consult their own interest as to make a good article and one suited to the English market. Without expressing any opinion relative to the question of a tariff, we have no doubt that all will agree with us that it is matter of no small moment to American farmers to have a ready and remunerating sale for their surplus produce in foreign countries, and that foreign demand for American provisions does now, and will continue to exert a favorable influence upon our agriculture in all its departments.

The following table will show the amount of butter and cheese exported from the port of New-York in the years 1843 and 1844.

	1843.	1844
Butter, firkins,	48,034	28,761
Cheese, casks,	8.961	11,241
do. boxes,	62,112	77,173

Showing a decrease in the exports of butter, of almost twenty thousand firkins, and an increase in the exports of cheese, of not far from one-fourth.

We have thus glanced at some of the statistics relating to the manufacture, exports, &c., of the products of the dairy, and have prolonged this article to a great length without arriving at an important point in our subject viz. The means which should be adopted to secure the greatest increase in quantity and improvement in quality of dairy products. This will form the subject for another article, when we hope to prove beyond the possibility of a doubt, that it is in the power of nearly every dairyman to make a *good* article, and also that an increase of one-fourth in the average per cow may be made without any thing like a corresponding increase in expense. This we are aware is a bold position, but it is nevertheless one susceptible of proof, and we shall produce something more than our own assertions to establish the positions assumed. In the mean time let us beg of those dairymen who are making no more than one hundred pounds of poor butter, or perhaps two hundred and fifty lbs. of poorer cheese per cow, to investigate the subject, and see if they cannot discover the cause of their want of success. E. Comstock.

Farm School.—The late **John Parker**, Esq. of Boston, among other munificent donations, gave $4,000 to the Farm School, on Rainsford Island.

IMPROVEMENT OF WORN OUT LANDS.

We have received a copy of a Report on this subject, made to the Union Ag. Society, Hartford county, Conn., by Samuel Camp. Not having room for the whole, we give the following, which embraces the substance of the article.

In directing the mode of improvement to be pursued, Mr. Camp thus speaks:—"In the first place attend to the barn yard. This should be of sufficient size for all your cattle, and in a dry place, the water from the eaves of your buildings being all turned out of the yard. An embankment should be made around the buildings and yard, to prevent any water from coming in which is without. And as special care should be had to the liquid, which is the most valuable part, let your yard be hollowed in the middle; the outside twelve feet in width, to be raised high enough to keep your cattle dry. This twelve feet at least should be covered with cow houses. Litter this over with straw or some vegetable matter, then a large supply of peat or muck, and litter over the top, to keep your cattle clean; turn all your cattle on every night through the summer, having brined straw or hay in the racks and mangers, and plenty of water in the troughs, (as a good well of water is essential.) Turn none of them off day or night in the winter. Your horse stables need no floors; level them off, and keep them well littered; always feeding grain sufficient to induce the poultry to scatter the droppings among the litter that you may not stumble over them when frozen. Pursue the above mentioned course with muck and litter, until spring; then clear all out applying chiefly to corn. Begin then anew—treat your hog pen in the same way, only the manure from this should be carried out late in the fall and spread evenly over the barn yard, and littered with straw, and if you have put in weeds with ripe seeds, a few bushels of salt may be put in to kill them. Near your out-house, place some loads of muck or peat with a few bushels of lime or ashes, having a box placed under the building that you may draw it out often and mix its contents with your muck—thus making your own *Poudrette.* If these fall short of being enough, take a supply from muck or peat swamps. To one cart load, put of ashes 2 bushels, of lime 1 bushel, of crushed charcoal 4 bushels, of clay one-third of the whole. Always see that your land is seeded after cropping. Green vegetables draw their support in a great degree from the atmosphere; hold the dews, and enrich the land, until the seed ripens; they then take from the soil, and if the substances are not there which they require, there will be a failure of the crop. Wheat, clover and millet, require lime in the soil to ripen well."

Mr. Camp recommends plowing in green crops, the best of which he thinks is clover. Wheat and rye are also mentioned as suitable to stand through the winter and plow in in the spring. He says—"If land has nothing green growing upon it, keep it mellow and free from crust, that it may drink in the dews, and in a little time it will produce a crop without manure. Dry stubble, where there is nothing green, should be turned under."

Mr. Camp closes with some good remarks on the training of sons and daughters. His advice to farmers on this subject is thus given. "Train all your sons and daughters to habits of industry, on the farm or in the kitchen; let the mind and hands go together to the work, and both are strengthened. Give the mind proper food, let the thoughts be employed in something noble, benevolent, and exalted. Much has already been learned, and the wise man regards this as an evidence that much more knowledge may be acquired. Let none say to the mind 'thus far shalt thou go and no farther'—it is a little spark from Infinity, which knows no bound!"

Prairie Grass.—Among things which are "*decidedly flat,*" the Prairie Farmer mentions the following:—"If a man has got him a dairy of a dozen cows, calculating to get rich in making butter, without having made any preparation for them in the way of feed—bragging loudly to some eastern friend, of the all-sufficiency of prairie grass—when he finds that grass as dry as stubble from August to Dec.—we think he will feel decidedly *queer.*"

CONDENSED CORRESPONDENCE, &c.

Fine Fruit in Ohio.—We learn that the Hon. James Matthews, M. C., of Coshocton, Ohio, has been for some years making an extensive collection of choice fruits from every section of our country, and from abroad. He has now growing about six hundred varieties, including apples, pears, peaches, cherries and plums, beside a great variety of noctarines, apricots, grapes, gooseberries, strawberries, &c. His trees are all young, only about fifty of the varieties having produced fruit the past season. We know of no finer climate for fruit than that of Ohio, and we are glad that Mr. M. is making such efforts to ascertain what varieties are best suited to it. He will, by these efforts, confer a benefit upon his constituents, which will entitle him to their lasting gratitude. In the culture of gooseberries, of which Mr. M. has 34 kinds of the large English varieties, he has been very successful for two years past, having entirely escaped the mildew which has proved so great an obstacle to the culture of this delicious and healthy fruit. Should his fruit escape the blight another year, he will be more inclined to think it is owing to his, in some measure peculiar treatment, and will give the public the benefit of his experience.

The American Larch.—Extract of a letter from Mr. M. Ingalsbe of Washington county in this State, to the Editor:—"Much has been said of late in the Cultivator, about the American larch, or tamerack. for timber. We have had much experience in this section, in the use of it. The farm upon which I was 'brought up,' is connected with a swamp, 4 or 5 miles long and one quarter to half a mile wide, and the principal timber growing on it was formerly tamerack. There appears to be two varieties of it; one is nearly all sap wood; the other has but little; the former is nearly worthless for posts or rails; the latter is considered to be the best timber for posts that can be found in this region, red cedar excepted. I have heard several old gentlemen say they had posts that had been in the ground for thirty years and upwards, while I removed a piece of fence that had stood only eleven years, and the posts, many of them, were rotted nearly off. They were of the first variety I mentioned. This worthless variety is what some call the 'second growth,' a term which I do not precisely understand. This timber is valuable for building; it grows straight, is very stiff, and will hold a nail equal to white oak. The rafters to most of the buildings in this section are poles of this wood. A gentleman of this town told me that his front gate post had stood in its place 30 years, and was an old weather beaten post when he put it there; I examined it, and it was quite sound at the time. The wood is the common wild black cherry. I never heard it recommended from any other source."

Death of cattle from dry corn-fodder.—Jas. Grant, Esq. of Davenport, Iowa, informs us, that on turning his cattle into the corn-fields, after the corn was gathered last fall, several of them died from constipation. The stoppage took place in the manyplus, (manifolds) or third stomach. The death of the animals was so sudden that cows which gave a good mess of milk at night, were dead the next morning; and oxen which worked as well as ever in the morning, died in the afternoon. After having lost several of the herd, among which was a valuable Durham bull, Mr. Grant saved the remainder by administering heavy doses of Epsom salts, and following generally the treatment recommended in the November number of the last volume of the Cultivator, in reference to a disease by which Mr. Devereux of North Carolina lost a Devon bull. Mr. Grant says if the Cultivator had reached him a week sooner, it would have saved many of his animals.

Clover, Crops, &c. in Mississippi.—Extract of a letter to the editor of the Cultivator, from A. M. Mayo, Esq., dated Holmes Co., Dec. 22:—"I am this year trying an experiment with red clover; and so far, it looks well. I think it will do well; if so, it will be a great thing for our country. I am not aware of any experiments with it having been tried in our region of country. I intend making an experiment with corn sown broadcast, for fodder, next year. Millet does well with us. Our cotton crop this last season was very light in many places, owing to the worm; and, added to that, the low price of the article, makes it a poor business. We shall be obliged to alter our system of farming, if we expect to live by it."

Spread of the Potatoe Malady.—Mr. John Townsend, of Zanesville Ohio, informs us that the disease in potatoes, spoken of in the eastern papers, made its appearance in his neighborhood last season. It seemed to be generally confined to particular varieties. Mr. T. says, "a round potatoe, of a dull red color, brought from the State of New-York in 1833, suffered the most," so far as his observation extended.

Monroe Co. Ag. Society—Great Crop of Corn.—Extract of a letter from T. H. Hyatt, Esq., dated Rochester, Dec. 18:—"The Annual meeting of the Monroe County Agricultural and Horticultural Society, for the election of officers, the awarding of premiums on field crops, &c., was held in this city on the 11th inst. An interesting and elaborate report on farms, the best modes of farming, &c., was made by Mr. Langworthy, chairman of the committee appointed to examine and award premiums on the best farms in this county. The awards of the committees were but few. The most remarkable crop offered, was by Rufus Beckwith of Henrietta, being that of 126 *bushels of shelled corn per acre!* The whole Transactions of this Society for the year, are soon to appear in pamphlet foim. The following are the officers elected for the ensuing year: John H. Robinson, Henrietta, President; Elisha Harmon, C. K. Hobbie, F. P. Root, V. Presidents; James P. Flogg, Bochester, Treasurer; H. M. Ward, Recording, and Thos. H. Hyatt, Rochester, Coresponding Secretary."

Prejudice.—A correspondent who dates at Lenox, N. Y., and signs "Rambler," gives us some of the objections of a very narrow-minded and prejudiced man to agricultural papers and to all improvements. It is an old saying, that "*it takes all sorts of people to make a world,*" and this saying furnishes the only evidence we are able to give, of the advantage which some men are to society at large. The man who opposes improvement, is in principle and fact a *savage*—his proper place, if he really belongs to our territory, is "west of the Mississippi"—not, however, among the Cherokees, Choctaws, or Wyandotts, for they take the Cultivator, and are rapidly advancing in agriculture and other arts—but among the Crows and Black-feet, he would probably find congenial spirits. We are not surprised that a man of the prejudice and obstinacy of the one described by "Rambler," should lose "*two thousand dollars by farming.*" The resolution he has adopted of doing all his work himself, for the future, is no doubt a good one. Under such narrow policy, the less that is done, the better—small business is adapted to a small mind.

The Apple Worm.—We give the following, from a letter from R. L. Pell, Esq.—"I have for years been at a loss to know from whence the worm was derived, which is always found in fallen fruit, or in that ripening prematurely; by accident, last spring, when my fruit trees were in bloom, a limb of an apple tree was cut off, I examined the blossoms, and discovered numerous small worms, precisely like those found in the fruit, at a later period; even many of the buds still unopen, contained a worm. I observed as the fruit enlarged, the worm eat its way into it, and caused it to fall. The season was still cold, not a fly of any description had yet appeared; the conclusion I arrived at was, that the egg had been deposited early in the autumn in the bud intended for fruit the ensuing season. Last fall I noticed my trees frequently, and invariably saw numerous winged insects flying around them, and alighting on the buds, but could not discover to what family the obnoxious one belonged. Can you throw any light on the subject?"

Continuation of Milk in Cows.—Extract of a letter from Mr. Calvin Butler, Plymouth, Ct., to the Editor: "On the subject of keeping cows in milk from year to year, I have had some experience. It is not true that cows kept constantly in milk, will, after a lapse of years fail of their milk. This depends upon the nature and disposition of the cow for milk or fattening. I kept one in milk for five years constantly, and she increased in her milk every year, and it was almost impossible to dry her when I turned her to beef. I am now milking one for the third year, which neither gains nor fails in her milk, and I presume would not, should she be milked ten years. I am milking another for the first year, which I presume will continue to gain, from year to year. My cows have been kept from the bull—not spayed."

Spaying Cows, &c.—In a late letter to the Editor, W. S. Gibbes, Esq. of Chester District, S. C., says:—"In your Nov. number, p. 357, notice is taken of spaying cattle. Mr. James Knox, an active and enterprising young farmer, and neighbor of mine, has been in the successful practice of spaying milch cows and heifers for some years past; the cows do not seem to suffer much, never lose their milk, and one that he spayed three years ago, is giving yet her usual quantity of milk. He has never lost one. This autumn he successfully spayed an ewe for me, as an experiment."

Fly in Wheat.—Mr. Wm. Whiting of New-York, sent us an extract from the Detroit Advertiser, recommending oats to be sown in the fall with wheat, four quarts to the acre, for the protection of the wheat against the fly. The argument used in favor of the practice, is that the oats come up first, and grow the most luxuriantly, and that the fly will deposit its eggs on them instead of the wheat—that the winter kills the oats, and the eggs or worms in the plants, perish. We have heard this practice recommended before, but cannot say, from experience, any thing in regard to its efficacy.

Mediterranean Wheat.—From a letter of N. J. Palmer, Esq. Milton, N. C.—"I have been trying the Mediterranean wheat for two years; the seed of which, I procured from Philadelphia. It succeeds admirably, has a very large plump grain, and makes excellent flour. It will grow much better on thin land than our May wheat, will ripen as early, and is not so liable to injury by the fly, or affected by the rust."

BERKSHIRE AG. SOCIETY.

Address of Frederick J. Betts, Esq., before the Berkshire (Mass.) Ag. Society. This address is highly creditable to its author, and the ancient and respectable society to which it was delivered. Mr. Betts' remarks on the advantages of agricultural associations, are well-timed, and appropriate. The Berkshire Society itself, one of the oldest in the country, furnishes an excellent example of the kind. To this society belongs the honor of instituting *Cattle Shows* in America—the first of which was holden at Pittsfield in 1807. Since that time they have been continued annually; each succeeding year adding new interest to the exhibitions, and increased usefulness to the society.

In relation to the duties of committees at Cattle Shows, we give a paragraph from Mr. Betts' address, which we consider particularly worthy attention:

"The reports of the *Committee of Judges* may be made a most important means of desseminating agricultural knowledge; the mere awarding premiums is a most unimportant part of their duties. To distinguish the nice shades of difference in different specimens subjected to their inspection, will of course frequently require from them close observation; and the exercise of a discriminating judgment, and in this consists their great duty to competitors. Their duty to the Society, and to Agriculture, requires that they should accurately note and specify in their reports, the individual merits and demerits, of each article inspected by them, and clearly describe the points in which the preferred article surpasses the others. The principles too upon which they award their premiums are of the greatest importance. It is by no means true that the best farm, the best animal, or the largest crop is always entitled to the *first*, or even to *any* premium. The farmer, of all other men, is bound to act upon the lesson taught his countrymen, by America's great philosopher, "*not to pay too much for the whistle*," and though it may therefore be true, that "*the man is a benefactor of his race who makes two blades of grass grow where but one grew before*," it is certainly equally true, that he is no *benefactor to the farmer* if his two blades triple the expense of the usual mode of raising one. Award then your premiums to him who *does the best with his means*, whether those means be great or small; and let the consciousness of doing wonders reward the ambitious aspirant for fame, who works upon other principles."

Subsoil Plowing.—The committee on Root Crops for the Worcester (Mass.) Ag. Society, states that one of their number had once seen a demonstration of the great advantages which would be derived from the more common use of the subsoil plow. Mr. Isaac R. Barbour who received the first premium for a crop of carrots, had two lots, on one of which the subsoil plow was used, and on the other, only the common plow. The difference in the appearence of the crop in favor of the subsoiled portion, was quite evident.

SEED AND IMPLEMENT STORE,
At Rome, Oneida Co., N. Y.

COMSTOCK & JOHNSON, proprietors of the above store, will be happy to receive orders for seeds of any kind, and also for all the most approved implements used by farmers.

January, 1845—tf

FOR SALE.

THE subscriber offers for sale his fine Durham bull Osceola. He is now two years and a half old, and has taken the 1st premium at two successive State Fairs; for pedigree and further description, see Cultivator, Sept. 1843.

Also, his thorough bred Stallion Young Florizel.

Watervliet, Dec. 16, 1844—tf. CLARKSON F. CROSBY.

PLOWS

OF the most approved patterns now used in this State, will be constantly kept for sale either at wholesale or retail at the Rome Plow Factory, corner of Dominick and Washington streets. The *Diamond Plow*, which received the State Society's first premium last fall, is made by us in good style. Farmers in want of Plows, Cultivators, Cradles, Scrapers, &c. are invited to call.

A liberal discount to those who buy for retailing.

Jan. 1845—tf. BRAINARD, COMSTOCK & CO

FARM IN ILLINOIS.

FOR SALE—A good farm, with valuable improvements. The subscriber being about changing his business, will sell a great bargain. Also has in immediate vicinity, 2,000 acres choice land, which he will sell at a discount from government price. Address ISAAC HINCKLEY, P. M., Audubon, Montgomery Co., Illinois.

Dec. 1, 1844—tf.

SPLENDID FARM AND COUNTRY SEAT FOR SALE.

I NOW offer for sale my farm, consisting of 170 acres of the richest of the Mohawk Flats, all under improvement and in a highly productive state, together with the substantial and superbly finished brick mansion erected by the late Gen. John G. Weaver, at an expense of about $10,000. It is one and three-quarter miles from the city of Utica, on the north bank of the Mohawk, over a McAdam road. It has a beautiful orchard, garden, farm-house, barns, stables, sheds, &c., and is finely watered, and now stocked with choice Durham and grade cattle, Bakewell and Southdown Sheep, and all necessary farm implements; all of which will be sold at a great bargain to the purchaser. D. SKINNER.

Utica, January 1, 1845—3t*

FINE FARMS FOR SALE AT AUCTION.

THE property known as the Stimson Farm, situated at Galway in the county of Saratoga and State of New-York, will be sold at auction, at the Court House in Ballston Spa, on Wednesday the second day of April next, at 12 o'clock noon. It contains in the whole about 325 acres and is so divided as to make three farms, each having on it the necessary farming buildings. The roads from Schenectady to the Fish House, and from Saratoga and Ballston to Johnstown, run through the property at right angles, dividing it into four parts. The two pieces lying north of the road, said to contain about 190 acres, will be sold together. On this part are, a large hotel, capable of accommodating one hundred boarders, with the most extensive and convenient buildings for agricultural purposes. It is a favorite place of resort for families in the summer season. This part of the property will be a most desirable investment for any person desiring to connect the business of farming with that of keeping a hotel of this description.

The south eastern portion, said to contain about 90 acres, has a farm house and the necessary out buildings, with a wagon maker's and a blacksmith's shop. The south-western portion, said to contain about 50 acres, has on it a store and dwelling-house attached, farm house and barns, and is a most desirable property for any person wishing a small farm. Each farm has on it the proper proportion of woodland, and the whole is of the best quality for farming, there being no waste land, and in the highest state of cultivation. The situation is high, commanding a most beautiful and extensive prospect in all directions.

The sale will be positive and without reserve, to the highest bidder, and perfect titles will be given. The terms will be 5 per cent cash, to be paid to the auctioneer at the time of sale; 50 per cent may remain on bond and mortgage for five years, or a longer term, at 6 per cent interest, payable half yearly in the city of New-York, on the first of May and November, and the balance to be paid in cash on the delivery of the deed. For further particulars, apply to JOHN W. THOMPSON, Esq., Ballston Spa, or to J. OAKLEY, No. 77 Nassau-street, New-York.

Dated New-York, Dec. 9, 1844—3t.

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CONNECTICUT SEED LEAF TOBACCO SEED.

THE true broad and narrow Seed Leaf Tobacco Seed, selected from growth of 1844, for sale at the Seed Store of the Hartford County Agricultural Society, by . E W. BULL, Seedsman.
Feb. 1—3t.

LOUISVILLE KY. SEED AND AGRICULTURAL STORE.

GEORGE, LAPPING & Co., keep constantly on hand
Kentucky Blue Grass, extra clean for Lawns,
Kentucky do. do. in strips,
Hemp seed,
Timothy,
Clover,
Orchard Grass,
Red Top.
All orders promptly attended to. MUNN & PETTIBONE,
206 Pearl St., N. Y., Agents.

FOR SALE.

THE splendid two years old Bull "Marius," belonging to Thomas Oliver Esq., of Riversdale, Sing Sing. Marius was imported in 1843 from the far famed stock of Earl Spencer, of Wiseton, Northamptonshire, and was subsequently exhibited at the State fair, held at Po'keepsie, in 1844, at which place he took the first premium of the yearlings in the short-horned class, as also that of the year olds against all classes then exhibited. Subsequently at the Fair of the American Institute last autumn, he was again awarded the first prize for the yearlings of his class. He is a Roan Bull of the most complete symmetry, and although only two years old on the 5th of last Dec., weighs about 20 cwt.

Pedigree—Marius, a Roan Bull—calved December 5th, 1842, got by Roman, dam by Waverly—gr. dam by Satalite—gr. g. dam by Cato—gr. g. g. dam by St. John—gr. g. g. g. dam by Chilton—gr. g. g. g. g. dam by the White Bull—gr. g. g. g. g. gr. dam by Favorite—gr. g. g. g. g. g. gr. dam by Duke. Signed, George Earl Spencer.

Letters, post paid, may be addressed to the subscriber.
Sing-Sing, N. Y. Jan. 28, 1845.—tf. JOHN LUMSDEN.

AGENTS FOR THE CULTIVATOR.

It would occupy too much room to give a full list of the Agents for the Cultivator. We would therefore state that all Postmasters are authorized to act as Agents, as well as all others who feel a sufficient interest in the circulation of our paper to induce them to act as Agents. We add a list of such Agents as have the back volumes for sale.

Auburn, N. Y.—J. C. Derby & Co. booksellers.
Alexandria, D. C.—Bell & Entwistle, booksellers.
Augusta, Geo.—C. A. Greenville & Co. booksellers.
Buffalo—T. S. Hawks, Periodical Depot.
Boston—E. Wight, Druggist.
A. D. Phelps, 124 Washington-street.
Baltimore—Dr. G. B. Smith.
Cincinnati, O.—W. H. Moore & Co. booksellers.
Erie, Pa.—T. S. Moorehead, Jr.
Halifax, N. S.—C. H. Belcher, bookseller.
Hartford, Ct.—E. W. Bull, Seedsman.
Louisville, Ky.—George, Lapping & Co. Seedsmen.
Montreal—John H. Scott and B. Brewster.
New-York—M. H. Newman, bookseller, 199 Broadway.
New-Haven, Ct.—J. M. Patten.
New-Orleans—W. M'Kean, bookseller.
A. Hodge, Jr. Esq.
Philadelphia—Landreth & Munns, Seedsmen.
Pittsburgh—J W. Cook, bookseller.
Providence, R. I.—A. H. Stilwell, bookseller.
Quebec, L. C.—J. Wheatley, Stationer.
Rochester—D. B. Dewey, Arcade Hall .
Richmond, Va.—R. Hill, Jr. & Co.
Rome, N. Y.—Comstock & Johnson.
Utica, N. Y.—Wm. Bristol, Druggist.
Washington City—J. F. Callan & Co. Seedsmen.
Wilmington, Del.—Jas. La Roche.

PROUTY & MEARS'

PATENT Centre Draught Self Sharpening Ploughs, from $6 to $13 each—Subsoil Ploughs at $8, $10, and $12 each—Corn Planters $12 to $15—Straw Cutters in variety—Meat Cutters and Stuffers—together with every implement wanted on the farm or garden. Also a full assortment of Vegetable, Flower and Field Seeds, crop of 1844, warranted of the best quality and true to name; among them are several new and superior kinds, as Seymour's Giant Celery, Union Head Lettuce, &c. &c. Fruit Trees, Bulbous Roots, &c., for sale at the Philadelphia Agricultural Ware House and Seed Store, No. 194 1-2 Market Street, Phil'a, by D. O, PROUTY.
January 20—2t.

ISABELLA GRAPES, of proper age for forming Vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the Vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their location is not too far North.) All communications, post paid addressed to R. T. UNDERHILL, M. D., 400 Broadway, New York, will receive attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his Vineyards and Nurseries, by improved cultivation, pruning, &c., that they will generally ripen well and produce good fruit when planted in most of the Northern, and all the Western, Middle and Southern States.
January 20.—2t.

PRINCE'S LINNÆAN BOTANIC GARDEN
AND NURSERIES,
Flushing, L. I., near New-York.

WILLIAM R. PRINCE & CO'S New Descriptive Catalogues of Fruit and Ornamental Trees and Plants (34th edition,) *with prices much below those usually charged,* and comprising additions of above 500 select varieties of Fruits, and 1200 varieties of Ornamental Trees, Shrubs and Roses, not in any other American Nursery, will be sent to every post paid applicant. The cost of the present edition, is above $700, and it is the most complete ever published.

Also, Prince's Treatise on Fruits, $2,00, and on the Vine, $1.50, and on Roses, 50 cents. Orders will be executed in a superior manner, and forwarded as ordered. WM. R. PRINCE & Co
Flushing, December, 1844—2t.

N. B. The public are cautioned against a spurious assumption of our title and name by Winter & Co.

HUSSEY'S REAPING MACHINE.

THE subscriber has now brought his Reaping Machine to the highest state of improvement. The cutting of four harvests has proved the last improvements to be permanent and durable. The four horse machine is warranted to cut from 15 to 20 acres per day—price, $170. The light two horse machine is warranted to cut from 12 to 15 acres per day—price $100. Medium size, price, $140. Farmers who intend getting machines to cut their next harvest, will please send their orders soon. References are given in the Dec. number of the Cultivator, 1844. Also for sale, my corn and cob crusher, an improved article; price 25 dollars. OBED HUSSEY.
Baltimore, Nov. 1844—4t

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. II. ALBANY, MARCH, 1845. No. 3.

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5,00—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage.

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OFFICE IN NEW-YORK CITY, AT
M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,
where single numbers, or complete sets of the back volumes, can always be obtained.

☞ This paper is subject to newspaper postage only, being one cent within the state or within 100 miles of Albany, and 1½ cent for any greater distance.

THE CULTIVATOR.

TO CORRESPONDENTS.

COMMUNICATIONS have been received since our last, from C. D., B. P. Learned, S. Weller, P—, J. P. Norton, D. G. Mitchell, A Lady, Solon Robinson, W. Orcum, Agricolaris, Yarrow, A. S. of Oakwood Farm, Amherst, S. B. Buckley, S. W. Jewett, B., S., Charles Colfelt, Dairyman Farmer, A Country Typo, H. W. S. C., Indicator, A Laboring Man, A Subscriber, C. Osborne, P. Smith, Jr., Fishkill Landing, S. Camp, A Subscriber, D. S. Curtis, G. N. Blakeslee, H. A. Parsons, Gibson & Ritchie, A. C. Stevenson, M. Adams.

We are under obligations to the American Institute, New-York, for a handsome pamphlet copy of the "Proceedings of the National Convention of Farmers and Gardeners held at the American Institute," in Oct. last—To J. R. BAILEY, New-York, for the "Leicester Journal," containing very full accounts of the anniversary meetings of the Rutland and Leicestershire *(England)* Ag. Societies—To Hon. H. L. ELLSWORTH, Com. Patents, for two packages of various kinds of seeds—To Hon. WM. L. GOGGIN, M. C., for his Address before the New London (Va.) Ag. Society—To J. W. LINCOLN, Esq. for the Transactions of the Worcester County, (Mass.) Ag. Society for 1844—To R. R. PHELPS, Esq. for the Transactions of the Hartford Co. (Ct.) Ag. Society for 1844—To LORENZO BULL, for a copy of the beautiful Diploma of the Hartford Co. Ag. Society, and for copies of the Transactions of the same Society for 1842 and 1843—To HENRY WATSON, for a copy of the same—To Hon. LEVI WOODBURY, U. S. Senate, for his Address before the National Institute at Washington, on the 15th of last month. To ARTEMAS HALE, Bridgewater, for Reports of the Plymouth Co. Ag. Society—To E. H. PEASE, bookseller, of this city, for copies of Johnston's Agricultural Catechism—To F. DWIGHT, for a copy of his Report on the Common Schools of Albany County.

CRITICISM.—The criticism of "Amherst" is received. It is certainly much to the point, but we would remark that many who send articles for the Cultivator, are not practiced writers. *Facts*, of the most valuable kind, are frequently communicated in a style not the most laconic or beautiful. Justice, however, compels us to say that we have found the objections of our correspondent in regard to "redundant expressions," and "circuitous style," not generally more applicable to those who write but little, than to those who write much. The hints of Amherst, are nevertheless good, and we will endeavor to profit by them.

☞ Several communications in type for this month, are crowded out to make room for the Prize List of the State Agricultural Society.

Mr. HATHAWAY, Rome, will have seen that the extract he sent us was noticed in our last number, p. 71.

J. H., *Guelph*.—The 'Northern Light,' has been discontinued. What shall we do with the $2?—Shall we advertise the stock you wish to dispose of?

J. P.—Your request shall be attended to, and the necessary preparations made in due season.

MONTHLY NOTICES.

NEW-YORK STATE AGRICULTURAL SOCIETY.—The Executive Committee met on the 13th and 15th February, and completed the premium list, &c., which will be found in another part of this number. The next show, it will be borne in mind, will take place at UTICA, on the 16th, 17th and 18th days of September next. We would call particular attention to the premium list, which in some respects, we think, is improved on that of former years. The central position of Utica is certainly favorable to a wide competition in all the departments, and we are confident the people of that thriving city will omit nothing on their part to make the show in all respects worthy of our great state. Come on, then, farmers, and give us the opportunity of comparing the products of your farms at this grand *rural jubilee*.

AGRICULTURAL LECTURER.—We are pleased to inform the public that the Executive Committee of the New-York State Agricultural Society have made an arrangements with the Corresponding Secretary, Dr. D. LEE, to make a tour through various portions of the state, for the purpose of collecting useful information, and giving occasional lectures on agricultural subjects. We have no doubt his visits will be received by the farmers with warm approbation, and that due notice only will be required to insure the attendance of large audiences to hear his lectures. Dr. Lee is at present a member of the Assembly, and during the session may be addressed here on any matters pertaining to his proposed tour.

THE CULTIVATOR FOR PREMIUMS.—We have recently received orders from the following Societies for The Cultivator to be distributed as Premiums:

Orange Co. Ag. Society, N. Y.,.........	7	copies.
Chautauque Co. Ag. Society, N. Y......	17	"
Miami Co. Ag. Society, Ohio,.........	10	"
Ohio and Brooke Counties Society, Va.,	15	"
Coshocton Ag. Society, Ohio,.........	7	"
Herkimer Co. Ag. Society, N. Y.,......	36	"
Cortland Co. Ag. Society, "	31	"
Seneca Co. Ag. Society, "	25	"

We would suggest to the Managers of County Ag. Societies, who will soon convene to make out their Premium Lists for the present year, whether they could in any way better promote their objects, than by including in their premium lists 25 to 40 copies of The Cultivator.

Liberal Subscriptions.—Hon. J. J. McKay, M. C. from North-Carolina, has renewed his subscription for *one hundred* copies of "The Cultivator," for gratuitous circulation among his constituents. James Sloan, Esq. of the same state, is also a subscriber for *one hundred* copies.

Solon Robinson.—We give this month, the first of a series of Letters from this veteran, from the South and South West, which we doubt not will be read with interest in all sections of the country. This letter was intended for our Feb. number, but did not reach us in season. We have a second letter, dated at Glenfinlas, Missouri, 26th Jan., which will appear in our next.

Suffolk Pigs.—In our notice of the Massachusetts State show at Worcester, last fall, we spoke of some Suffolk swine, imported by Mr. William Stickney, of Boston. In a letter lately received from Mr. S., he informs us that they have proved to be a very valuable variety. Some of the half bloods, killed the past winter, at the age of ten to eleven months, weighed 300 to 375 lbs. each. We notice a letter of Col. Jaques in the Massachusetts Plowman, in which he thus speaks of the Suffolk pigs: "They are of good promise, and if judiciously crossed with some of our varieties, may make great improvements."

Hops.—There were inspected in this city during the last year, by William Armsdell, inspector, 1050 bales of hops. These were raised, principally, we are informed, in the counties of Otsego, Oneida and Madison, in this State. They are said to have been well matured on the vine, of rich flavor, and well secured, being of a quality that would generally pass for first sort. Gurdon Avery and Charles D. Palmer of Oneida, Solomon Root of Madison, Gilbert Conrad and William Hinds of Otsego county, are mentioned as having produced a superior article.

Carrots.—In our notice of Mr. Newhall's farm in the Jan. No., we spoke of the culture of carrots, and stated that the crop we saw growing in October would probably amount to eight or ten hundred bushels per acre. By a note of Mr. Newhall's in the New-England Farmer, Jan. 29, we learn that the crop was carefully measured, at harvesting, and was found to be 880 bushels per acre.

Correction.—In our notice of Mr. Newhall's soiling system, we mentioned that rye, which was the first thing cut in the spring, lasted till corn, sown or planted for fodder, would answer to cut and feed. In his note to the N. E. Farmer, Mr. N. states that we were under a slight mistake. There is usually a short time after the time for using rye is passed, that he feeds with green clover, before the corn is used.

Early Corn.—Extract of a letter from B. Brewster, Esq. Montreal.—"Should an opportunity offer, I shall send you a few ears of Indian corn, similar to your Dutton, but much earlier. Time, the past year, 94 days from planting to harvesting—produce 96 bushels to the acre." We shall be greatly obliged, if Mr. B. will send us half a bushel or bushel of ears, by express, and charge expenses to our account.

☞ The *Germantown Telegraph* of Jan. 29, copies an article of two and a half columns from the Cultivator, and invites the attention of its readers to it, without informing them from whence it was copied. It appears, in fact, as original in the Telegraph, and will probably be copied from that paper and credited to it, as several of our articles have heretofore been, which appeared in that paper leaded, without credit. The Telegraph will understand why the exchange is discontinued.

Samples of Wool.—A. C. Stevenson, Esq. Green Castle, Ia. says—"I would like to have samples of wool from a few of the best fine wooled flocks in your vicinity, and if any of your sheep growers will send me samples and prices, I will take some pains to exhibit them."

Agriculture in New-Brunswick.—By the St. Andrews Standard, we have the twenty-fifth report of the Charlotte County Agricultural Society, with the list of officers, &c. for the present year. It appears that this society has rendered important benefits by the introduction of seeds, implements, and stock of various kinds; and the report informs us that a commendable spirit of improvement is observable in the various departments of agriculture. We rejoice in their progress.

Mount Hope.—The editor of the *Troy Whig*, in noticing the February number of the Cultivator, and its beautiful view of "Mount Hope," after alluding to the proprietor as "among the most distinguished breeders of Durham cattle in the United States," says: "Mr. Prentice is moreover a liberal patron of the fine arts. In the hall of his mansion at Mount Hope are the four marble statues of the Seasons executed for Mr. Prentice by Henry Kirke Brown, the young American sculptor now in Italy, and several marble busts by the same artist. It is by the liberality of Mr. Prentice that Mr. Browne is enabled to prosecute the study of his profession abroad."

Potatoe Rot.—An exchange paper suggests that the rot in potatoes may be "occasioned by the worm that destroys cucumber vines." We have seen no satisfactory evidence that this trouble is caused by *any* insect. The most minute examinations have failed to trace the rot to animal life in any form.

South Carolina Wine.—The Savannah Republican states that Dr. Sidney Smith, of Robertsville, S. C., has lately exhibited eight samples of wine made from the pure juice of the grape. Dr. Smith has 800 gallons of these wines, which are pronounced excellent, particularly for all medicinal and culinary purposes.

Potatoes in Hills and in Drills.—The Plymouth co. (Mass.) Ag. Society paid premiums last year for experiments to ascertain the best mode of planting potatoes. The following are some of the results:

	In hills.	In drills.	
P. Bassett, of Bridgewater raised	363	425	bu. per acre.
Paul Hathaway, Middleboro', -	331	396	"
B. Hobart, - - - - - - - -	270	310	"

Neither the relative quantities of seed, nor the difference in the expense of cultivation for each mode, are mentioned.

FOUNTAINS.

Few things add more to the beauty and interest of gardens, than a diversity in the play of water. In hot, sultry weather, especially, it contributes to cool the air, as well as enliven the prospect. Water spouting from an ajutage, never attains entirely the height of the reservoir, being prevented by various concurring causes:—1st, friction in the tubes; 2d, friction against the circumference of the aperture; 3d, the resistance of the air; its weight obstructs the rising column. Thus the Emperor Fountain, lately erected at Chatsworth, with a fall of 381 feet, only raised a jet 267 feet in height. The above causes account for the loss; as all are aware if a pipe were laid to a corresponding height, the column of water would then rise to the height of the place from whence it was supplied. In order to make large jets rise higher than small ones, the conduit pipe must be large enough to furnish a sufficient quantity of water to supply them. History informs us that the ancients were far before us in this delightful ornament. Greek cities were adorned by them; in Corinth, there were several; in Rome, Frontenus was employed in erecting fountains; Pompeii had many, some of which remain to this day. The fountain of Trevi, and the Pauline fountain at San Pietro, in Montono, are immense piles of architecture. The London Gardener's Chronicle, from which we have condensed the above remarks, gives the following table in reference to some of the principal fountains in Europe. The same paper also mentions an improved hydraulic ram, used by Mr. Roe, in which water can be raised with a fall of ten feet, to the height of 300 feet without labor.

The Emperor Fountain at Chatsworth, height of jet,	267 ft.
Wilhemhœhe Fountain, in Hesse Cassel,	190
Fountain St. Cloud,	160
Peterhoff, Russia,	120
Old Chatsworth,	94
Versailles,	90

TEN HILLS FARM.

This farm, the residence of Col. Samuel Jaques, is in Charlestown, about three miles from Boston. The location is one of the finest in the country. The Mystic river, which is here navigable for vessels of the largest class, forms the northern boundary, and the Middlesex canal and Medford turnpike pass through its center. From a kind of promontory which embraces the northern part of the farm, and around which the Mystic makes a graceful curve, there rises, with gentle acclivity, a hill from whose top is presented a landscape view of most exquisite beauty and interest. Here, at once before the eye, is Charlestown, with Bunker Hill and its towering monument—a little beyond, is the city of Boston, with its harbor and shipping, and the bay, with its numerous green islands—scattered around, are the many handsome towns and villages which constitute the suburbs of the New-England metropolis; the highly cultivated country, with all its varied features of hill and dale, forest and field, filling up the picture to the horizon on every side. But no description can do full justice to the diversified beauty of the scene.

Contiguous to this farm is Mount Benedict, on which stood the Ursuline convent which was burnt by a mob on the 11th August, 1834. The blackened and crumbling walls, with a scattered remnant of trees and shrubbery, are all that now remain of the objects which once adorned this memorable spot.

Many interesting reminiscences are associated with Ten Hills. The first vessel constructed in Massachusetts, called "*The Blessing of the Bay*," was built *here* in 1631, and a part of the wharf at which she was moored, is still to be seen! The first house here, was built by an English gentleman, in 16—, and a door, which is believed to have belonged to this house, now constitutes one of the hall-doors of the present mansion! The latter was built by the late Gen. E. Haskett Derby, who resided here for several years.

Col. Jaques has long been extensively known as a skillful breeder of various kinds of stock. Some of the first premiums of the Mass. State Ag. Society on Merino sheep, were awarded to him. He was also one of the first introducers of the Leicesters and South Downs—having received a premium of fifty dollars for the best Leicester buck in 1822; and from the year 1816 to 1834, he received from the Mass. Ag. Society in premiums on Merino, Leicester, and South Down sheep, the handsome sum of three hundred and twenty-five dollars. He was also the owner of some of the first of the improved Short-horn cattle that were brought to this country. Among these were the bull *Cœlebs* and cow *Flora*, imported in 1819. They were derived from the celebrated herd of Mr. Mason, of Chilton, Durham. From this pair, Col. J. bred several animals which were much admired—some of them received the highest prizes of the Mass. State Ag. Society,[*] and sold at prices from $300 to $500 each, which at that early day were considered very high.

In 1823, Col. Jaques sold his bull *Eclipse*, then two years old, to the Agricultural Society of Montreal, for $500. The Montreal papers, in noticing his arrival there, declare him to have been superior in points and appearance, to any thing which could have been anticipated. [See extract from the Canadian Courant, in the New-England Farmer, vol. 1, p. 350.]

According to the documents which accompanied the importation of Cœlebs and Flora, (copies of which have been placed in our hands,) the former was the grandson on both sides, of Mr. Colling's bull *Comet*, which was sold for a thousand guineas. Flora's dam and sire were also both by Comet. Her dam was said to have given 33 quarts of milk per day. Cœlebs was a very popular bull, and for several years earned his owner the round sum of from $500 to $600 per year; and during the time Col. J. owned him, no less than three thousand two hundred and thirty dollars were received for his services. Many of his progeny were remarkable as milkers. In a letter received from Col. Jaques, dated Jan. 16th, last, he says,—"The different strains of Cœleb's blood are now daily talked of, and are eagerly sought after, in all parts of the country where his blood has been spread—particularly by our *milk-men;* and I am frequently called upon to go and see a fine cow whose blood can be traced back through several generations, to Cœlebs; and not unfrequently do I find a fine animal of the fifth or sixth generation, showing points almost equal to a full blood. Mr. Leonard Stone, of Watertown, one of our best and wealthiest farmers, says he had two cows by Joshua Coolidge's premium bull, [a son of Cœlebs, which took a premium at Brighton in 1822,] that proved the best milkers he ever had, and he added that he would now be very glad to obtain a number of such cows, at $100 each."

There can be no doubt that Cœlebs caused a great improvement in the stock of Massachusetts and other sections where his progeny were introduced.[*] The variety to which Col. Jaques has given the name of "Cream pot breed," originated from a cross of Cœlebs with two remarkable cows selected from what is called the native stock of the country.

The Cream-pot cows are distinguished for the quantity and particularly for the *richness* of their milk. Particular trials have been made with some individuals of this stock, and they have given at the rate of from seventeen to twenty-one pounds of butter per week. Col. J. has a few cows of this breed now on his farm. He would have had more, but the tempting offers of a hundred dollars a piece for his heifer calves, have induced him to part with most of them at an early age. We were shown the milk and cream from the cow *Gem*, and one or two others. The cream is of a very rich yellow color, and of uncommon thickness and tenacity. That which had risen on pans of milk that had only stood eight hours, was so firm that after being separated from the edge of the pan, it would almost hold together to be lifted by a fork.

The shape and points of these cows are remarkably good. Gem, which may be considered a fair specimen of the best of the family, is a very large bodied short-legged cow, with long, wide and deep hind quarters, a rich yellow and mellow skin, large milk veins and udder. Her color is dark red, which is a family characteristic. Her head and neck have not quite that fineness of some of the pure Durhams or Ayrshires, but her body, especially the hind quarter, is very near *right*, and her *handling* is first rate.

Judging from what we have seen, we should say, to sum up the qualities of the Cream-pots, that for the New England climate, lands of middling quality, and the combined purposes of the dairy, the shambles, and the yoke, they are not probably surpassed by any other stock.

In feeding his stock, Col. Jaques practices close economy. He has sometimes kept a herd of cows for the purpose of supplying milk for the market. The following is a system of feeding which he has followed with success. For 30 cows, cut with a machine 30 bushels for one feed; one-third common or English hay, one-third salt hay, and one-third rye or barley straw; add 30 quarts of wheat-bran or shorts, and 10 quarts of oat and corn meal moistened with water. One bushel of this mixture is given to each cow in the morning, and the same quantity at noon and in the evening. In addition to this, a peck of mangel wurtzel is given to each cow per day. This mode of feeding has been found to produce nearly as much milk as the best grass feed in summer. When no wheat bran or any kind of meal is given, the hay is fed without cutting.

Col. Jaques has favored us with some very valuable papers in reference to the introduction and improvement of stock in New-England, and other matters, from which we design to form a separate article.

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[*] No less than six hundred and forty-one dollars, were awarded in premiums, by the Massachusetts State Agricultural Society, to Cœlebs, Flora, and their descendants, from 1819 to 1835. Flora had fourteen calves—the first in 1819, and the last in 1833.

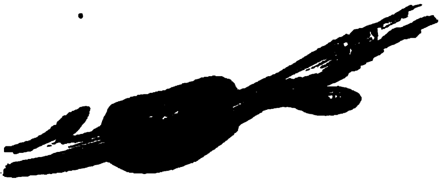
[*] The late Hon. John Lowell, in his Report on Bulls and Fat cattle at the Mass. State Show at Brighton in 1824, observes—"On the whole it must be obvious that Cœlebs has done much for the amelioration of our stock. His progeny are certainly fine." [See Mass. Ag. Repository and Journal, vol. 8, p. 221.] The same gentleman, in an article on the improvement of the breed of cattle by the importation of foreign stock, (Mass. Ag. Repository and Journal, vol. 8, p. 311,) makes the following remarks—"While Col. Jaques, the most successful, and the most intelligent of our breeders, who, under great disadvantages of location, seems to rival the celebrated Bakewell, in his skill and attention, can sell his pure breed, as he has done this spring, at $300 for an eight months old bull-calf, there can be no doubt that the experiment will be fairly tried."

THE ORCHARD CATERPILLAR—TIMELY CAUTION.

MANY of our readers will recollect the extensive injuries committed on the apple-trees of this country, several years ago, by the common orchard caterpillar. Either from the unfavorable seasons or from some other cause, they subsequently disappeared in a great degree, and for a few years past we have been very little troubled with them. But they are now again on the increase; in the summer of 1843 there were some occasionally to be seen; last year they had multiplied very considerably; and present indications promise very severe damage next summer.

What are those indications? And are they sure?

They are the numerous nests of eggs, scattered thickly over the apple-trees, in all orchards, at least in the western part of the State, and doubtless in the other portions; and unless these are destroyed either accidentally or purposely, before next spring, the owners of orchards may expect trouble.



Caterpillar's Nest—(Fig. 23.)

One of these nests of eggs is accurately represented by fig. 23, encircling the branch. The eggs are first laid closely round the branch, and afterwards covered over with a water-proof varnish; in the form of numerous small vesicles or bubbles, like the scum on boiling molasses, the numerous air-cells forming a non-conductor of heat and effectually protecting the eggs from the greatest severities of winter. Sometimes they only extend partly round the branch. The number of eggs, each one producing a caterpillar, is from about three to five hundred in each nest, most of which usually hatch. They are laid in the latter part of summer and early in autumn. They remain until the following spring, and the young caterpillars come out just as the leaves of the apple are bursting from the buds. At this time, a whole nest of five hundred are not so large in bulk as a single caterpillar when fully grown. They increase rapidly in size as the leaves expand, and in a few weeks, one nest of them will completely defoliate a large branch. The consequence is, that neither the branch itself, nor the fruit it contains can grow and mature. Where there are several nests on a tree, the crop is very seriously lessened in size and quality.

The number of remedies are in proportion to the extent of the evil. The usual course is, first, to leave them unharmed until they become large, vigorous and hard to kill, and until they have already done considerable mischief. They are then beaten off by whips; threshed off by poles, wound upon long sticks while in their webs, and crushed; scoured off by circular brushes; whitewashed with lime; anointed with soapsuds or strong ley; shot or blown off with gunpowder; or swept off clean while young by ascending a ladder and grasping them with both hands. The latter appears to be the most effectual of these modes. Many would prefer first covering their hands with mittens, though we know a distinguished cultivator who fearlessly takes a nest at any age, and grinds it in his ungloved hands till all are destroyed.

But *an incomparably better mode* is to take a basket in one hand; a long and light pole, with a pair of clipping shears worked by a cord at the end, in the other; and pass through the orchard any time during autumn or winter, clipping off all the nests of eggs, throwing them into the basket, and afterwards burning them. In the absence of shears, a *very sharp*, hooked knife, set in the end of the pole, will answer nearly as well. A day when no bright clouds are overhead, should be selected, to prevent pain to the eyes. A little practice will enable the operator to see them at a glance, as they are generally within a few inches of the extremities of the branches. Every nest thus removed, done in two or three seconds, effectually prevents a nest of caterpillars next spring, without the danger of stragglets escaping, which is nearly always the case after they are hatched. The expedition of this mode is another chief recommendation.

The only objection to this mode is, that it gives such a fine opportunity for the pranks of that vexatious old thief "*Procrastination*." For it may be done "*any time*" through autumn and winter, and hence is neglected for the same reason that the old man near Niagara falls had never seen the cataract, because he could go and see them "any day."

FASTENINGS FOR STALL CATTLE—(Fig. 24.)

SOME of our readers may be familiar with the following mode, but its convenience, simplicity and effectiveness, render it worthy of more general adoption.

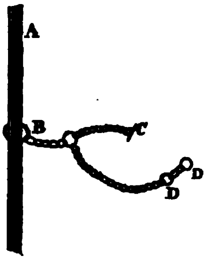


Fig. 24.

Two cows will occupy one stall six feet wide. An upright pole, A. is placed near the partition on each side, to which the animal is fastened. The cross-bar C. at the end of the chain, hooks into one of the rings D. D. and holds the animal—into the outer ring for a large, and into the inner ring, for a small animal; the sliding ring B. fastens the whole to the upright post, and while it permits the cow either to stand up or lie down freely, it prevents her from making war on her neighbor, standing with her side by side.

THE APHIS, OR PLANT LOUSE.

A friend desires us to give some information in regard to the extirpation of the aphis from rose plants, &c. Solutions of soap, tobacco-water, or tobacco-water and soap-suds mixed together, have been used with success. Flour sulphur dusted on the plants with a swan-down puff, and fumigations with sulphur and with tobacco, have been found effective. Decoctions of elder leaves and of cayenne pepper, are likewise useful. When the insects first make their appearance on the plants, they are mostly on the ends of the twigs or branches, and they may then be easily got rid of, by plucking off the leaves to which they are attached; or the branches may be bent into vessels containing some of the above solutions, and the insects thus killed. In using the liquids on the plants, some little force is necessary to insure the desired effect. A syringe, with a nose like that of a watering-pot, is the best contrivance for this purpose. Willis's syringe, which is for sale by J. Breck & Co. Boston, is well recommended.

Some other insects are troublesome on rose-plants. The Rose Scale, (*Aspidiotus rosæ*,) lives on the stems and old twigs of rose-trees, which are often entirely covered with them, and look mouldy. When numerous, they are very destructive. Kollar says the best way of getting rid of them, is brushing them off with strong brushes before the plants sprout.

The *rose-moth* is also a troublesome enemy to the rose. From its smallness and peculiarity of form it is easily overlooked. Kollar thus describes it: "If the new leaf shoots are closely examined, a little brownish scale is found here and there attached to them; and on nearer inspection, we shall be convinced that it is a little case, in which a worm, the larva of a small moth, is concealed, which gnaws the tender shoots. When it has devoured one shoot, it removes with its house, and attacks another, and thus in a short time, one of these larva can strip a whole branch of its shoots. The larva which lives in the little case is only a few lines long; yellow, with a black head and spotted collar," &c. To preserve rose-trees from this enemy, Kollar directs that the small cases in which the moth is enveloped, be looked for in early spring, before any foliage is developed, when an experienced eye will discover the insect. They should be taken off and crushed immediately, for if left, they will re-ascend the tree.

FACTS IN FARMING.

Nothing is more agreeable to us, than to meet with observing, practical farmers, from whom we can gather valuable facts. One day in January last, we called on Mr. William Merrifield, who lives in Guilderland, about sixteen miles from this city. The weather being inclement, and the ground covered with snow, we could not go over the farm to examine the soil and mode of management, but we had the pleasure of seeing his cattle, sheep, hogs and poultry, and of obtaining from him some useful hints in relation to farming operations.

Cattle.—Mr. Merrifield is a native of Devonshire, England, and he informs us that the dairymen in that district were in the habit of crossing their Devon stock, occasionally, with the Jersey-Island, or Alderney breed; the result of which was, a great improvement in the milking and butter making qualities.

Mr. Merrifield states that about thirty-five years ago, the late Chancellor Livingston had some imported cattle called Devons, but whose color, points and qualities, indicated that they had a dash of the Jersey blood. They were excellent for the dairy. Mr. M. had the good fortune to obtain a heifer of this stock, from a gentleman to whom it had been presented by Chancellor Livingston. She proved a first rate butter cow.

Several years after this, Gen. Solomon Van Rensselaer, of this city, purchased two bulls and twelve cows of Gen. Williamson, of Ontario county. One of these bulls was called a Short-Horn, and the other a Long-Horn; but Mr. Merrifield has no doubt that the latter was a *Hereford*, as he had the red color, white face, and other characteristics of the Hereford race. The stock bought of Gen. Williamson, were said to have descended from animals imported by him from England. Mr. Merrifield crossed the stock which came from the (so called) Devon heifer with two bulls from the herd of Gen. Williamson, and has kept the stock thus derived to this day, with no other mixture than a slight cross with the short-horns of the late Matthew Bullock, Esq.

Mr. Merrifield observes that the blood of the Hereford bull (as he calls him) above mentioned, must have been very *strong*, as his descendants, down to the present time, show many of his prominent characteristics, though they may have no more than a sixteenth or thirty-second part of his blood. Mr. M.'s stock look well, and *do* well for the dairy, and have generally good constitutions, with a fair disposition to fatten. A three year old heifer of his, is really "hard to beat," for a combination of qualities that constitute a profitable animal. A few years ago, Mr. M. had four cows, all four years old. He tried the milk of the four cows for a few weeks, while they were kept entirely on pasture feed, and they made, on the average eleven pounds of butter each, per week.

Sheep.—Mr. Merrifield has a small flock of excellent long-wooled sheep. They were originally Leicesters, derived from the flock of Mr. Dunn, but latterly Mr. M. has worked in the blood of the Cotswold. Last season, he sheared sixteen ewes, (each of which reared a lamb,) four bucks, two wethers and four yearlings, and they gave an average of seven pounds of perfectly washed wool per head, which sold at thirty and a half cents per pound—making the value of the fleeces two dollars thirteen and a half cents each. One yearling buck sheared eleven and a half, and a three years old buck ten a half pounds. Mr. M. has had a buck which sheared twelve pounds per fleece, and Mr. Dunn had one that sheared fifteen pounds, of one year's growth. Mr. M. has frequently fatted wethers of his flock, and they have sometimes weighed as high as forty-five pounds per quarter, bringing (sold on the farm) from ten to fifteen dollars per head.

Swine.—Mr. Merrifield has a first rate stock of swine. They are a cross of the Cheshire (from stock imported by Mr. Corning) and the Mocha. They have small heads and legs, with very large bodies, and can be made fat at any age with small expense. He was feeding his breeding stock almost entirely on raw carrots, yet they were fat to a *fault*. He has a boar, nineteen months old, whose superior, every thing considered, we think we have never seen. The average weight of these hogs, tolerably fattened, has been, at six to eight months old, 175 to 200 lbs., and at eighteen months old, 400 lbs.

Poultry.—Mr. Merrifield showed us two breeds of hens—a large sort, evidently a cross of the Java and Malay, and the Game. The latter are as handsome in shape, and as fierce in appearance, as any we have seen.

Spring Wheat.—Mr. Merrifield has for many years sowed more or less spring wheat. He finds it a rather more sure crop on his land than winter wheat. Of late years, however, it has often been injured by the worm, or maggot, in the head, (*Cecidomyia tritici*,) improperly called "weevil." Late sowing, for spring wheat, is the best remedy against this enemy. Mr. M. has had the Italian spring wheat eighteen years, and by taking great care to save the plumpest and heaviest for seed, it has much improved, become more hardy, &c. He has now a quantity of this seed wheat, which is very clean, a few bushels of which he would spare.

Potatoe Rot.—Mr. Merrifield's potatoe crop has suffered much from the prevailing malady for two years, particularly the last. He has as yet found no remedy against it. He has made fair experiments with lime, put on the seed at planting time. It has done no good whatever, so far as could be seen. Last year he caused some of the potatoes to be thoroughly rolled in lime, just before planting them. The whole crop rotted without any regard to the lime. This is worthy of notice, as it has been by some supposed that lime would prevent the rot.

CUTTING GRAFTS.

Lord Bacon said very truly, "When nations arrive at civility and elegancy, men come to build stately, sooner than to garden finely, as if gardening were the greater perfection." Yet the most of farmers who expend one to two or three thousand dollars or more on a fine dwelling, think it extravagance beyond sufferance, to expend one or two hundred dollars to have a good, pleasant, profitable garden, for themselves, wives and children. And no part of the "greater perfection" aforesaid, is more neglected, than that appropriated to the cultivation of first rate fruit. How much better to have rich, sweet and superb cherries for one or two months in the early part of summer, than only the common pie cherry, whose only taste is its intense sourness; and apricots, almost equal in flavor to the most delicious peaches, and ripening weeks before the earliest peaches are thought of; and melting pears before harvest, and so on in succession till mid-winter; and the finest peaches all the autumn; and other fruits added, the whole making out a complete circle of succession the whole year round.

Now, those who have worthless, or second or third rate trees, should forthwith prepare to graft better into them. Now is the time to cut the grafts, which may be collected any time during winter, if they are well preserved till spring. No pains should be spared in getting the very best kinds; some money and a few long rides will be well employed for this purpose. If the fruit can be examined before the kinds are chosen, it may be done much more satisfactorily;—although those who are not familiar with good fruits might make some blunders. We have known some cultivators, when travelling from home, and very hungry, select as delicious some very contemptible sorts, which their keen appetites led them to pronounce delicious.

To preserve grafts till spring, the following mode is perhaps the best, as it is uniformly successful, and of very easy performance: Procure a wooden box, of a size about twice as large as will contain the given bundle of grafts, and open on one side; put the grafts into it, and fasten them by cross sticks as far as possible from the open side. Then dig a hole into the ground to receive the box with its contents; place the open side downwards, and cover the whole with earth till wanted. Two or three inches of earth over the top of the box are enough. A dry spot of ground should be selected. In this way the grafts are kept damp enough, without being wet by actual contact with the soil.

Timber and corn cannot be grown together with advantage.

SPRING GRAIN.

Excepting the liability of spring wheat to be attacked by the insect improperly termed "weevil," we believe it may be assumed as a rule, that spring grains generally succeed best when sown as early in the season as the ground can be brought into a proper state to receive the seed. For oats, in particular, and especially on light soils, our experience leads us to prefer an early seed time. In this latitude, the ground frequently becomes so far settled during this month, that warm, light soils may be sown. The proper quantity of seed per acre, is a matter on which much diversity of opinion prevails. From one and a half to *five* bushels of oats are sown by different farmers. In our opinion, the quantity of seed should be varied according to the nature of the soil, and the time of sowing; so that no fixed rule can be laid down. Of the grain we are now speaking of, we should use from two to three bushels per acre, in the ordinary mode of sowing. And we would here remark, that our experience has shown that *less* seed is required on *rich* than on thin soil. The reason is this: That in the first case the abundant food the plant receives induces it to *tiller*, or spread; whereas in the latter case but a single seed stem, perhaps, is thrown up. It should therefore be made an object to sow on thin land as much seed as will be sure to cover the ground at once with a sufficient number of plants, for if this is not done, weeds, or some foul growth, will be sure to infest the soil to the injury of the crop.

As regards the practice of sowing four or five bushels per acre, as we have mentioned is sometimes done, we must confess we have seen no satisfactory evidence of its expediency.

For barley, a loamy soil is considered preferable; we have, however, seen good crops grown on quite stiff clays, properly drained and worked. We have sown from two and a half to three bushels per acre.

For wheat, loamy soils, which contain some lime, are best. We prefer sowing about two bushels of seed to the acre. We remarked above, however, that the quantity of seed depended somewhat on the *time* of sowing—thus, early sown grain has more time to tiller, and it actually will spread much more than late sown. In our remarks about the quantity of seed, we have had only in view the ordinary modes of sowing; no doubt is entertained that by the adoption of other modes, much seed might be saved. Sowing or planting in drills, by machines, has been much practiced in England, and to some extent in this country, and so far as we have known with success. *Dibbling*, or planting in hills, is also somewhat practiced in England under the *allotment* system. In this way a few quarts only of seed is enough for an acre, and the product is very great, making an average, in some districts, of forty-eight bushels per acre. But it must be recollected that under this system the ground is hoed and kept clean while the crop is growing—the cheapness of labor, and the dearness of land, justifying the course. But the American farmer would hardly find his account in bestowing so much labor in proportion to the quantity of ground and the quantity of produce.

We have said that spring wheat is liable to be injured by an insect. We think that which is sown early is most subject to injury from this cause. If the sowing is deferred till the latter part of May, it is thought the *season* of the worm becomes past before the wheat is sufficiently advanced to be injured by it. But as the late sown wheat is more liable to injury from rust, &c., than early sown, the farmer must make his calculations as he best can, which enemy is most formidable, or in what course lies his greatest chance of success.

Peas, for early use, cannot be sown too soon after the ground is dry enough to work. Select a warm piece of ground, rather sandy, and do not put on too much rank or strong manure, as it tends to throw the peas too much into vines.

The pea crop is a very profitable one in many situations. Sown on a sod furrow, it furnishes an excellent preparation for wheat, or any other crop. Very hot weather seems not to be favorable to the *filling* of peas; therefore it is advisable to sow them so early that they may get well advanced before the hottest and dryest part of the summer comes on.

Peas and oats are sometimes sown together, and are considered profitable. Ground into meal, they form an excellent food for fattening hogs and other animals, and in sections where Indian corn cannot well be grown, are highly esteemed.

CARE OF STOCK.

During the latter part of winter and the beginning of spring, stock requires more attention than at any other season. There is usually much stormy weather about this time, and under the fluctuations from heat to cold, and from fair to foul, the appetite of the animal is very irregular. Cattle, sheep and swine, are now bringing forth their young, and unless they are properly sheltered, provided with suitable food, and carefully watched and attended, they will certainly fall into bad condition. The best hay should have been reserved for feeding the cows and ewes at this period, and they should be fed, besides, with a little grain in some form, and some potatoes, turneps, carrots, or other vegetables. They should be fed lightly for a few days after parturition, because in the weakened state of the system at this critical time, there is danger of bringing on fever and inflammation by overloading the digestive organs. But after the system has become accommodated to the new change in the secretions, and the milk begins to flow freely, the food of the mother may be increased in proportion to the draft made on her by the increasing growth and demands of the young animal. This should be borne in mind. Thus, a cow with two calves to support, or a sheep with two lambs, should be supplied with double the quantity of food which is necessary to support but one; and if this is not done, the constitution of the mother will be very likely to be injured, or else the young will not have sufficient food. To enable a sow with ten pigs to keep herself in as good condition as if she had but five, she must receive food in proportion to the number; and as the young grow in size, her food must also be proportionally increased till they are able to obtain a part of their support from some other source.

Care should be taken that cows do not calve while tied to the stanchion, or confined in a narrow stall. Serious accidents may arise from inattention to this. If the birth takes place in the night the calf may get covered with the filth of the stall, and if the weather is severe, he may freeze before morning; or the cow may be thrown into a position by which she suffers a permanent injury. Separate apartments, warm and well littered, should be provided, in which the cow should be allowed to run loose for a few days preceding the birth of the calf, and for a day or two afterwards.

A word in regard to calves. If *veal* is the object, feed the cow well, let the calf suck, and make him fat as quick as possible. If milk is of most consequence, and the calf is not to be reared, it is best to "knock him in the head" as soon as the milk of the cow is fit for use. His carcass is worth something for the hogs, and his hide may pay for taking off for the tanner. In *rearing* calves, the expediency of any particular mode depends on circumstances. In the interior, where cattle are reared almost entirely for beef, and where labor is scarce, it is hardly worth the while to undertake bringing up calves "by hand"—it is less trouble to let them run with the cow for several months, and this is probably the best course in such locations. But where butter and cheese are valuable the case is different, and we should prefer teaching the calves to drink instead of allowing them to suck their dams. With close care and attention, good stock may be reared without giving them any new milk after they are two or three weeks old. Skimmed milk, *not sour*, with oil-cake gruel, or oat-meal, will make the calf grow very well. But the calf must be kept dry and warm, the food given warm, and the state of its health, till it becomes well accustomed to the diet, constantly watched. There are several advantages of rearing calves in this way. They become more tame, more readily learn to eat every thing, are more tractable, and are more easily brought to their *duties*, either as cows or oxen, and in some locations, as we have mentioned, this course is most economical.

Oxen and horses, which have worked hard during the winter, will be much benefitted by being allowed a respite during this month of storm and mud; and while the farmer and his boys are engaged in cutting and splitting the year's stock of wood, which has been (of course) got up by good sledding, he will find it much to his advantage to let his oxen quietly chew the cud "of sweet and bitter fancy" in the comfortable barn, or sunny barn yard.

This interval of rest will enable the animals to recover some of their flesh and strength, which have been exhausted in hauling wood and logs, or in carrying the farm products to market; their old hair becomes loose and falls off, the pores of the skin are opened, and the animals, reinvigorated, are fitted to withstand the heat and burden of the spring's labor.

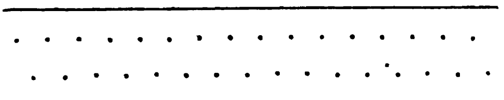
CULTIVATION OF ASPARAGUS.

Of all vegetables, treated as "*greens*," the asparagus is considered by most, as standing at the head of the list. Comparatively few, however, provide themselves properly with a supply, or even where they have an abundance, it is not of the first quality. Perhaps a few hints on its culture, and on the mode of obtaining the finest, may be acceptable at this time.

The difference between large and small asparagus, depends very much on cultivation; a deep rich soil, and *plenty of room between the plants*, producing the largest growth. Something also doubtless is to be attributed to the variety; as by a successive selection of seed from the thriftiest plants, an ultimate improvement may be obtained. Hence, in making a bed, seed from those plants which are known to be very large, are to be preferred. If good plants, one or two years old, can be obtained at hand, the bed will of course be accelerated one year.

A common and a good practice in preparing an asparagus bed, is to trench the ground two spades deep, and then return the earth thus removed, mixed with alternate layers of nearly an equal quantity of stable manure, until the top of the bed is six inches above the surface of the ground. But a great improvement on one part of this process is—after each layer of soil is thrown on the preceding layer of manure, to *intermix it very thoroughly* with the manure, by means of a coarse iron rake, potatoe hook, or other suitable tool. This thorough admixture of soil and manure, though scarcely ever practiced, is of the greatest importance, as large lumps of pure manure, and of earth, without being finely divided and interfused, form but a poor material for the extension of the fine and delicate fibres of the growing plants.

The bed being ready for the reception of plants from the seed bed, which should be removed with the least possible injury to the roots, proceed to lay off the trenches for the rows. One of the greatest errors with most cultivators is crowding their plants too closely together; they wish, after so much labor in the preparation of a fine bed, to obtain the largest possible supply from it, but defeat their own purpose by the slender and diminished growth resulting from such treatment. The nearest possible distance which ought ever to be admitted in an asparagus bed, is one foot apart *in* the row, and eighteen inches *between* the rows. Thus, if the trenched bed is four feet wide, only two rows can be admitted, instead of four or five as usually practised. This may be seen by the following diagram, the dots indicating the plants, which are placed, not opposite, but alternating with each other, which gives the more space between them. If there are eighteen inches of space between the rows, then there will be fifteen inches from the rows to the edge of the bed, which is none too much for the proper extension of the roots. The trenches for the plants should be made six inches deep, and wide enough to admit the roots spread out horizontally, which must be done with the fingers. The depth should be such that two or three inches of earth may be spread on the crowns of the plants. The beds may be made of any length to suit cultivators. One a hundred and fifty feet long and four feet wide will supply an abundance for a moderate sized family.



After a bed is transplanted, it should remain uncut for two seasons. Cutting sooner will greatly injure its subsequent thriftiness.

If it is remembered that the two chief requisites for success, are *plenty of room* for the growth of the plants, and a *deep, fertile soil*, no one need be at a loss in the cultivation of this fine vegetable. Good, constant, and cleanly culture, as every one must know, is indispensable. These requisites are of vastly greater consequence than large varieties merely. Indeed, the fact that with good cultivation and management, no plants are small, and without that none are large, has led many intelligent persons to suppose that the difference between giant and small varieties is owing entirely to these circumstances, and they are not far wrong.

One advantage which may be derived from planting the rows more distant than is usual, besides large growth, is the facility of keeping the ground cultivated, a light plow drawn by one horse being passed freely between them.

With such distances, and the facilities afforded for horse cultivation, much finer plants may be had from a rich deeply plowed soil only, than without them from a trenched bed two feet deep, though depth and distance combined are the best.

DOMESTIC ECONOMY.

Buckwheat Cakes, after standing to rise all night, are much improved by adding, just before baking, sour cream and saleratus—say a teacup full for two quarts of the batter. This treatment improves the flavor, and makes them richer and lighter. It was discovered this winter by a notable housekeeper in the western part of the state, where fine hot buckwheat cakes and keen appetites, on frosty mornings, often go together.

Corn Cake.—Two teacups of buttermilk, one of sour cream previously sweetened with saleratus, one tablespoonful of molasses, and Indian meal to make it nearly as stiff as muffins. Bake half an hour. Thoroughly tried by the above mentioned housekeeper, and found first rate; and also eaten with good *gusto* by the writer.

Apple Jelly.—Slice thirteen large apples very thin without paring them; then cover them with water; boil and strain them,—and to the juice add a pound and a half of loaf sugar, and as much lemon-juice as your taste may direct. Clarify it with eggs, and boil it to a jelly. It is an exceedingly delicate, palatable, and beautiful dish, fit to grace any wedding table, the writer having partaken of it on such an occasion, the housekeeper above named forming the center of attraction at the time. It is also very fine in sickness.

Domestic Yeast.—The following is copied from the London Gardener's Chronicle, and must be cheap and easy. Boil one pound of good flour, quarter of a pound of brown sugar, and a little salt, [how much is that?] in two gallons of water, for an hour. When milk warm, bottle it and cork it closely, and it will be fit for use in twenty-four hours. One pound of this yeast will make eighteen pounds of bread.

FRANKLIN COLLEGE.

From the Tennessee Agriculturist, we learn that this institution commenced operations on the first of January, with about fifty students, and that as many would probably apply in the course of a few months as can be accommodated. The President, T. Fanning, Esq., states that the prospects were favorable to success, which we are glad to hear. A greater number of mechanics are wanted, such as blacksmiths, coach makers, harness makers, and cabinet workmen; and it is stated that "a young man acquainted with any of these trades, and who is willing to devote some four or five hours a day to honorable industry, may be sure that he can at least pay for his board and tuition by his trade, and secure as good an education, in as short a time, as if he possessed millions."

Beaverwyck,[*] *the seat of Wm. P. Van Rensselaer*—(Fig. 28.)

LANDSCAPE GARDENING.

A Treatise on the Theory and Practice of Landscape Gardening, adapted to North America, with a view to the Improvement of Country Residences, comprising historical notices and General Principles of the Art, directions for Laying out Grounds and arranging Plantations, the Description and Cultivation of Hardy Trees, Decorative Accompaniments to the House and Grounds, the Formation of Pieces of Artificial Water, Flower Gardens, etc., with remarks on Rural Architecture. Second edition, enlarged, revised, and newly illustrated. By A. J. Downing, Author of Designs for Cottage Residences, etc. New-York—Wiley & Putnam.

THE appearance of a second and greatly improved edition of this admirable work, must be hailed with pleasure by every friend of rural improvement. The early success which has attended the first and only work of American origin, devoted entirely to this subject, while it not only proves the ability of its execution, furnishes also the gratifying evidence of the rapidly increasing wish among our countrymen, for the tasteful embellishment of their country residences. To this increased attention to landscape gardening, the work before us has contributed very considerably, although but three or four years have elapsed since its first appearance.

Beside much valuable matter added to the present edition, a large portion of the first part of it has been rewritten, some modifications of the principles of the art introduced, and more than twenty new views are given, chiefly of American residences and their adjacent grounds, executed in the best style, and all excellent illustrations of the beautiful and picturesque in the art. Descriptions of many new places are introduced, and some valuable practical hints are appended to the body of the volume. As but few of our readers possess this work, we hope we shall do them an acceptable service, by giving a more extended account of its contents.

The work opens with a general notice of the objects of landscape gardening; a glance at the ancient and modern styles, with their characteristics; an account of the origin of the modern or natural style, its progress and general adoption; and a history of the art in the United States, with a reference to many examples now existing, accompanied by several beautifully engraved views. The general principles of landscape gardening are then laid down in a very clear and interesting manner, and an insight is given into the beauty, the endless variety of expression, and even the sublimity, belonging to the study of the modern style. The details of the art next come in order; and the treatment of woods and plantations, the grouping and arrangement of trees, and their peculiar characteristic expressions; with a subsequent full treatise on the individual ornamental trees adapted to the climate of the country, and the places to be assigned them in ornamental grounds, follow sucessively in course. Another section is devoted to the treatment of ground and the formation of walks; another to the formation of artificial lakes and the management of brooks, cascades and waterfalls; and another to rural architecture, with the features and associations of the different styles, illustrated by many views. The work concludes with a chapter on rural embellishments. An appendix contains many practical directions, and also a minute, and consequently useful and instructive description, by J. C. Loudon, of a moderate, but very beautiful suburban residence in the neighborhood of London, an excellent specimen of the modern style, and which every one, wishing to become well acquainted with it, would do well to study. From this general enumeration of the subjects of the work, our readers may form a faint idea of the vast fund of value and interest it must contain, every department being treated of in a manner eminently interesting to a person of any taste. Indeed, we found it very difficult to tear ourselves away from its fascinations, during the first examination.

The works of Loudon, which have been extensively read in America with a corresponding influence on this art, though pre-eminent for their plain, practical, condensed style, and for the good sense, general correct taste, and adaptedness of principles, indicate nevertheless a far less appreciation of the picturesque than is contained in the work before us. The favor with which Loudon regarded the old or geometric style of gardening and planting, we consider as nearly his only failure in this respect, except which, his writings possess a *practical* value rarely if ever equalled. But on the other hand, the work of Mr. DOWNING has been eminently successful is laying down the principles of EXPRESSION, whether of single trees and objects, or as grouped without discord in a varied and extensive landscape. He very properly exposes the absurdity of the geometric style, where "the greatest care was taken to avoid any appearance of irregularity. A tree upon one side of the house, was opposed by another *vis a vis*, and a row of trees at the right of the mansion had its always accompanying row on the left; or as Pope in his satire has more rythmically expressed it—

> "Grove nods to grove, each alley has its brother,
> And half the platform just reflects the other."

The old gardener to the Earl of Selkirk was very strongly imbued with the old style mania, when, having shut up a thief for stealing fruit, in one summer house, was compelled, for the sake of symmetry, to confine his own son in the summer house opposite. The extent to which this mania was carried, in distorting nature into odd conceits, with little or no exercise of taste for her

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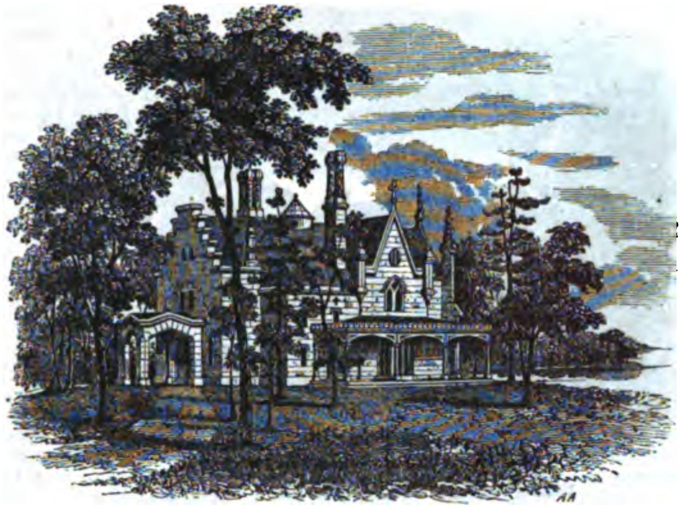
[*] *Beaverwyck*, a little north of Albany, on the opposite bank of the river, is the seat of Wm. P. Van Rensselaer, Esq. The whole estate is ten or twelve miles square, including the village of Bath on the river shore, and a large farming district. The home residence embraces several hundred acres, with a large level lawn bordered by highly varied surface of hill and dale. The mansion, one of the first class, is newly erected from the plans of Mr. Diaper, and in its interior—its hall with mosaic floor of polished woods, its marble staircase, frescoed apartments, and spacious adjoining conservatory—is perhaps the most splendid in the Union. The grounds are yet newly laid out, but with much judgment; and *six or seven miles* of winding, gravelled roads and walks have been formed—their boundaries now leading over level meadows, and now winding through woody dells. The drives thus afforded, are almost unrivalled in extent and variety, and give the stranger or guest, an opportunity of seeing the near, and distant views to the best advantage.—p. 37.



*Kenwood,** *the residence of Joel Rathbone.*—(Fig. 29.)

genuine beauties, is strikingly exhibited in an extract from a satire of Pope, who, in common with all true poets, shrunk with aversion from the sight of trees drilled rank and file into straight lines, and sheared down to pyramids and statues of verdure:

> "INVENTORY OF A VIRTUOSO GARDENER. Adam and Eve in yew; Adam, a little shattered by the tree of knowledge in the great storm; Eve and the serpent, very flourishing. Noah's ark in Holly; the ribs a little damaged for want of water.
> The tower of Babel, not yet finished.
> St. George, in box; his arm scarce long enough, but will be in a condition to stick the dragon by next April.
> Edward the Black Prince in Cypress.
> A pair of giants stunted, to be sold cheap.
> An old maid of honor, in wormwood.
> A quick-set hog, shot up into a porcupine, by being forgot a week in rainy weather."

All these contrivances, and fifty others similar, and dissimilar, including concealed pipes for suddenly dousing visitors with cold water, and including also many of the statues, busts, and other objects too common at the present time, were very correctly characterized by Lord Bacon where he said, "as for the making of knots or figures of divers colored earths, that they may lie under the windows of the house, they be but toys; you may see as good sights many times in tarts. I, for my part, do not like images cut out in juniper and other garden stuff; they are for children." How much more worthy of the attention of an enlightened mind, is the simple imitation of the beautiful and picturesque, by a handsome and natural arrangement of majestic trees, adapted to the character of the grounds.

In urging the application of the principles of correct taste, even for very small places, the author has the following excellent remarks:

"But if Landscape Gardening, in its proper sense, cannot be applied to the embellishment of the smallest cottage residences in the country, its principles may be studied with advantage, even by him who has only three trees to plant for ornament; and we hope no one will think his grounds too small to feel willing to add something to the general amount of beauty in the country. If the possessor of the cottage acre, would embellish in accordance with propriety, he must not, as we have sometimes seen, render the whole ridiculous by aiming at ambitious and costly embellishments; but he will rather seek to delight us by the good taste evinced in the *tasteful simplicity* of the whole arrangement. And if the proprietors of our country villas, in their improvements, are more likely to run into any one error than another, we fear it will be that of too great a desire for display—too many vases, temples and seats—and too little purity and simplicity of general effect."

Again, in speaking of the *cottage ornée*, and of laying out and embellishing limited grounds, he says:

"In making these arrangements, even in the small area of a fourth of an acre, we should study the same principles, and endeavor to produce the same harmony of effects, as if we were improving a mansion residence of the first class. The extent of the operations, and the sums lavished, are not by any means necessarily connected with successful and pleasing results. The man of correct taste, will, by the aid of very limited means, and upon a small surface, be able to afford the mind more true pleasure, than the improver who lavishes thousands without it, creating no other emotion than surprise or pity at the useless expenditure incurred." It is in accordance with these principles that the author very properly places this motto upon his title-page:

> "Insult not nature with absurd expense,
> Nor spoil her simple charms by vain pretence;
> Weigh well the subject, be with caution bold,
> Profuse of genius, not profuse of gold."

The wide extent of many of the English parks—though affording some of the finest specimens of the modern style of landscape gardening,—where sometimes a broad and magnificent landscape is embraced within the limits of a single park—we hope never to see imitated in this country, especially if at the same cost of human happiness. For we cannot regard these, even in all their glory, with their wide-spread undulating lawns, their majestic trees, marked with the age of centuries, and embellished with all the beauty of nature, and all the poetry of association —without secret pain and aversion, from the recollection of the thousands of poor laborers, tasked to their utmost strength to support their starving and suffering families, while a large share of their toils go to the support of these costly establishments. While, on the other hand, it is a source of much gratification that such drawbacks do not exist in our own region of the country, we hope the spirit of republican simplicity will always so prevail, that while it teaches us to cultivate a taste for natural and rural beauty, we may always shun extravagant profusion and ostentatious display; and use without abusing the creations of the source, "who made all nature beauty to the eye, and music to the ear." It is with great justice that the author remarks,

"The owner of a small cottage residence, may have almost every kind of beauty and enjoyment in his grounds, that the largest estate will afford, so far as regards the interest of trees and plants, tasteful arrangement, recreation and occupation. Indeed, we have little doubt that he, who directs personally, the curve of every walk, selects and plants every shrub and tree, and

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* Situate about two miles south of Albany, on a densely wooded hill, and is one of the most complete specimens of the Tudor style in the United States. It was built from the designs of Davis, and is, to the amateur, a very instructive example of this mode of domestic architecture.—p. 370.

Villa of Theodore Lyman, near Boston—(Fig. 30.)

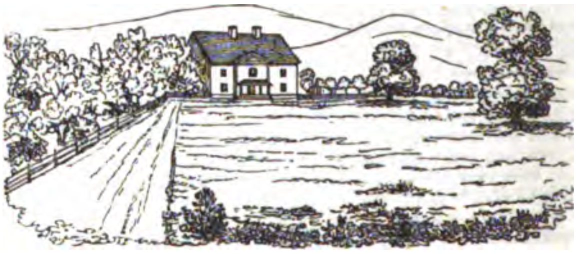
watches with solicitude every evidence of beauty and progress, succeeds in extracting from his tasteful grounds of half a dozen acres, a more intense degree of pleasure, than one who is only able to direct and enjoy, in a general sense, the arrangement of a vast estate."

The following extract contains much in little, and conveys valuable hints to the person of taste:

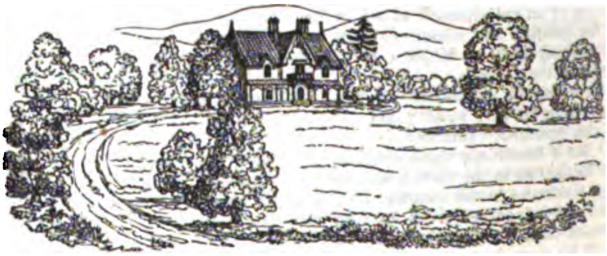
"In the case of large landed estates, its capabilities may be displayed to their full extent, as from fifty to five hundred acres may be devoted to a park or pleasure grounds. Most of its beauty, and all its charms, may, however, be enjoyed in ten or twenty acres, fortunately situated, and well treated; and Landscape Gardening in America, combined and working in harmony as it is with our fine scenery, is already beginning to give us results scarcely less beautiful than those produced by its finest effects abroad. The lovely villa residences of our noble river and lake margins, when well treated—even in a few acres of tasteful fore-ground,—seem so entirely to appropriate the whole adjacent landscape, and to mingle so sweetly in their outlines with the woods and valleys and shores around them, that the effects are often truly enchanting."

But these instances are the splendid few—with regard to more frequent cases, our author remarks:

"In many parts of the Union, where new residences are being formed, or where old ones are to be improved, the grounds will often be found, partially, or to a considerable extent, clothed with belts or masses of wood, either previously planted, or preserved from the woodman's axe. How easily we may turn these to advantage in the natural style of landscape gardening; and by judicious trimming when too thick, or additions when too much scattered, elicit often the happiest effects in a magical manner! In the accompanying sketch, (fig. 25,) the reader will recognize a portrait of a hundred familiar examples, existing with us, of the places of persons of considerable means and intelligence, where the house is not less meagre than the stiff approach leading to it, bordered with a formal belt of trees. The succeeding sketch, (fig. 26,) exhibits this place as improved agreeably to the principles of Landscape Gardening, not only in the plantations, but in the house—which appears tastefully altered from a plain, unmeaning parallelogram, to a simple, old English cottage—and in the more graceful approach. Effects like these, are within the reach of very moderate means, and are peculiarly worth attention in this country, where so much has been partially, and often badly executed."



View of a Country Residence as frequently seen—(Fig. 25.)

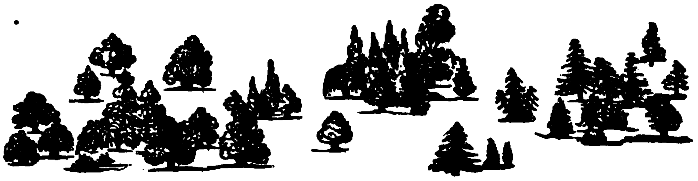


View of the same Residence improved—(Fig. 26.)

The following clear, judicious, and interesting remarks on the arrangement and grouping of trees, cannot fail to be useful to every person planting his own grounds:

"The only rules which we can suggest to govern the planter are these: First, if a certain leading expression is desired in a group of trees, together with as great a variety as possible, such species must be chosen as harmonize with each other in certain leading points. And, secondly, in occasionally intermingling trees of opposite characters, discordance may be prevented, and harmonious expression promoted, by interposing other trees of an intermediate character.

"In the first case, suppose it is desired to form a group of trees, in which gracefulness must be the leading expression. The willow alone would have the effect; but in groups, willows alone produce sameness: in order, therefore, to give variety, we must choose other trees which, while they differ from the willow in some particulars, agree in others. The elm has much larger and darker foliage, while it has also a drooping spray; the weeping birch differs in its leaves, but agrees in the pensile flow of its branches; the common birch has few pendant boughs, but resembles in the airy lightness of its leaves; and the three-thorned acacia, though its branches are horizontal, as delicate foliage of nearly the same hue and floating lightness as the willow. Here we have a group of five trees, which is, in the whole, full of gracefulness and variety, while there is nothing in the composition inharmonious to the practiced eye.


Example in grouping—Fig. 27.

"To illustrate the second case, let us suppose a long sweeping outline of maples, birches, and other light, mellow-colored trees, which the improver wishes to vary, and break into groups, by spiry topped, evergreen trees. It is evident, that if these trees were planted in such a manner as to peer abruptly out of the light colored foliage of the former trees, in dark, or almost black masses of tapering verdure, the effect would be by no means so satisfactory and pleasing, as if there were a partial transition from the mellow, pale green of the maples, etc., to the darker hues of the oak, ash, or beech, and finally the sombre tint of the evergreens. Thus much for the coloring; and if, in addition to this, oblong headed trees, or pyramidal trees, were also placed near and partly intermingled with the spiry-topped ones, the unity of the whole composition would be still more complete.[*]

"Contrasts, again, are often admissible in woody scenery, and we would not wish to lose many of our most superb trees, because they could not be introduced in particular portions of landscape. Contrasts in trees may be so violent as to be displeasing; as in the example of the groups of the three trees, the willow, poplar and oak: or they may be such as to produce spirited and pleasing effects. This must be effected by planting the different divisions of trees, first, in small leading groups, and then by effecting a union between the groups of different character, by intermingling those of the nearest similarity into and near the groups: in this way, by easy transitions from the drooping to the round-headed, and from these to the tapering trees, the whole of the foliage and forms, harmonize well."

It has often been remarked that while the natural style of landscape gardening is well adapted to old countries, thickly settled districts, and the vicinity of cities, the geometric style is better suited to new countries already abounding with natural scenery. The author of the work before us very properly exposes the error of this opinion. If the geometric style is a distortion of nature, then it must offend a correct taste wherever it is to be found, whether in the city square, or in the wilds of the west. All that is necessary, in employing the natural method in wild regions, is to adopt a more graceful finish on every part of the grounds, by closely shorn lawns, highly finished gravel-walks, and by planting the more rare exotic trees instead of those of native growth—to have the place "kept in high and polished order, instead of the tangled wildness of general nature." Art and wealth are more strikingly and visibly shown to the hasty observer by the geometric style; but the *perfection* of art consists not in this external show; but merely in the pleasing and admirable effect, while the art that produced it is concealed from the eye of the spectator. The most beautiful painting is that which most nearly resembles the finest objects of nature, and where the stroke of the pencil is concealed; and not openly visible, as in the daubings of the sign painter.

A not unfrequent error, with those who are little acquainted with the art, is to suppose that the modern style consists *merely* in *irregularity*. But, irregularity without arrangement, is not taste—confusion is not the beautiful in nature. The scenery which the art produces may *appear* the accidental arrangement of appropriate parts; but it is as really the result of study, as the roughly dashed execution of a skillful painter, where every touch, rude and accidental as it may seem at first glance, is found, on a view of the whole together, to combine in producing the most pleasing assemblage of the different portions. The rules laid down by the author, for the successful arrangement of the various parts of an artificial landscape, are given with great clearness and vigor, and are well worthy of attentive study. Few, at first view, would be likely to form even a remote conception of the various points to take into consideration in laying out a single acre of ground, so as to produce the best effect, combined with "*unity, harmony* and *variety*." These are even necessary, where the *planting of nature* already exists, to "the nice perception," in the words of the author, "of the natural expression, as well as the capabilities of a residence," and in which "lies the secret of the superior results produced by the improver, who, to use the words of Horace Walpole, "is proud of no other art than that of softening nature's harshness, and copying her graceful touch."

Our limits preclude much further extension of this notice. But we cannot pass by the interesting section on Rural Architecture without a few words of passing commendation. It may not be known to all our readers, and we will therefore state here, what is well known by many to be the fact, that the publication of this section of this book of Mr. Downing's, has done and is doing more to impart correct notions of the different styles of domestic architecture among our country gentlemen than all other works or articles on the subject, that have ever been read on this side of the Atlantic. Before its appearance, (and that of Mr. Downing's succeeding volume on "Cottage Residences,") there was generally prevalent only a vague and distorted notion of the Grecian and Gothic styles—the former was exhibited in the horrible form of a heavy wooden portico, stuck, without propriety or meaning, against a simple clapboarded house. The author of the work before us, boldly attacked the falsely called Grecian, and pointed out its entire unfitness for domestic purposes, while he has showed the superior beauty of more simple modes of building. Any one who is conversant with the great change of taste which has taken place in the last few years, and is every day more fully evinced, will not be at a loss, on referring to Mr. Downing's remarks on this subject, to trace the revolution of feeling in these matters to its proper cause.

To give our readers some faint idea of the illustrations of the work, and of this section in particular, we introduce here the view of the princely mansion of **Wm. P. Van Rensselaer**, opposite Albany, an extensive and pleasing example in the Grecian style, (Fig. 28.) Next an example in the Italian style—the seat of the Hon. **Theodore Lyman**, near Boston, (Fig. 30.) (This is necessarily so reduced as to lose much of the beautiful effect of the irregular front.) For an example of the Gothic, we borrow a view of the fine villa of **Joel Rathbone**, near Albany, (Fig. 29.) And in a simpler and more cottage like Gothic—what may be called the English cottage style, (Fig. 31)—the view of the pretty Gardener's Lodge at Blithewood, Dutchess county, the seat of **Robert Donaldson**.

It will be understood that in the extracts we have given, we do not by any means intend to furnish directions which can be followed in laying out grounds. They are entirely too meagre for this purpose, and are only a glimpse of the work, which after all is but a faint glimpse

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[*] We are persuaded that very few persons are aware of the beauty, varied and endless, that may be produced by arranging trees with regard to their coloring. It requires the eye and genius of a Claude, or a Poussin, to develope all these hidden beauties of harmonious combination. Gilpin rightly says, in speaking of the dark Scotch fir, "with regard to color in general, I think I speak the language of painting, when I assert that the picturesque eye makes little distinction in this matter. It has no attachment to one color in preference to another, but considers the beauty of all coloring as resulting, not from the colors themselves, but almost entirely from their harmony with other colors in their neighborhood. So that as the Scotch fir tree is combined or stationed, it forms a beautiful umbrage or a murky spot."

The Gardener's House, Blithewood—(Fig. 31.]

of the vast fund of information and interest contained in the 500 pages, embellished with more than a hundred appropriate and beautiful illustrations.

If it were possible in any respect to improve the work, it would perhaps be in a more terse and vigorous style, and occasionally in a less studied and polished mode of expression. And to readers like us, educated between the plow-handles, it would be pleasant to have the various extracts in French, Spanish, Latin and Italian, rendered into English, the only language which, having once learned, we have not become somewhat rusty in. But these detract nothing from the merits of the work as an excellent treatise on Landscape Gardening, which, unlike many works on similar subjects, is strictly American in its character and adaptation; and for general utility it stands without a rival, and probably will continue to do so for many years to come.*

STATISTICS OF GOOD AND BAD FARMING.

We know of no better way of showing accurately, the importance of the diffusion of agricultural knowledge, than by a comparison of the aggregate products of the land as they actually exist, with what they might probably be with improved cultivation. The following numbers exhibit the whole amount of each crop in the United States, according to the agricultural census a few years since, which was by many supposed to be too low, from various omissions at the time it was taken, and certainly less than at present, from the increase of improved land and population:

Wheat,	91 million bu.	Buckwheat,	7 million bu.
Oats,..	130 "	Corn,.....	387 "
Barley,	5 "	Potatoes,..	113 "
Rye,...	19 "	Hay,......	12 " tons.

The average product per acre would have been very interesting, could it have been derived accurately from facts; it is supposed to be not far from the following, taking the whole country and all seasons together:

Wheat, ...	12 bushels.	Buckwheat,...	15 bushels.
Oats,......	25 "	Corn,........	20 "
Barley,....	20 "	Potatoes,.....	100 "
Rye,......	20 "	Hay, ...	1 ton.

With our best farmers, or with many which might be named, the whole of these crops taken together, would average about double these rates; some would more than be tripled, as for example, corn, instances being frequent where the general crop for the farm together, and for successive seasons, has exceeded eighty, and in some rare instances, one hundred bushels. These increased results have been obtained by an improved course throughout, including systematic rotation, the best management of manures, the use of good implements, thorough underdraining, the selection of good animals, of the best varieties of grain, and general good management throughout. The spread of agricultural knowledge through periodicals, and in other ways, has mainly contributed to this excellent result.

The total number of bushels of the above mentioned crops, raised in the United States, according to the census, is 764 millions. If these would average each one third of a dollar in value, the total product of these crops would be 253 million dollars. There is no doubt, therefore, that if the best farming prevailed that this enormous amount would be doubled; and therefore that no less than 250 millions of dollars are lost to the country, from the want of a more thorough diffusion of agricultural knowledge and a corresponding practice. It will be observed that the preceding sum scarcely includes one-half of the whole proceeds of farm labor, as cotton, sugar, tobacco, and the products of domestic animals, are not included, all of which would be increased in a corresponding ratio.

It has been estimated, that all the money paid out by our State government in the shape of agricultural bounties, has been much more than returned to the State treasury in canal tolls on the resulting increased productions. It would be an interesting fact, could it be known, how much the treasury has been enriched by the spread of agricultural publications through the State within the last ten years—reckoning by hundreds of thousands would doubtless be exceedingly moderate.

CHEESE MANUFACTURE IN HERKIMER CO.

The Address of Col. A. Petrie, before the Herkimer County Ag. Society, is a sound, common sense article, evincing the good judgment and practical observation of its author. We give an extract in relation to the manufacture of cheese, which from the facts it contains, is especially worthy of preservation:

"Some farmers make less than 300 pounds of cheese per cow in a season, while others exceed 600. Perhaps some of this difference may be accounted for by the inequality of advantages; but I am assured by gentlemen in whose skill in the art we have the highest confidence, that there is a great difference in the product per cow, when all advantages are equal. One case I will mention: A gentleman who has for years made more than 600 pounds per cow in a season, from a dairy of 25 cows, let out his dairy to a tenant, whose reputation as a common cheese-maker, was of the highest order. He observed, that the tenant's cheeses were smaller and lighter than they should be, and suspecting the cause, watched his mode of making them, and found it to be like that of nearly all the cheese makers in the country, by guess. The milk was tempered, and set, and the curd scalded without a thermometor, and less care was taken in other parts of the process than he was accustomed to. He attempted to teach the tenant, who was rather prejudiced against "book farming"—reminded him of his reputation. The landlord, however, made a few cheeses himself, and the tenant looked on. These were found to be larger and heavier than the cheeses made by the tenant. The tenant then adopted the improved mode, and he could make as large a cheese as his friend. Both gentlemen now agree, that the improved mode increased the amount about 10 per cent. Now the tenant was evidently more than an ordinary cheese maker, for *he* would have made over five hundred pounds per cow during the season, but by the improved mode he made over six hundred."

Col. P. remarks that the average rate of cheese per cow in Herkimer county is supposed to be less than 350 pounds per cow, and that as it is nearly all made by *guess*, it is fair to suppose that a careful, scientific mode of making would increase the amount at least 10 per cent; which would amount to over *sixty-seven thousand dollars* annually for that county.

Fine Pork.—Mr. Daniel Briggs, of Hyde Park, Dutchess county, fattened six shoats, which at eight months old were killed and weighed 275 pounds each.

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* We would respectfully suggest in the next edition, which must be issued at no remote period, the introduction of the *Black Maple* as a very rich and handsome shade tree, and also of the *Golden Ash*, as one of peculiar character and beauty. Also, the quantity of water needed in a stream, to supply evaporation in summer from artificial lakes of given extent. The note from the N. Y. Med. Repos. appears to contain some mistake, where the "Montezuma estate, Jefferson, Cayuga County, N. Y." is spoken of. There is no such place as *Jefferson* in the county. The large button-wood alluded to, grew at Montezuma in the township of Mentz in that County. We do not mention these things to exhibit errors, for we know of scarcely any work of equal size, and embracing so much variety of matter, so free from mistakes.

NEW-YORK STATE AG. SOCIETY.

The regular monthly meeting of the Executive Committee of the N. Y. State Ag. Society for February, was held at the Society's Room in the old State Hall on the 13th. The President, B. P. Johnson, Esq. of Oneida in the chair. Present—Messrs. Prentice, Hillhouse, M'Intyre and Tucker of Albany—Mr. Beekman of Columbia—Messrs. Walsh and Vail of Rensselaer—Mr. Enos of Madison, and Mr. Lee of Erie.

Reports of Committees.

Mr. Johnson, from the committee to whom was referred the applications for the prize for the best managed Cheese Dairy, reported that they had awarded the Gold Medal to Alonzo L. Fish of Cedarville, Herkimer Co., and three vols. Transactions to Abraham Hall of Holland Patent, Oneida county.

Mr. Johnson also reported that the committee had awarded the prize of $25, for the best Experiment in the Culture of Indian Corn, to George Geddes of Camillus, Onondaga county.

Mr. Johnson also reported that the committee on that subject, had awarded the prize of $20, for the best Essay on Farm Management, to John J. Thomas of Macedon, Wayne county.

Mr. Beekman, from the committee to whom was referred the Essays on the importance of scientific knowledge in prosecuting successfully the ordinary pursuits of agriculture, reported that the committee had examined the three Essays submitted to them, neither of which, in their opinion were written with sufficient care to entitle it to the premium; and they recommend that the same prize be offered another year.

Mr. Lee, from the commiitee to whom the applications for the prize for the best Text Book on Agriculture for the use of Schools was referred, reported that two books were submitted to them, neither of which were sufficiently adapted for the purpose to entitle it to the prize, and concluded by recommending that the same premium be again offered.

Mr. M'Intyre, from the committee on Essays on Rotation of Crops, reported that they had awarded the prize, $20, to the writer of the Essay marked A., the author's name being unknown to them. [It was written by John J. Thomas, Macedon.]

Mr. R. L. Pell, from the committee on Essays on the Culture of the Apple, sent in a written report, awarding the prize, ($20,) to the Essay sent in with the report. [This Essay was written by John J. Thomas.]

Mr. Prentice, from the committee on Essays on the prevalent disease in potatoes, reported that they had come to the conclusion that neither of the Essays were such as would warrant them in awarding the premium.

Mr. Lee, from the committee on Essays on Manures, reported against awarding the premium to the Essay submitted to them. He also reported that the committee had awarded a Silver Medal to R. L. Pell of Pelham, Ulster County, for his report of Experiments to show the comparative value of different kinds of food for cattle.

Mr. Walsh, from the committee on Essays on the Culture of Silk, stated that but one Essay had been submitted to them, and that evidently not intended for the premium, as it did not contain the matters required in the prize Essay. The Essay was referred to the committee of publication.

The committee on Wheat, at the annual Meeting recommended that a premium of $15 be awarded to Mr. E. J. Ayres of Tompkins, provided he furnished certain farther particulars, which, Mr. Ayres having furnished, a premium of $15 was voted him, on his wheat crop, amounting to 114 bushels and 58 lbs. on two acres.

Mr. Beekman presented the Annual Report of the American Institute, which was referred to the committee of publication.

Messrs. Walsh, Lenox and Prentice, were appointed a committee on the Library.

The discussion and arrangement of the List of Premiums occupied most of the afternoon, and not being completed, the Board adjourned to meet again on the 15th.

Feb. 15th.—The President in the chair. Present—Messrs. Vail, Hillhouse, M'Intyre, Lee, Enos, and Tucker.

The premium List was taken up, and after a few trifling additions, was ordered to be published.

The Board then proceeded to the appointment of County Corresponding Committees in each County. (We are obliged to defer the publication of this list of committees till our next.)

A resolution was adopted, directing the Corresponding Secretary to open a correspondence with the County Committees, Superintendents of Common Schools, and others, for the purpose of furthering the objects of the Society, and especially the introduction of the study of the principles of Agriculture into our Schools and Academies.

Messrs. Tucker, Beekman and Lee, were appointed a committee of publication.

After the transaction of a variety of other business, the Executive Committee adjourned to meet again on the Second Thursday of March.

A room has been fitted up, in the old State Hall, exclusively for the use of the State Society, where the meetings will hereafter be held. Entrance on Lodge, corner of State-street.

Payment of Premiums.

All money premiums awarded by the Society, may be obtained on application to Thomas Hillhouse, Treasurer, or to Luther Tucker, Rec. Secretary, Albany. ☞ All premiums not demanded within *four months* after the award, will be considered as donations to the Society.

ANSWERS TO INQUIRIES.

H. Ambler, Bethel, Conn., will find some good suggestions on improving worn-out lands, perhaps applicable to his location, in our Feb. No. page 69.

A. W.—Subsoil Plows can be had of Pruyn, Wilson & Vosburgh of this city—price, from $8. to $16.

M. B.—Black Sea Wheat not to be had in this city to our knowledge.

Lucerne.—D. E., Allegan, Michigan. The price of lucerne is 37 cents by the single pound. If sown broadcast, fifteen pounds are required for an acre. It can be sent to Detroit per express.

Salt for Butter.—We cannot particularly answer the inquiry of Mr. Barton, in regard to the means of ascertaining good from poor salt. The best salt for butter, we believe to be that which is usually sold under the name of *rock* salt. It is sometimes ground for dairy purposes. It may also be rendered fine by putting it in a kettle or boiler, with water enough to cover it, and heating it till the lumps are broken down, stirring it while the process of heating is going on. When it has become fine it may be dipped out and drained, and it is in a suitable state to use. Any impurities that rise to the top of the water while the salt is melting, should be skimmed off. The Liverpool blown, or bag salt, often contains impurities, and does not answer well for butter. The table salt, so called, made at Salina, in this state, it is said by those who have used it, answers very well. Mr. B. will find at page 318, of our last volume, ample directions for purifying salt for butter.

Clover Seed.—"A Subscriber," at Martindale, N. C., is informed that we know of no way of cleaning clover seed, or separating it from the head or chaff, but by a hulling machine. It may be, and often is, sown in the *chaff;* but no rule can be given as to the quantity per acre, as every thing depends on the quantity of seed there is in proportion to the whole bulk.

Soiling.—Our Maryland correspondent, W. Orcum, (if we read the name right,) will find the exact information he asks for on this subject, at p. 22, of our number for Jan. last, where he will see that Mr. Newhall keeps 25 milch cows on the soiling system. He is also referred to pages 108, 182 and 250, of our last volume, and to page 48, vol. 10, where he will find a detail of the practice of Jas. Gowen, Esq.

Fruit-trees.—Mr. Orcum asks the best time for transplanting trees. The fall, immediately after the leaves have fallen, is preferred by many, and on dry ground, perhaps it is better than spring planting. If, however, you want trees, and did not get them last fall, attend to it in the spring. The roots of trees should not be allowed to get bound by a tough grass sward. If the orchard is not plowed, the trees may be dug round and manured, with compost, muck, &c. On the Ohio river, where large quantities of apples are raised for the New-Orleans market, it is found best to gather them before they get too ripe, and they are picked while the leaves are fully green.

PRUNING HARDY GRAPES.

There are many of our readers, who cultivate fine varieties of hardy grapes, such as the Catawba, Bland, Isabella, Black Cluster and others, who obtain very inferior fruit from a want of proper pruning and culture. Let this work not be passed over another season. They may be pruned any time during winter, till within a short time before the commencement of the flowing of the sap. If put off too long, the bleeding, or effusion of sap from the wounds, will seriously injure them. A week or two is in general sufficient for the freshly cut faces to become dry enough to close the sap pores. Sometimes during a long cold season of freezing weather in spring, moderate pruning may be given with safety, which in milder weather would be highly improper.

It is hardly necessary to give any special directions for pruning hardy grape vines. Those who know how to turn out the thick, crooked, and superabundant branches of fruit trees, to produce thrifty growth of the remainder, and let in the air and sun, can hardly fail in applying the same rules to hardy grapes.

NEW PUBLICATIONS.

Catechism of Agricultural Chemistry and Geology—by James F. W. Johnston, of Edinburgh, author of "Lectures on Agricultural Chemistry and Geology," &c. with an Introduction by John Pitkin Norton, of Farmington, Connecticut. From the eighth English edition, with notes and additions by the author, prepared expressly for this edition.

In this little work, we think Professor Johnston has decided in the affirmative, the question whether the study of chemistry and geology, as applicable to agriculture, can be properly introduced into elementary schools. The subjects are arranged in a connection so natural, and treated in a style so plain and simple, that any child who is capable of reading and understanding the English language, may readily acquire a knowledge of the contents of the book. We believe the introduction of this work into the schools of this country, is destined to effect an incalculable good. From its pages we believe the youth will receive an insight into the *arcana* of nature, which cannot fail to stimulate him to investigations from which the happiest results will flow. Habits of thought and reflection will be induced, by which the business of agriculture will be more thoroughly understood, and not only practiced with greater pecuniary advantage, but the mind of the farmer will become expanded, and his labors at once lightened and rendered pleasant, by the aid of philosophy.

In saying that this book is adapted to children and youth, we would not be understood as intimating that people of mature age would not be largely benefitted by it. On the contrary, we think it should be in the hands of every farmer. Many would find here an explanation of important scientific terms with which they may not be familiar, while *all* will find it a very convenient manual of reference.

We shall recur to this subject next month, and furnish more extended notice of the work. Published by Erastus H. Pease, Albany. Price 18¾ cents.

American Quarterly Journal of Agriculture and Science—conducted by Dr. E. Emmons and Dr. A. J. Prime. The first number of this work has been issued. It is a neatly printed octavo of 184 pages, consisting mostly of original articles. We have not read the whole of the contents with the attention which we intend to devote to them, but are nevertheless able to say that several of the articles are of a highly valuable character, and ably written. Candor, however, obliges us to state that on some points which are introduced into the work, we are compelled to differ in opinion from the respected editors. We allude particularly to the discouragement of "root culture," and the expression of "regret," by the editors, that this branch of husbandry has been so much encouraged by our "agricultural writers." We mention this in no captious spirit, or desire to find fault, but simply because we deem the subject an important one to the interest of the farmer. We have not now room to discuss the matter, but may recur to it again.

The Review, we are glad to hear, is well patronized, another evidence that a spirit of agricultural inquiry is deeply awakened; and we trust that this journal will be an important aid in dispensing the light which is so earnestly sought after. Published in this city, by the editors, at $3 a year.

SCHOOL DISTRICT LIBRARIES.

We respectfully invite the attention of county and town superintendents, to the subject of the introduction of an agricultural book into our school libraries. The Cultivator for the year 1844, contains much matter which we trust will prove of great value to most of the readers of the school libraries of the state, a class of persons probably more than three-quarters of whom are engaged in agricultural pursuits. We are most decidedly of the opinion that a larger share of reading, directly relating to the occupation which employs nearly all the time of so large a portion of our citizens, would be in the highest degree appropriate and beneficial.

Among the contributors to the vol. we speak of, there are more than *three hundred correspondents*, almost all of them practical farmers, and a large share residing in our own state, many of them distinguished for their great success in the cultivation of the soil. The matter thus furnished, not only possesses great practical value, but embodies the latest established improvements, and is peculiarly fitted to our own region of country. In addition to this, the *amount* of matter furnished for the price, becomes another strong inducement for the general introduction of this volume into school libraries. There is six times as much reading as in one volume of Harper's School Library, of average size, and illustrated by more than one hundred handsomely executed wood engravings. The volume is furnished, well bound, for $1.25, and we respectfully solicit the attention of all concerned or in any wise interested in these libraries, to this cheap and effectual means of imparting agricultural knowledge.

EXPERIMENTS IN PLANTING.

The advantages of free admission of light, and free circulation of air, to the growth of plants, are in a good degree obvious to persons of any experience in agriculture. So important are these influences to Indian corn, that an advantage is known to result from giving the widest space to rows running north and south. This more readily admits the light and heat of the sun, than rows running in a contrary direction. It has been suggested that planting corn and potatoes in alternate rows, or in alternations of two rows each, would give a greater aggregate product for a given extent of land, than if each crop were planted entirely by itself. Experiments relative to this point have been made in Massachusetts for a few years past, under the direction of the Plymouth County Ag. Society, and the results so far, indicate considerable advantage in favor of the mode of alternate planting. Mr. Nathan Whitman, who received, for an experiment of this kind, made last season, a premium of $15, planted half an acre with corn alone; from this was harvested 42 43-75 bushels; half an acre with potatoes; from this was harvested 136 7-56 bushels; and half an acre in alternate rows of corn and potatoes; from this was harvested 22 50-75 bushels of corn, and 79 40-56 bushels of potatoes. In this experiment there appears to have been a gain in mixed planting of ten bushels of corn to the acre, and twenty-six bushels of potatoes. Some experiments reported to this society in former years, we believe showed about the same results.

EFFECTS OF ASHES.—Mr. **PETER CRISPELL**, of Hurley, Ulster county, informs us that he raised last year, on one acre of land, three tons twelve hundred and eighty pounds of hay, at one crop. The hay was in merchantable condition and of good quality, as will appear from the fact that it was sold at eight dollars per ton, and was all weighed on the scales. The soil where this crop grew, was a dry, loamy alluvion, and had been in grass many years. Last spring Mr. C. spread on a hundred bushels of leached ashes to the acre, which cost eight cents per bushel. The ashes increased the quantity of hay nearly one-half, and from former experiments in the use of them, it is known that their effects continue for several years.

Mr. Crispell has made some trials with both leached and unleached ashes, and the results, in his case, would seem to show that the unleached are not more valuable than the leached. He thinks that ashes which have laid some time after being leached, are much more valuable than when they are applied immediately after leaching. He informs us that this is also in accordance with the experience of several of the Long Island farmers with whom he has conversed. We are aware that results do not appear to have been uniform in regard to the action of ashes, but we have heard the same views as are held by Mr. Crispell frequently given by other farmers.

CULTURE OF MUSTARD.

Several subscribers, among which is our friend C. J. **SANDERS**, Esq., of Lexington, Ky., have requested an article on the cultivation of mustard. Our own experience in its culture is very limited. Several years ago we raised a small crop, and the method we practiced was as follows: The soil was a sandy loam. The seed was sown in drills, with a turnep drill; the rows about sixteen inches apart. The spaces between the rows were kept clean by the hoe. This was the white mustard. The black variety is larger and requires more room.

Mr. James H. Parmelee, of Duncan's Falls, Ohio, raised last year, twenty-seven acres of the black or brown mustard. We gave an account of this crop in our last volume, page 354. It appears that it was planted in hills one foot apart one way and two feet the other, the crop being well worked during the season. The twenty-seven acres produced, by Mr. P.'s account, 457 bushels, or nearly seventeen bushels per acre. It may be sown as soon as the ground is in proper condition to work.

COTTON CULTURE IN ALABAMA.

EAST INDIA COTTON.—We give the following extract from a private letter of our esteemed correspondent, Dr. **CLOUD**, of Macon county:—"Enclosed I send you a small sample of a variety of *East India* cotton, which grew at my place the past season. The stalk from which this sample was taken attained the height of thirteen and a half feet, had on it at frost sixty-two bearing limbs, and measured fifteen inches in circumference between the two first limbs from the ground, and contained at one time, about the first of September, upward of twelve hundred bolls, blooms and squares! My opinion is that this variety promises to make a great produce in our climate. The stalk now stands in my yard as its own witness. When other cotton was selling at four and half to five cents per pound, last fall in Montgomery, I was offered fifteen cents per pound for a sample of this. It is the true green seed, the natural tendency of our climate and soil, and therefore the kind upon which our improvements should be made."

ALEXANDER McDONALD, of Eufalla, Alabama, writes us in reference to the unprofitableness of the cotton crop, as follows:—"Our most valuable and important southern staple has gone down so low as to pay but poorly for its cultivation and preparation for market; but the present low price of cotton will work its own cure. We will, in all the south and southwest, be taught that most important and useful lesson, that it is the true interest of the farmers throughout the cotton growing sections, to raise a full supply of provisions, and after they have done that, to divide the balance of the labor between cotton and other valuable articles. I will mention two at this time, to wit, wool and silk. There will no doubt be great falling off the present year, 1845, in the amount of cotton planted, as it is the greatest folly imaginable to make cotton to purchase any article that the soil and the climate afford, to say nothing of the imperious necessity as well as propriety of our raising our own provisions of every kind."

Mr. McDonald takes particular note of all his farming operations, and informs us that his memoranda for 1844, amounted to 183 pages. He also informs us that he has produced a good supply of provisions, in addition to the cotton crop, which latter he says is the finest article he has ever seen.

HORTICULTURAL ITEMS.

(Condensed from the Gardener's Chronicle.)

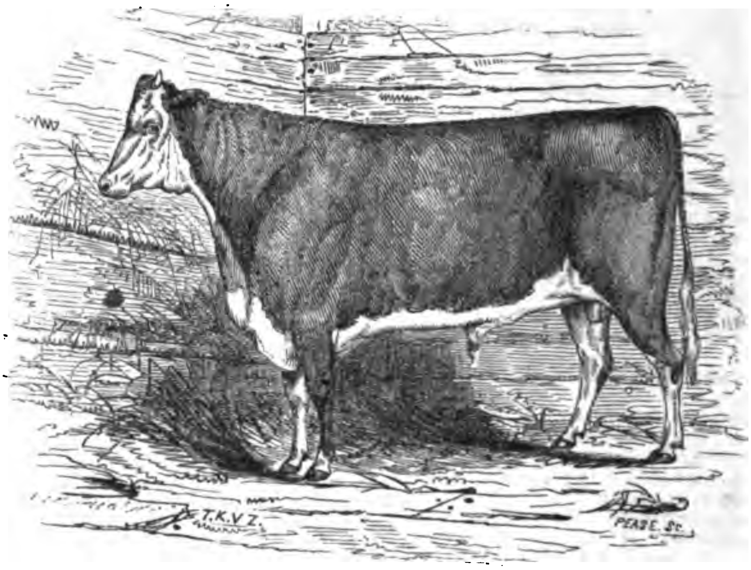
GAS TAR *vs.* RABBITS AND MICE.—William May, of Bedale, Yorkshire, says he has tried this substance repeatedly for some years upon the fruit trees in his nursery, and in all cases it has kept off hares and rabbits, without the least injury to the trees. But it is necessary to apply it in winter while the trees are in a dormant state, as at any other season it destroys them. (Would it not be a simple and efficient remedy against the nibblings of mice, so often destructive to our fine young trees in winter?"

AUTHORITY FOR NAMES.—During some discussion in the agricultural part of the Gardener's Chronicle, dictionaries having been cited as authority, the following facts are stated:—Melocoton (the name of a peach, generally written Malacotoon) is evidently from Malum cotoneum of Pliny, which was our quince; it has hence been applied to certain yellow peaches, from their resemblance in color and skin, to the quince. A correspondent of the paper says, "In some fruit catalogues, I find it changed to Melocoton and Mallacoton; in English and German dictionaries, I find the original pure Melocoton, but for an explanation I must turn over to Melicotony, where I see it translated "a Quince," "a Peach." Not satisfied with this information, I referred to a Spanish and English dictionary, where in the mean time, it had grown into "a peach tree ingrafted in a quince tree!" (This is about equal to Virgil in his second Georgic, where, leaving fact, and running wild into imagination, he speaks of walnuts engrafted on arbutes, apples on plums, and beeches on chestnuts; adorns the wild ash with the white blossoms of the pear, and represents swine crunching acorns under elms. In keeping with the whole of this, he finally gives life and sense to his engrafted trees, making them wonder at the unknown leaves and fruits with which they are loaded. Equally sensible, but infinitely less poetical, are the stories which go the rounds of the papers every few years, of budding peaches on walnuts and on willows, &c.)

COVERING FOR FLOWER BEDS.—It is an excellent plan to cover clumps with moss, to prevent the soil getting dry in hot weather, for which purpose it may be skinned off in large patches, and neatly laid down, which gives it a fine appearance. By occasionally watering it in dry weather, and especially shaded by shrubs and trees it will keep fresh for the season.

ASPARAGUS.—A correspondent says, "I have an asparagus bed, 30 feet by 5 feet, on which I put one hundred weight of salt, about the middle of March, last year, and also this year. The increase of crop, both with regard to size and number, is most extraordinary." In another place, a case is given where too heavy and often repeated a dressing of salt, destroyed the asparagus, though the precise amount of this over dose is not given.

SCIENTIFIC WORDS.—The terms *sporæ*, *sporulæ*, *sporidia*, &c. have either been applied synonymously or vaguely by different authors. The more modern practice appears to be, to use *sporulæ* for the ultimate granules, analogous to seeds; *sporidia*, for the cases or vessels containing them; and *sporæ* for an additional covering, which sometimes includes several *sporidia*.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HEREFORD BULL-CALF "POMARIA."—(Fig. 00.)

The above is a portrait of **Pomaria**, the bull-calf which received the first premium, Class first, of the New-York State Agricultural Society, at the exhibition at Poughkeepsie, 1844. He was bred by Messrs. **Corning** and **Sotham**, and, together with a superior heifer calf of the same breed, has been purchased by A. G. **Summer**, Esq. of Pomaria, South Carolina. Besides these fine animals, Mr. **Summer** puschased here, eight South Down ewes, and six Cotswold ewes and a buck-lamb. The sheep were all very good—both lots showing the peculiar excellencies of their respective breeds. The South Downs were from Mr. C. N. **Bement**, and the Cotswolds from Messrs. **Corning** and **Sotham**. These animals left here in November last for their southern destination, and we have since learned of their safe arrival. We have no doubt they will prove an important and valuable acquisition to that section of country.

ANALYSIS OF KENTUCKY SOIL.

Tired Fields soon recover when in Grass--Rotation of Crops.

To the Editor of the Cultivator.—I analysed many specimens of Kentucky soil last spring. They were taken from land worth about fifty dollars per acre, in Clarke county, fourteen miles east of Lexington. I will send you three specimens.

No. 1, was taken from land that produced the fall previous one hundred and forty-one bushels of shelled corn to the acre. This field has been in cultivation about fifty years, and had twice been in clover, each time two years. The last time it was in clover I had hauled upon it about fifty (one horse) cart loads of rotten chips mixed with spent ashes, to the acre, from the place where most of the wood for family fires had been chopped for the last fifty years. The ash hopper stood near, and after the potash was extracted, the spent ashes were thrown with the chips.

No. 2, has been cultivated about the same length of time; has been once in clover, and once in blue grass and clover; five years altogether in grass; had cattle fed all winter upon it whilst in grass; produced about one hundred bushels of shelled corn to the acre.

Both fields were planted with large corn, three feet nine inches by three feet six inches apart in the hills, and were thinned to four stalks in a hill. The season was uncommonly favorable to the production of corn.

No. 3, was clay, taken from a hole three feet below the surface.

	No. 1.	No. 2.	No. 3.
Soluble. vegetable and other matter, ...	7	6	0
Insoluble vegetable matter, ...	12	12	0
Alumina, ...	17	6	24
Magnesian lime, ...	21	25	26
Phosphate of lime, ...	3	2½	3
Iron, (red oxide, shot ore, gravel)	7	4	12
Quartz, flint and sand, very small fragm'ts,	30	41	33
Loss, ...	3	3½	2
	100	100	100

Magnesia constitutes about one-fifth of the lime, and the clay has in it eight per cent of potash. It is a general impression here that there is no sand in our soil, and to find one-third sand is truly astonishing. I could not believe it at first, and added potash to some of it, and with a blowpipe made glass. I took, subsequently, two hundred and twenty-nine parts of the sand that had resisted nitric, sulphuric and muriatic acids, and melted it with potash, and afterwards found that one hundred parts of it was iron, lime and magnesia, so there is not as much sand as my tables show.*

It is truly astonishing how soon our old fields, when worn down by long continued and excessive cropping, regain their primitive fertility when sown in grass. The above analysis shows that all they want is vegetable matter. And even on hill sides, where all the soil is washed off, so as to expose the clay, as soon as there is added vegetable matter, it becomes productive again, and the above analysis of clay shows that it has all the elements of fertility except vegetable matter.

My most productive field, No. 1, did not produce more than thirty bushels of corn to the acre eleven years ago, when I first got possession of it. It has been improved mostly by clover and hauling manure upon it. No. 2, was likewise exhausted so that it would not have produced more than thirty bushels of corn to the acre. It has been improved by clover, blue-grass and feeding stock upon it, so that they deposited their manure in the field where it was wanted.

To restore an exhausted, or rather tired field, it should be sown in grass, and stock fed upon it during the winter months. Hogs fattened upon tired land enrich it very much. It may be true that they fatten faster in a close pen, but when they are fed on ground that is intended for cultivation they will greatly increase its productiveness. One hundred hogs fattened upon ten acres of worn land will increase the produce of that land in the next corn crop at least two hundred bushels. This being the case, how very wasteful to fatten hogs in a little pen by the side of the creek, branch or pond, where all the manure is washed into the water and is wasted. I do not speak of those who scrape up their manure and haul it upon their fields. They do not live about here. Very few of our Kentucky farmers have as yet engaged in hauling out manure. And why should they, when by a proper rotation of crops, and feeding upon the fields whilst in grass, they may make their manure so much easier in the fields where they want it?

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* This experiment was made from sand after it had resisted the above acids. The lime, magnesia and iron, in this last experiment, were about in the same proportion as in the others. This reduces the sand to a less average than twenty per cent, and a part of this was incombustible vegetable matter.

When a field is much exhausted it should be kept in grass four or five years. In this case there should be sowed three quarts of clover seed, the same quantity of timothy (*Phleum pratense*) seed, and half a bushel (in the chaff) of blue grass seed to the acre. If the field is not much exhausted, two years will be a sufficient time in grass, and the blue grass seed may be omitted. The grass may either be fed off to stock or mowed. If the latter, the hay may be fed with other food, on the same ground, to stock cattle. The soil will improve much faster where stock are fattened than where they are only fed so as to winter them. The ground is enriched in proportion to the richness of the food that is fed thereon.

When the grass is plowed up, two crops of hemp may be taken, a crop of corn, oats fed down to hogs, corn again, wheat or rye followed by grass sown upon it in the spring. Thus in an eight year course, giving two crops of hemp, two of corn, one of oats, one of wheat or rye, and two of grass. Land will improve under this course if stock are fattened upon it the two winters it is in grass.

Another shorter rotation is two crops of corn, rye fed down by hogs, grass seed sown upon the rye in the spring after it is sown, grass two years with stock fed or fattened on it during winter. Land will also improve under this course, and the second crop of corn will be better than the first, in years equally good. In the first case also the second crop of hemp will be better than the first. The soil will be rotted the second year, and there will be much less labor in cultivating the ground in corn.

I could never get grass to come well when sowed with oats, if I put on a sufficient quantity of oats to insure a good crop. Wheat is often injured by the early start of the grass in the spring, producing the rust in it. Therefore I prefer putting in my grass seed with the rye crop. I have had clover come very well, however, when I would only put in a small quantity (half a bushel) of oats to the acre. SAML. D. MARTIN.

Colbyville, Ky., January, 1845.

RESULTS OF EXPERIMENTS

In the Culture of Indian Corn, Wheat and Potatoes.

MR. L. TUCKER—Last spring I made an experiment on my corn crop, with compost prepared in the following manner: Took twenty-five bushels leached and unleached ashes, ten bushels plaster of Paris, sixteen bushels lime, and about fifty bushels fine sheep manure, mixed the whole together on the barn floor, and dissolved the lime with beef and pork brine. After thorough mixing, the compost heap had the appearance of the grey plaster. I put one handful in a hill of corn until I found I should not have enough to go over the field, which was about twelve acres. I then reduced the quantity to one handful to two, and even to three hills.

The field selected was the poorest on the place, and I was told I could not possibly have over half a crop of corn. It had been in wheat last, and laid out one summer without clover; hence the prospect was not very encouraging. Some of my neighbors rather quizzed me about the compost; but when husking and hauling-in time came, they were amazed. The corn grew surprisingly. It was very tall, although the cut and grub worms and blackbirds worked on it to such a degree that I replanted at least one-third of the field about the 20th May. The crop was as good as any in the neighborhood, if not better—hauled twenty-six wagon loads of seventy bushels each. Some of the ears were so high upon the stalks that my hired man of six feet could not reach the top of the ear. The corn planted was the large and small yellow, and was all hard. Where the handful of compost was put, was the best corn; as the quantity was diminished the difference was perceptible.

I have tried an experiment on two bushels wheat sowed. When it is harvested, I will communicate to you. I also tried an experiment on my last year's wheat to prevent smut. One portion I washed and soaked with salt brine, dried with-quick lime; another portion I washed and dried with lime; and another lot spread out, made wet with a watering can, and dried with lime. The former was almost clear from smut, whilst the second and third lots were considerably smutted—the second not so much as the last.

I put ashes and plaster on my potatoes when planted, and so far they prove good.

CHARLES COLFELT.

East Kishacoquillas Valley, Pa., January, 1845.

PRODUCTS OF THE DAIRY—NO. III.

WE intimated, in closing our remarks upon this subject last month, that we should make some suggestions as to "the means which should be adopted to secure the greatest increase in quantity and improvement in quality of dairy products." Before attempting this, however, let us first see what is the quantity now actually made in most of our dairies. Upon this point we have very little positive information, and must rely mainly on the opinions of dealers and persons who are well acquainted with the dairy business. Our intercourse with farmers and dairymen has enabled us to judge perhaps with some degree of correctness, especially as we have hundreds of times asked the question, "How much butter or cheese do your cows average in the season?" To this question we have received various answers, some putting the amount as high as 200 lbs.; others at 150 lbs.; and many nearly or quite as low as 100 lbs. of butter. We suppose that two and a half pounds of cheese are about equivalent to one of butter, so that the range in the average of cheese dairies would be from 250 to 500 pounds. Our own conviction, strengthened by the opinion of a number of dealers in dairy products with whom we have consulted, is, that the average production of butter cannot exceed 125 lbs. per cow. The average product of cheese cannot much exceed 300 lbs. It is not asserted that these are the actual average products, but the amount here assumed will be found, on a careful inquiry, very nearly correct. The extremes, as before stated, are far above and below this amount.

For the purpose of showing what may be done with good cows and good management, we now propose to give a few statements which have come under our notice, or been communicated to us by persons engaged in this business, and to give our readers an opportunity of judging correctly in the premises, we shall accompany the statements, as far as practicable, with an account of the measures pursued to arrive at the results spoken of.

We will first give some extracts from the report of the committee on cheese dairies to the New-York State Agricultural Society, February 13th, 1845. From that report we learn that Mr. Abraham Hall, of Floyd, Oneida county, has made the past season, from forty cows, 23,427 lbs. of cheese, and 200 lbs. of butter. This is an average of five hundred and eighty-five and five-eighths pounds of cheese per cow; and if we add the butter, we have equivalent to 598 lbs. of cheese per cow. To accomplish this, Mr. H. informs us that he has 100 acres of pasture, (in addition to the cows, four horses and three dry cows are kept,) of good quality, though not very abundant, and about fifty-two acres of meadow. Cows are supposed to consume about two and one-fourth tons of hay each, as they are fed in stormy weather in summer as well as a full supply in winter. Has not fed sixty bushels of grain to cows. The whey was all fed to twenty of the oldest cows, and Mr. Hall has no doubt that the twenty cows to which the whey was fed have made full 700 lbs. each. Cows come in from the first of April to the first of May. They have access to salt at all times, which is considered important. The cows are well selected, regularly milked, and attended to in every respect. The cheese is made with great care and attention, and brings the highest price in market, having been sent to Philadelphia for several years past, but the last year a considerable portion of it was shipped to England. There will hardly be spare room in this article to give the details of the process of manufacture. We hope to hear more from this dairy next year.

From the same report to the State Society, we learn that Mr. Alonzo L. Fish, of Litchfield, Herkimer county, has made during the last season, previous to the 17th of September, an average of 592 lbs. per cow; and Mr. F. estimates the quantity for the season at 700 lbs. The average, the last three years, from twenty-five cows, has been 590 lbs. Mr. Fish also feeds the whey to his cows, and about the first of August commences feeding corn-stalks, raised broadcast, once a day, to keep up a full flow of milk. While giving milk in winter, the cows are fed four quarts of shorts or one peck of roots per day. The dairy furniture and fixtures, buildings, &c. are convenient, and all well attended to. Here is an annual product of $41.40 cents from each cow for three years in succession; a handsome product truly in these times of low prices. Mr. Fish received the first premium from the State Society for the best managed cheese dairy.

Mr. Elisha Baker, of Bridgewater, Oneida county, made in 1843, between April 15th and December 1st, 10,000 lbs. of cheese and 1,000 lbs. of butter, making an average of 500 lbs. of cheese and 50 lbs. of butter from each cow. In addition to hay and grass, the cows were fed two quarts of oat-meal per day, mixed with the whey from the dairy. The cheese was sold at five cents and the butter at fourteen cents, making thirty-two dollars per cow.

We have thus glanced at some of the *large stories* from cheese makers, which are sometimes doubted, and often pronounced false by those who have no idea that any one else can make more than they have done, and are unwilling themselves to make even an effort to go beyond the old mark. These cases might be multiplied to almost any extent, had we room. Suffice it, however, to say, that there cannot be the slightest doubt of the correctness of the foregoing statements, and that the amount stated was actually made.

Let us now glance for a moment at the causes which have produced these results; results so different from those in common dairies. In the first place we find a good selection of cows, every one of which is capable of making as much as the best in many of our dairies. Where is the dairyman who has not in his yard, cows which will make nearly twice as much as others kept in the same manner, and treated in precisely the same way in all respects. This has been our experience, and we have no doubt that it is so almost every where. Now, if we select for our full number, cows of this character, the product will be at once greatly increased, without any additional allowance of feed. But where are these cows to be had? All farmers cannot have the best, it is true, but nearly all may have better animals than they do, by proper selection, if purchased, or by more care in breeding, if raised by themselves. The truth is, very little attention has been given to the breeding of dairy cows, and too many dairymen depend on keeping their number good by purchases from *droves*, which are picked up in sections where little attention is given to dairying, and driven into the dairy districts to sell. Many of these are good animals, and many of our dairymen are good judges of cows, but we often hear them complain of the difficulty of purchasing good cows. We must raise more heifers expressly for the dairy, with direct reference to their milking qualities. But we have been led from the legitimate train of our remarks, to glance at the subject of breeding dairy stock, which we have not time to pursue.

Cows, to produce large quantities of milk, must have warm, well ventilated stables, and a full supply of suitable food. So important is the first point considered, that very few farmers now allow their cows to remain in the yard in cold weather, and when they are secured in good stables at the first approach of uncomfortable weather, and kept warm and well fed until they get a full bite of grass in spring, they will hardly fail to remunerate their owners for the extra expense. There can, however, be no extra expense in point of fact, for cattle kept warm will consume far less than when exposed to the inclemencies of the weather, in this severe climate. In the cases of Mr. Hall and Mr. Fish, above referred to, very little grain or roots were fed, the principal addition to the usual food being the whey, instead of feeding it to hogs as is usually practiced. These gentlemen, with many others with whom we have conversed, are of opinion that as many pounds of cheese may be made from feeding the whey, as of pork, while the value of the former is usually greater than that of the latter. Mr. Baker fed about two cents worth of oat-meal, besides the whey. For this he doubtless was well paid.

The great secret, however, in managing cows, consists not so much in the amount of food given as in the regularity with which it is given, and the care and attention bestowed upon them at all seasons of the year. They should of course be fed liberally in winter, and more especially in fall and spring, and have, during summer, an abundance of suitable pasture, and plenty of pure water and salt. They should be milked regularly and quickly by the same person every day, if possible, and treated with *gentleness* and *civility*, (an important feature in dairy management, which many persons have not yet learned,) so as not to worry and disturb them, either in driving or in milking.

We have given the product of several cheese dairies in which a little extra feed was allowed, and for the purpose of showing that large products may be obtained without extra feed. We now propose to give the product of a few butter dairies within our acquaintance, assuring our readers that we are acquainted with the individuals on whose statements we depend, and that there cannot be the slightest doubt about their correctness. We do not intend here to give extravagant accounts, but such as will show what may be done by good care and moderate feed.

Mr. Porter, of Western, Oneida county, has a dairy of twelve cows and three heifers, one of them three years old, and two of them two years old. From this dairy he has made the last season, 2,600 lbs. of butter for market, besides supplying a family of seven to nine persons during the year. This, it will be seen, is 173 1-3 lbs., and if we add the amount consumed in the family, the quantity can fall very little, if any, short of 200 lbs. Mr. P. says—"We winter our cows on hay principally. After they come in, in spring, we allow them three quarts of oat-meal each per day, until they are turned out to grass. In my opinion the whole secret about making a large quantity of butter is to keep the cows well through the winter; keep them in warm stables, and feed a little grain in spring. They must of course have an abundant supply of pasture, and an eye must be had to the management of the milk and butter." This may be set down as a good yield.

Mr. Timothy Wilcox, of New-Hartford, informed us early in November last, that he had made, up to that time, from five cows, 1,135 lbs. of butter. Mr. Wilcox expected to make up the amount to 1,200 lbs. before the close of the season. Besides this, milk was used in the family when wanted. One of these cows was two years old, one three years old, another four, and the others older. *Nothing but hay and grass was fed during the year.* One remark made by Mr. W. struck us as important. It was this: "I have milked these cows every time myself." Here, in our judgment, lies a part of the secret. (We hope when Mr. W. sees this, that he will go at once to the post-office and subscribe for an agricultural paper.)

Mr. Brainerd, of Western, has made from sixteen cows, previous to the 15th of November, 2,720 lbs. for market, besides supplying a considerable family. Here we have 175 lbs. from each cow. This dairy was also kept on hay and grass alone, (except about 150 pumpkins in the fall,) but they were well fed and well attended to.

It is unnecessary to multiply instances, but we will say, in addition, that our friend Lewis Eames, of Lee, has uniformly made from 160 to 180 lbs. for market annually. The dealers in butter all agree that where such large quantities are made the quality is uniformly good; better than when small quantities are made. Good attention to one branch secures, in a great degree, success in the other.

The remarks made in regard to selection of cows, and their management for cheese dairies, apply equally well here, and we can only say that to equal, and even excel, the individuals we have named, farmers have only to procure good cows, give them good feed, both summer and winter, see that they are at all times protected from cold and stormy weather, have plenty of pure water and free access to salt, are regularly milked by careful hands, and finally that the milk and the cheese or butter, as the case may be, are properly managed. These constitute the essentials in dairy management—essentials which may be attained in almost every particular by all dairymen. It is easy to see that while, in the usual method of managing cows, very little profit can be realized, the results arrived at by the individuals named, (and there are scores of similar cases,) cannot fail to afford a very handsome profit from their labor. It costs scarcely any more to keep a stock of cows in good order throughout the year, than to let them get poor, and then by extra feed raise them again to good condition. Now, we hold that three-fourths of the dairymen in this country may, by simply having warm and well ventilated stables, feeding and milking regularly, and treating their cows gently, increase their products considerably, without one dollar of additional expense; and if a few bushels of grain or roots be added in the winter and spring, the *profit* will be greatly increased. Of the method of managing the milk and manufacture of butter and cheese, we have not room to speak in this article, but will endeavor to speak of some points connected with that subject hereafter. The cases to which we have alluded are not extremes, but are frequent in many parts of the State; yet not one in one hundred reaches the amount named in these statements.

The season for commencing dairy operations will soon arrive; indeed, the time for giving increased attention to dairy cows is now at hand, and we appeal to all, so far to consult their own interest, if they have no mercy for their animals, as to look well to the care of their stock during the coming spring. We also respectfully suggest to our agricultural brethren, the propriety of endeavoring to increase the products of their dairy, as well as of all crops and productions of the farm, the coming season. We *can* improve in these as well as other branches of agriculture. Shall we not say that we *will* improve in these things? Let us not be disheartened by the assertion, so often thrust in our faces, that we now raise more than we need of agricultural products. Or if this is really so, let us keep fewer cows, and make from them the same quantity which we now make from a greater number. And so with our crops; let our motto be, "the greatest amount of produce at the least expense." Profit is our object, and how shall we secure it except by cheapening the cost of production?

E. Comstock.

KNOCKS ON A FARM.

Mr. Editor—I know that you will have considered me, long ere this, "slack concerning my promises;" but each day has furnished some new pledge that "to-morrow" you should have some account of my success and mishaps in my new vocation.

The first of May last found me in possession of a farm of about one hundred and eighty acres of land in this pleasant farming district, with about as much knowledge of my new calling as most plowmen have of a special demurrer. Yet my former experience had taught me that patience and perseverance would overcome almost any difficulty; and relying on these supports I went to work, and, as you might expect, received many "*knocks*," the teachings of which will be long remembered. There was growing on my farm, when I took possession of it, twelve acres of wheat and six acres of rye. In order that the crop might be good, the seed had been procured at the west, and at a high price. A part of the crop was sown on greensward turned under, the soil being low and moist. The result, when harvest came, was forty-two bushels of ordinary wheat and eighty-eight bushels of chess. As soon as the half-bushel had shown me the quantity of each, I seated myself in my big arm chair, placed my feet on the office table (attitude is everything) and commenced looking over the list of premiums for the next State Fair at Poughkeepsie, supposing, of course, that my chess crop would entitle me to number one. But finding no bounty offered for my crop of chess, I consulted the back numbers of the Cultivator (and these have been my indispensable oracles) to find some information as to the quality of my abundant harvest. While, however, but little light was afforded by the treatises, much amusement was enjoyed from the sharp controversy which has been carried on among the agricultural community on the "transmutation of wheat"—the "book men"* claiming the transmutation of wheat into chess to be a violation of the laws of nature, and the practical farmers maintaining that the severity of winter changes wheat into chess. One thing I know, my predecessor sowed good wheat and I harvested good chess; and the best explanation is found in the Book that says: "Thou sowest not that body that shall be, but bare grain; it may chance of wheat or of some other grain."†

I cannot, in justice, omit here to recommend a fan-mill made by J. T. Grant & Co., of Schaghticoke, Rensselaer county. It removed all the chess from my wheat, and has cleaned thoroughly rye, peas, timothy and clover seed; in short all the grains and seed ordinarily produced on a farm have been entirely cleansed from their impurities by this mill. I was very careful to examine the various patterns which were offered for sale in your city and elsewhere, and to witness their operation; and I have impartially compared the work of my mill with that of the mills used by my neighbors, and I must say that Mr. Grant's mill is superior to all which I have seen, in the simplicity of its construction, the ease of its revolutions, and the perfect manner in which it performs its work. It is the most finished agricultural implement which I have ever seen, and has deservedly taken the first premium at our state and county fairs.

My corn was planted early, and finding that it did not come up, I examined the hills and discovered in more than half of them two or three small white worms in each kernel, gnawing at the very chit. A second planting escaped the insect, and gave an ordinary crop. Much of the first planting in this section of country failed, and a second was required.

The barley harvest has yielded the best returns, being worth six shillings per bushel, while oats were quoted at twenty-eight cents, corn at fifty cents, and buckwheat at thirty-seven and a half cents.

I have made many efforts to learn to plow, but all my lots had a slight sprinkling of stones, and the plow would jump out, and before I could enter it again the team would be far from the furrow. But I consoled myself with the reply which the boy made to his father when reproved for making irregular furrows: "Never mind," said he, "it has all got to be plowed." More practice another season will improve my skill, they say; at all events it shall have a fair trial.

Yours respectfully,

Ballston Centre, Jan. 20, 1845. B. P. Learned.

Honey is, according to Mr. Milton, who has lately published a treatise on bees in England, a universal specific, and among its other valuable properties, he declares that it prevents consumption, and states that that destroyer of human life is not known in countries where honey is regularly taken as an article of food. Those who have less faith in the specific, may perhaps attribute the cause to difference of climate rather than to honey. The Italian singers, it is also affirmed, are greatly indebted to honey, but their practice is to sharpen it with a few drops of acid, though they sometimes take it in a pure state.

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* This is not altogether fair. We have carefully looked over the old controversy in the Cultivator and Genesee Farmer, and find that every writer on the negative side of the question, was, to our certain knowledge, strictly a *practical farmer*.

† Our correspondent should have finished his quotation. It reads thus: "And that which thou sowest, thou sowest not that body that shall be, but bare grain, it may chance of wheat, or some other grain: but God giveth it a body as it hath pleased him, *and to every seed its own body.*"—Cor. xv. 37, 38.

NOTES OF TRAVEL IN THE WEST.

BY SOLON ROBINSON.

January 1, 1845—My old acquaintances, the Editors and readers of the Cultivator, I hope will be pleased to see that I have risen with the sun, who shines forth this morning with all the beauty and much of the warmth of a May morning, not only to wish them a single "happy new year," but with the intent of devoting many weeks, perhaps months, in daily intercourse, and agreeable conversation.

In my card introductory, which I have printed for the occasion, I announce myself as "Traveling Correspondent of the Cultivator," and in that capacity I hope to make my notes of travel, as I proceed through the South Western States, somewhat interesting to both Eastern and Western readers.

So far, this has been a remarkably mild and pleasant winter; almost without snow, and no very severe cold weather; and now the warm sun bids fair to carry off the little ice already formed. Bad weather for the growing wheat, which does not look so well as it did last year, and so far as my observation extends, there are not as many acres growing.

Now, Messrs. Editors, and you my dear old friends who have so often told me that you delighted to read my letters from the West, let me in fancy seat you by my side in my buggy, wrap you in Buffalo skins to protect you from the prairie blast, give the word to a pair of excellent mares, (by the bye, I always prefer mares for work,) and we will leave the home of your old friend upon this new day of a new year, and in the course of our long ride, we shall see many things that will be new and strange to you as well as me. The top of the ground is slightly thawed, and has the appearance and consistency of a first rate article of "paste blacking," ready prepared for use; and although we may get an over supply on coats as well as boots, be not alarmed; it will "rub off when it gets dry;" and even if it did not, it will not give us a very singular appearance, for in this respect, all men (travelers) are equal.

The first object of importance that meets our view, is a new church, crowned with the cross, that tells us that we are in the midst of a thriving settlement of Prussian Germans, thousands of whom are annually occupying the tens of thousands of vacant acres of land in this country. They are generally men of but moderate means, and content themselves with second rate land, and conduct their farming operations upon a small and rude plan, and adopt the improvements in agriculture of their go-ahead Yankee neighbors with slow caution. Yet there are some things that we may learn of them. If they do not go over as much ground, they generally do it better. They almost universally use oxen instead of horses; and what is more, you will find their rude log stables plastered up with mud, so that they are as warm and comfortable as their own dwellings, and comparatively more neat; for it must be said that the inside of their houses often presents such an appearance in regard to neatness and comfort, as would be "shocking" to some of my down East lady friends, who look upon a log cabin at best, as a name synonymous with every degree of discomfort.

Eight miles from home, we cross the western line of Indiana, and enter upon the eastern borders of the great prairie State of Illinois, over hills, and through ravines and deep dells, that will give the lie to that preconceived idea that the dwellers upon our broad prairies, inhabit one vast level plain. This part of the State (Will county,) is thinly timbered, and dotted with farms, all of which have sprung into existence within the last ten years, at which time I knew it as one vast wilderness. I spent the night in the hospitable mansion of Dr. Hitchcock, *late* postmaster of "Crete," but who, like many others of the devoted friends of agricultural improvement, who never abused the franking privilege, but sometimes used it to advance that science, has been thrust aside to make room for a more active politician. I visited the Doctor some two years ago, and found him in a very small log cabin, standing upon an unenclosed waste of prairie; and now I find him in a snug frame house, surrounded by a large well enclosed farm. Most of his fence is laid straight, the ends of the rails fastened by short blocks, which he prefers as a saving of timber, (a very important item) to the common worm fence. I objected to this, as less substantial than worm fence, but he assures me that when well staked, and with heavy riders, the wind has no effect upon it, and being straight, he can plow closer, and thus give his fields a better appearance. His lady-like eastern wife, is just such an one as is calculated to make the "new home in the West" comfortable. I found the whole house carpeted with the most beautiful rag carpet I ever saw, all the work of her own hands.

The 2d of January, like the day previous, was another lovely day, for which I was thankful, as I had a dozen miles across an open unsettled prairie, which must long remain unsettled, unless cultivated without fence, or else by some as yet undiscovered method of fencing; for the settlements are already as much extended from the groves upon each side as circumstances will admit, and the experiment of sod fence, I look upon as a total failure. Twelve miles from Juliet, we strike the "Hickory Creek Settlement," one of the oldest in this part of the State, possessing a fine body of timber, good mill privileges excellent prairie, and many well improved farms, the new houses and barns upon which show a thriving Yankee population; there are but few orchards coming forward, and in many cases where houses are situated upon the bleak prairie, there is not a tree or shrub visible. This is a neglect that I cannot too highly censure. Neither can I too highly censure an almost equal neglect to make good roads through so good a country.

JULIET.—This town is situated upon the "Riviere des Planes," (a good sized mill stream,) 40 miles south-westerly from Chicago, and containing about 1,800 inhabitants, many of whom, are to all appearance, "hanging on" to the long deferred hope that the Illinois canal that follows the bank of the river, and divides this wide spread straggling village, will soon be recommenced, and restore them to that prosperity that originally built up the place, and in fancy made many rich, and in reality made more poor. The village is situated upon a most sterile limestone rock, covered with barely soil enough to sustain a little grass, and every thing around shows evident signs, that through this mile wide valley, once rolled Niagara's mighty flood, at that period of long past time before the waters had passed the northern boundary at the heights of Queenston, and the thunders of the great falls were as yet unheard and unknown.

One of the most creditable things that I can say of Juliet, or of her half and half dead and alive population, is that during the last summer one of her enterprising citizens, (the Hon. J. A. Mattison,) has put in operation a small woolen manufactory, containing at present four sattinet and one broadcloth loom and other machinery, all finished and operated in the best manner. By the way, I would here say to you that this good firm, fine homespun suit that you see I am dressed in, was colored and dressed at this establishment. As such manufactories are real blessings to this "to be" great wool country, I hope the proprietor will be greatly blessed in his undertaking.

After finishing some business that detained me 24 hours here, I set off in the afternoon of the 3d, to visit one of the largest farms that I know of in this part of the State, situated about 14 miles westerly, most of the way across open prairie. Unlike the two previous pleasant days, this was one that would give us an idea of what a "gentle prairie breeze" was like. The first two or three miles lay between the river and "bluff," a high bank of limestone rock, composed of flat layers from one inch to one foot thick, and affording a most inexhaustible supply of materials for building and fencing, but as yet little used for the latter. As I passed up a ravine through this bluff, and came out upon the high prairie, with the wind "dead ahead," and blowing most beautifully strong and cool, I almost wished myself again by my own warm hearth, and the enterprise that I have undertaken, committed to other hands, supported by a stronger constitution. Here, when the wind blew almost strong enough to start the hair off my horses, were situated several farms, miles away from timber, treeless, barnless, shedless and shelterless for cattle, which stood drawn up into the smallest possible dimensions, under the lee side of a rail fence, while the owner was perhaps complaining that "this is not a good country for cattle."

Passing a little grove, and less village, called Plainfield, on a stream called the Du Page, and upon which there are many fine farms, I struck out again upon the prairie, where I found a variety of what the people are pleased to call roads, none of which seemed to lead toward that point of compass that I thought I ought to go, and therefore I concluded that I would not follow either, and boldly struck off upon the trackless prairie just at sundown, for a four miles drive. Taking, as I have often done before, the wind for my guide, which unlike some friends at some other time, this time proved unchanging, and conducted me safely to my point, without accident, except a slight harness break, while performing that very common feat in this country, jumping a deep creek, before the era of roads and bridges.

After my cool ride, I met with a warm reception in the very comfortable cabin of Major Wm. Noble Davis, (Ausable-grove, Kendall county, Illinois,) whose farm is situated about 2 miles from that beautiful stream, the well known and oft described Fox river, and 40 miles from the great commercial point of all this country, Chicago. The Major, (I insist upon giving him his rather questionable title, as he as well as every body else hereabouts, insist upon bestowing upon me the title of "Judge,") located upon this lovely spot about ten years ago, and by the purchase of an "Indian Reserve," secured about 500 acres of timber, that is now worth from $30 to $50 an acre. To this he has added about 1500 acres of as fine rolling prairie as fancy could wish, about 1100 acres of which is under substantial rail fences, mostly divided into lots of 80 acres each, all having suitable watering places for stock, which in the shape of horses, hogs, cattle and sheep, particularly the latter, abound in proportion to the size of the farm. Indeed, I believe he intends in time to make a sheep farm that will produce an amount of wool that will make some of the down east 100 acre farmers look with wonder, and wonder if such things can be. He has one little patch of Kentucky blue grass, of 160 acres. He has as yet but one barn, but that is a most noble one; but let me tell you, his cattle and sheep are not under the necessity of lashing themselves to the fence to keep from blowing away, for he has erected "cheap sheds" enough to shelter every hoof. He intends in the course of a couple of years more to get the remainder of his prairie under fence and in cultivation or seeded down to grass, and then with a well fenced 1600 acre farm—well what then do you think he intends to do? why, then he intends to *build a house and get married*. For be it known, and ye down east marriageable girls take notice, that this Illinois grandee is not yet a *very* old batchelor, only 36, fine looking, full of life, and as soon as he can get a nice, "snug little farm" ready, will also be ready to give you a call. But not till after "the new house advent." For be it known to his thousand and one eastern acquaintances, that he now lives in a log cabin that would be a rare show to some of his Broadway friends.

Major Davis has introduced some fine improved horses, cattle and sheep, the benefits to the country from which, will be long felt by others as well as himself. He has also set an example in the way of fruit trees, well worthy to be followed. *As I* have so many individuals to notice, I cannot of course, spend too much time individualising stock and improvements.

On Saturday, I intended to have gone on my way rejoicing, but who ever escaped from the Major with only a one night visit, (he studied hospitality in a southern latitude,) and that, connected with a slight indisposition, brought on by the strong lime water of Juliet, not only kept me over Saturday, but there also I took a Sabbath's quiet rest.

On Saturday afternoon, the Major drove me up to Oswego, 9½ and Aurora, 7 miles, two flourishing villages on Fox river, at both of which the river as well as at numerous other places, affords the best of water power, and at the latter is one of the best finished flour mills of 4 run of stone in the State.

Here we visited a picket fence making machine. The pickets are sawed by a circular saw, out of boards, and then passed through a set of cutters that round and sharpen them, and are put in girts also bored by a machine, and these lengths are set up crooked like worm fence, without posts, being held at the corners by one of the pickets passing through each girt, and as it is sold at 75 cents a rod, will answer well to fence prairie, where rails cannot be had for a less cost. But as it takes 14 rails to make a rod of as good fence, it is easy to calculate which kind of fence will be the cheapest. At present, while we cultivate so poorly, and do not average 10 bushels of wheat to the acre through a series of years, we cannot afford to pay 75 cents a rod for fencing, besides the cost of hauling and putting up, and then as most of us do, carelessly risk its being burnt by the annual fires that destroy thousands after thousands of rails every year.

Many of your Orange county readers will be interested to hear that I visited an old resident of that county, by the name of Townsend, who with several of his children, live in the same grove with Major Davis, and own about 3,000 acres of fine land. From Mr. Townsend I first learned that fowl meadow grass, which is one of the most valuable kinds that I am acquainted with for wet prairie, is indigenous to the country. By conversation with the old gentleman, I also became satisfied of what I had long believed, that what we call "blue grass," is a different article from what is known at the east by the same name. The eastern blue grass he thinks much the best. Neither of the kinds are profitable to cultivate for hay, but for fall and winter feed, particularly for sheep, exceedingly valuable.

I ought to have mentioned before, for the benefit of others who are beginning to make sheep farms, the manner which Major Davis constructs "cheap sheds"—two rows of posts about 15 feet apart are set up to sustain poles laid up in the same form of a log cabin roof, and small poles or brush laid on to sustain a covering of hay or straw, and the back side is completely filled with rails set up slanting and also covered, which not only makes a nearly tight roof, but a complete wind breaker, that will pay the cost in one winter. He fodders his sheep without racks. His method is this. The ground being well covered with straw, the sheep are driven into another yard, whilst the wagon, loaded with hay, is driven in the empty yard, and the hay laid in rows. The sheep being now let in, commence taking their places without running over the hay or wasting more than when it is fed in racks or boxes, and none gets in the wool. I believe it promotes the health of sheep to allow them every pleasant day to have a range in the bushes. I have no doubt but that many who have driven sheep to this country during the last summer, will find it a bad speculation before spring. It was the worst of seasons to drive, and drove sheep never get through the first winter without great care and some loss at best; while there are tens of thousands brought here without any kind of forethought of preparation for shelter or comfort, except what they may gather from a poor supply of prairie hay and such shelter as they can find under a rail fence, or upon the open wild waste. Such conduct is reprehensible, as not only cruel, but as a wicked waste of the lives of such valuable animals. This is a good sheep country I shall insist, until convinced by proof to the contrary; but they cannot live upon prairie wind, and sleep in knee deep prairie mud.

On Monday, I passed on my way down Fox river, crossing at a very poor county town of a very good county, on a very good bridge, but one that is only good in very cold weather, as I witnessed higher up the same stream last week, as it failed on a warm day, and let a pair of horses and wagon through; but by which I had an opportunity of witnessing the operation of getting a horse out of a hole in the ice, by drawing a rope tight round his neck until he chokes and floats to the top of the water. I stopped this night with an old farmer from Lycoming county, Pennsylvania, who had sold a comfortable "old homestead," and in his old age sought a "new home in the west;" and what do you think he has found? a fac simile of his mountain streams and clear springs, and tall trees and useful rocks? Oh no: he has got none of them. But he has bought 400 acres of land—rich land—200 of prairie, and 200 that is neither timber or prairie, plow land or meadow, but covered with a growth of small oaks, fit only for fire wood, while his rails must be hauled from 3 to 6 miles, and cost $2,50 or $3 a hundred.

The whole tract cost $3 an acre. 50 acres under improvement with poor buildings, destitute of water, and several attempts to get good well water, have failed at 70 feet deep And for such a home as this, the "old homestead" was parted with. I mention this circumstance, to show that emigrants do not always better their situation, when they leave substantial comfort in the east to pursue a vision of acquiring numberless acres of wild land in the west, however rich the soil of those acres may be.

Ten miles north of Ottawa, is "Indian creek," now occupied by a flourishing settlement, where, in 1832, the few inhabitants then there were the victims of the "Black Hawk war." Here is a body of good timber, which is the nearest timber to tha town. The space between this settlement and Ottawa, being unoccupied prairie. Four miles above Ottawa, there is about 20 feet fall over a rocky bed of the Fox river, partially occupied by a saw-mill and flouring mill of five run of stones, and a woolen manufactory of 4 satinet, and three broad looms, &c. As such manufacturing establishments are as yet so rare, although so much needed, I like to note all that come in my way. Here too, appears to be the northern boundary of the great coal field of Illinois. The abundance of coal that exists in the Illinois river valley is of immense importance, and more so on account of the scarcity of wood—coal at Ottawa is worth about 5c. a bushel, but it is not of first rate quality, being dug near the surface of the ground in the river bottom. By the bye, I wish you to notice that this phrase "river bottom," does not mean the bottom of the river, but what Eastern readers understand as "interval."

Ottawa is situated on the Illinois at the mouth of Fox river, and head of steam navigation in high water, and having been settled and built up during the canal fever, also contains many "hangers on," and from present appearances in the legislature, they are destined to hang on some time longer, before the canal is completed. And I would also here caution many of your down east readers, who have purchased land along the line of this canal at high prices under the expectancy of its early completion, that they are also "hanging on" to a very brittle prospect—and for my own part, until I see some vigorous measures taken to complete this important work, which when done will relieve the state from one portion of her debt, I shall believe that she does not intend ever to pay any part of it. There is a Court House at Ottawa, built when the whole country were building castles *on credit*, at an expense of $36,000. As an evidence of very uncommon taste in this treeless country, I notice the yard set with shade trees. As usual in all western towns, where land was so dear and scarce, the streets are narrow and lots small. Even the principal hotel, to save room upon the surface of such valuable lots, has its dining room below. I attended a thinly attended scientific lecture at a neglected looking Mechanic's hall; at which I did not wonder, as all interest and conversation seems to be centered upon "canal! canal! canal!"

On the 8th of Jan. I ferried the Illinois in a most violent snow storm, and amid floating ice, being impelled to do so by the prospect that in an hour more all chance of crossing would be at an end, except upon the ice, which in several instances had already caused the loss of several teams this winter; and of the two dangers I chose the least and got safe over. But not so at an unbridged creek, three miles along the river road, where the ice gave way and gave me an upset into the water, mud and ice. That such a creek on such a road so near such a town, should remain for years unbridged is not singular, for who ever knew little works attended to where great ones, like this great canal, absorbed all minds. But for my consolation for my misfortune, I was assured that hundreds had met with worse ones at the same place. The great neglect of roads that manifests itself throughout this country, goes far towards creating a prejudice with strangers against any new country they are passing through.

I spent the night with a very intelligent farmer by the name of Baldwin, at "Farm ridge" on the Vermillion. Here is a settlement of Connecticut farmers, who have brought abundance of enterprise and industry with them, as is manifest by the appearance of good houses, barns and orchards. The only thing lacking to make this lovely land very desirable, is timber which is here, as everywhere, too scarce. The Vermillion, however affords excellent mill sites, and abounds in coal of good quality. The coal is in three beds, the lower one in the bed of the stream. The banks are high bluffs of clay, coal and limestone. Vermillionville is one of those many towns in the west where people have learned by sad experience that they cannot live upon a little "7 by 9" town lot. Though many have moved out, there are some enterprising citizens left, one of whom is the new postmaster, Dr. Bullock.

The nature of the soil along the Vermillion, is from 1 to 3 ft. black loam, then several feet clay, then sand, in which is found water. Natural curiosities in such a country are scarce, but near the mouth of the Vermillion are two—one, the "Deer-park," is a chasm in the rocks several hundred feet deep, a few rods in width and half a mile long, having an opening next the stream, into which deer used to wander after a "salt lick," and fall an easy prey to the Indians. The other is the celebrated "starved rock" on the Illinois, noted in history as the spot where a small tribe of Indians were driven by another tribe and besieged till starvation alone conquered the bravest of the red braves. From the Vermillion I passed over a dozen miles of beautiful country to Granville, a fine little town in Putnam co. beautified by a handsome church and a very excellent school. Spent the night with a Mr. Ware from Massachusetts, who with his brother have set their neighbors an example in farming and improved stock worthy of imitation.

During this day's ride I passed a "long ditch" in the woods at Cedar point, which I was informed, was "the great Central Rail Road of Illinois," *that was* to lead from Galena, crossing the Illinois at the termination of the canal at Peru, to the great city of Cairo, at the mouth of the Ohio. Six miles southeast of Granville, is "Mt. Palatine," a Baptist settlement and school, four miles out upon the wide prairie, solitary and alone, so far as regards timber.

Near Magnolia, which is a flourishing new town, 8 miles from the Illinois river, in which for the want of water power, steam is used, I spent a night with a Mr. Patterson from Pa.; and from his English shepherd, I learnt that he esteems bran slops, the best food for sheep dropping lambs in winter; and the condition of those on hand went far to prove it. As some criterion of the price of land in this vicinity, I learnt the sale of a two hundred acre farm, about 80 improved, 60 timber and balance unenclosed prairie, with very moderate buildings for $2500—the seller being bound for that new "Eldorado," of our restless population, the Oregon territory.

At Magnolia, I saw the first sugar maple; the timber northward being mostly oak. Upon Mr. Patterson's land, I also witnessed the astonishing increase of timber, when kept from fire—a matter not sufficiently thought of in this country—a country where tens of thousands of acres of rich soil can never be fenced except by growing the materials.

From Magnolia to Washington, I passed over some poor, uneven, barren, much uncultivated prairie, few and poor mill streams, through the very poor county town of Woodford co. (so named perhaps to indicate that the county is *not all* prairie) to the latter town, which lies about 10 miles east of Peoria, where I saw a large steam mill in operation, and a very extensive pork house, and other evidences of a prosperous state of things. Here after many days of beautiful winter weather, I encountered in the afternoon of January 11th, a furious snow storm with a head wind too strong to beat up against, which drove me into quarters with a homesick Kentuckian, who was longing to return to his "own native land"—and here, after our rambling ride, my dear readers, we will rest until the morrow, when you shall again "go ahead" with your old friend,

SOLON ROBINSON.

IMPROVEMENT OF AN OLD FARM.

LUTHER TUCKER, Esq.—The January number of your new series has been received, and I should be deficient in gratitude to your able contributors, were I to omit the opportunity to express the obligation I owe them for the valuable information contained in this publication. A single article therein has benefited me now, more than the cost of several years subscription. During years gone by, when your publication was issued from Rochester, most of my substantial ideas of farming were acquired by a perusal of its pages; and these old volumes are preserved and referred to yet, on many occasions, for practical information that I could not otherwise obtain.

I am disposed to contribute to your periodical my share of observation and knowledge of agricultural subjects as justly due to it, but the ground is so completely occupied by abler hands, that I can do but little more than corroborate the great value and practical utility of the plans laid down to increase the fertility of the soil, and improve the manner of its cultivation. But inasmuch as a statement of the method I pursued to produce the same results (though brief, imperfect and a repetition of that which has been better detailed) may be an encouragement to some of your new subscribers to proceed at once to the improvement of their farms, I will endeavor to lay it before them.

Seven years ago my wife and I came into possession of about seventy acres of land. The soil naturally would rank as second quality in this part of Pennsylvania, but was much reduced in fertility, and sadly out of order, by bad farming, continued during a series of years, and the last fourteen in the hands of yearly tenants, the last of whom paid one hundred dollars a year, and frequently claimed an abatement of that. The soil generally inclines to a yellow or reddish clay, with occasional stony ridges of sandy loam, the whole based upon a subsoil of impermeable red clay. In wet weather this soil becomes saturated with water, and during the winter and early spring, when mid-day thaws alternate with freezing nights, clover and other taprooted plants are thrown out of the ground, and generally perish.

The fences on this property were in a decayed state; not one good panel could be found, but briers, elder, sassafras, cherry, noxious weeds and stones, occupied both sides of every fence. On the ridges, red sand rocks, from the size of a stove to a bake-oven, were obstructions to farming, and in spots small stones were so numerous as to throw the plow out when in the best hands. Briers, garlic, St. Johnswort, yarrow, wild carrot, and every other noxious weed in this part of the country abounded in the fields; and to add to the evils of this bad system of farming, the water from the public road and the adjacent higher ground, ran through the dung yard, leaching the manure of its fertilizing principles, and carrying its best substance to waste in the nearest mill-dam, leaving fifty or sixty loads of light, strawy substance, to supply the exhaustion of the cropped soil. Ten bushels of wheat, twelve of rye, fifteen of corn, and one ton of rough field hay per acre, may be set down as its produce in a favorable season.

The experienced reader will believe this picture too highly colored until I mention one encouraging feature on this farm, which alone enabled its occupant to pay any rent at all. About eight acres formed a valley, through which ran a small but constant stream of water. Half a century ago artificial channels were dug at the proper level, along both sides of its banks, for this stream to flow in, enclosing about that quantity of ground, which could be watered at pleasure, and with due attention could be made to produce two tons or more of hay to the acre, making the most valuable kind of provender for milch cows.

On taking possession of this land, my partner aforementioned and I sat down to calculate the cost of making the necessary improvement to bring this land into a profitable condition. We borrowed five hundred dollars, and commenced working. We enlarged our garden to an ample size, and enclosed it with a good picket fence. I enlarged my hog pens to contain thirty or forty two horse loads of manure; had many loads of small stones hauled from the fields into the roads, and breaks made across the road, with inlets for the water into the sod fields, and open ditches or covered drains to carry the excess off; plowed the road down below the barn and filled up around the dung yard, so as to turn the water off the manure; next cleared the meadow of all obstructions of wood, stone, or unsightly heaps of earth, harrowed the surface with a sharp and loaded harrow, sowed timothy seed, opened the ditches on the sides and the middle of the meadow, and spread the water evenly over its surface; then moved the fences, grubbed the headlands; chopped level with the ground every tree not useful for fruit, shade or ornament; collected the bones of animals and oyster shells, and on heaps of briers or brush reduced them to cinders, applied this as a top dressing to poor spots of sward; applied thirty or forty bushels of fresh slaked lime to every acre of arable land, and about one-half has a second dressing of the same amount applied; have taken up, split, and carted to convenient places for building wall, every rock in the way of farming; have enclosed the land and divided the fields with substantial fencing, and planted about two hundred and fifty grafted fruit trees; and lastly, but not least in importance, I made during the last year upwards of two hundred two horse loads of good manure.

Now, what is the result in figures of this system of farming? Book farming, if you choose to call it so. Last summer fattened six steers on grass, (that I fed the previous winter on straw and corn fodder,) and sold them to the butcher in hay-making; fattened and sold forty-three sheep, one-third of them my own raising; sold one fresh cow, also my own raising; sold four hundred pounds of chickens, besides a lot of other poultry; sold seven barrels of vinegar; butchered four hundred and fifty pounds of corn fed beef, and one thousand nine hundred and fifty pounds of pork, also my own raising; sold fifty bushels of early potatoes, and sell about eight pounds of butter weekly the year round; raised one two year old and one three year old colt; made the last season, though a dry one, one ton and a half of clover and two tons of clear timothy hay to the acre, and raised twenty bushels of wheat, thirty-eight bushels of oats, and thirty-three bushels of corn per acre, each.

In presenting this statement of improvement in exhausted land, I claim no particular merit; it has been done by application of the principles again and again laid down in your valuable paper; and I doubt not that in the hands of an experienced farmer greater improvement would have been made. Enough however is done, to justify me to present it to your readers, as proof of what may be done to renovate impoverished soil, and make it profitable.

AGRICOLARIS.

Coventry, Chester co., Pa., Jan. 23, 1845.

MAMMOTH HOG.—Hiram Duell, of Hebron, N. Y., it is said has gone to Boston with a live hog, which is two and a half years old and weighs 1,548 pounds.

THE FIRE BLIGHT IN PEAR TREES, &c.

MR. EDITOR—Some time since, I visited, in company with an agricultural friend, the delightful place and well cultivated farm and garden of Mr. JABEZ JENKINS, of West Whiteland, Pa., and witnessed his mode of preventing the fire blight on his young pear trees, as also the cure of the cause, from whatever source proceeding, of the shedding of premature fruit. It was nothing more or less, than paving around each tree to a good distance, with stones, which he assured us he had hitherto found to answer the purpose, entertaining the idea that the remedy proceeded from the fact that the time of their blooming is thus very perceptibly retarded. Certain it is, at the time of which I speak, a good crop of very healthy fruit was found on every tree.

But my present purpose is, respectfully to request Mr. Jenkins to inform us through the medium of the Cultivator—which I presume he reads, for, judging from the order, neatness and regularity exhibited around him, he must be held obnoxious to the charge of being a book farmer, and then he takes the Cultivator as a matter of course—if the mode he had adopted for the purpose continues to afford him satisfaction, and if so, whether, reasoning from analogy, he would not expect the same course to work the same effect on the disease of the plum, as also that of the Morello cherry, the trees of which, in so many places, are afflicted with the rheumatic gout, and of consequence, subjected to the ravages of the curculio, according to the new doctrine which is gaining ground about it, that "living blight is the effect, and not a cause of disease." Remarking by the way, however, that this plan of paving around the trees, militates most strongly against the perpetual cultivating system, so long practiced by our large peach growers, for the express purpose of protecting their trees from the Yellows, &c.

I remember also, that the soiling of cattle in their stalls had claimed his attention; and the result was manifest in mountains of the richest manure, thrown up in the stable yards around. I recollect too, indistinctly I must confess, that he informed us, he had made some remarks respecting the crop of wheat, sown on land from which a crop of oats had been cut for soiling, which exhibited different appearances on spots that had been mown early, middling, and late, as also on that part where they had been permitted to remain until ripe, but whether they had been plowed in, or cut and taken to the barn, I cannot say; however that may be, I can promise your readers a very interesting account, if Mr. Jenkins will oblige us; and to those who know him, I need not add, that may be depended upon. Am I right in the idea, that the racks, out of which the cattle were soiled, had the staves placed horizontally instead of vertically, by which they were enabled to pull out long fodder with much greater ease, and without the waste attendant on the practice of feeding in troughs. As the system of soiling seems to be gaining ground in many places, Mr. Jenkins has it in his power to confer lasting obligations on numerous individuals, who are only desirous of knowing the ground upon which to commence operations, and their probable results, before starting, and although myself, not quite a stranger to the system, I should be glad to learn how the cattle are supplied in their stalls, after the crops, destined for their use, have become sufficiently high in growth to admit of a good bite, but not to allow of mowing, which must be delayed, else the productiveness of the crop is very much reduced. Where few cattle are kept, they might be tethered on the crops for a time, but on a sufficient scale to answer any good purpose, this plan would be found impracticable, and could not be denominated *soiling*. This, therefore, is a feature in the system that requires to be *brought out*; at the same time, I am prepared to find, that the addition to the manure heap and its superior quality, are sufficient to pay the extra expense incurred; particularly if the attendant knows how to compost the heap; and by pouring on the liquid contents of the cistern, built to receive it from the cattle, rendering it of more importance than the solid portions, according to late experiments, by which it was found, that one pint of urine from stalled cattle will produce an extra pound of wheat. *Chester Co., Pa.* M. P.

BERMUDA AND CRAB GRASS.

EDITOR OF THE CULTIVATOR—I have read an article in the December number of the Cultivator, in which some grasses from Bermuda are compared with others from Mississippi. The botanical name of the Bermuda grass is *Cynodon dactylon*, or *Digitaria dactylon* of Elliott, who places it in the same genus with the crab grass (*Digitaria sanguinalis*) so troublesome to planters at the south, and to our northern gardeners. Elliott, in his Botany of South-Carolina and Georgia, remarks that although the crab grass is an annual, it is the best grass for hay at present known in our low country. The Bermuda grass is perennial, and is already widely diffused through the low country of the south. I have seen it frequently in south Alabama; have received specimens of it from Prof. Carpenter of Louisiana, and according to Elliott, it is common in the low country of South-Carolina and Georgia, particularly in loose soils.

Elliott says: "We have two varieties of this plant, one coarser (perhaps a species) growing in damp soils and native; the other said to be imported, a tender, delicate grass, growing over and binding the most arid and loose lands in our country, and apparently preferred by stock of all descriptions to every other grass. The cultivation of this grass on the poor and expensive sand-hills of our middle country, would probably convert them into sheep walks of great value; but it grows in every soil, and no grass on close rich land is more formidable to the cultivator; *it must therefore be introduced with caution.*"

The crab grass of Bermuda (*Rottboella dimidiata*) is rare in the southern States, and apparently confined to places in the vicinity of salt water. I never met with it but once, and then it was confined to a small spot forming a dense mat. This was opposite Pilatka on the St. Johns river in Florida. Yours truly,

SAML. B. BUCKLEY.

West Dresden, Yates co., N. Y.

BLACK SEA WHEAT.

MR. TUCKER—This wheat is found to be so valuable a variety of spring grain in this and some other of the New-England States, that I am disposed to trouble you with another letter on the subject. It is evidently a very hardy grain, and not liable to suffer from the depredations of insects. It will grow and yield a fair crop, on almost every variety of soil, rich or poor; on very rich land it fills well, even where it is inclined to lodge.

It has been suggested that it would be profitable to introduce this wheat into those parts of Michigan and Illinois, where the winter variety suffers much damage, and yields poorly on account of the luxuriance in growth.

Most farmers here fail by letting this Black sea wheat stand too long. It produces less bran, and the bread is whiter and sweeter, where the crop is gathered in a greenish state. When allowed to stand upon the ground till perfectly ripe, there is a black mould, or substance, which frequently may be seen between the lobes on the belly of the grain.

I believe this grain was first shipped to Portland in the State of Maine, and it proved to be so valuable in that State, that the Kennebec County Agricultural Society have recently made two additional importations from the Black Sea, both of which have proved entire failures. In 1841, they had forwarded through the agency of Thomas Cordis of Boston, sixteen bushels. It was distributed, and sown by different individuals in that county, on various soils in the different locations, and in all cases it mildewed. Some was sown again with no better success in 1842. In that year, through the same agency, they procured about the same quantity, which proved to be the same variety, and they met with equal bad success. They were in hopes to have obtained some of the Siberian wheat in the last attempt, but were disappointed. I understand they are about to try again their success in another importation. We have proved by actual experiment, that not only this, but other kinds of winter and spring wheat will produce better to change the seed back and forth every year, from east to west, and from west to the east, between Maine and Michigan. I understand that Mr. Cordis has a nephew at Smyrna who is happy to confer favors on such as are striving to improve the agriculture of the country.

I sowed this season on about two acres, near 3 bushels of seed, from which we harvested 71¼ bushels of plump wheat. I took to Sprague's mill in this town, some of this Black Sea wheat, which was cleaned in "Bailey & Rich's Smut Mill," (which, by the way, has proved to be the best machine to clean *damp grain*, that has ever been introduced among us.) There carefully measured in a sealed measure, seven bushels, which weighed on the scales, 478 lbs. and 3 ounces, which is 68 lbs. 5 ounces to the bushel, after it was manufactured into flour. The yield was 360 lbs. 8 ounces, or 51 lbs. 7 ounces of flour to the bushel, and 14 lbs. and 10 ounces of bran and middlings—waste, 2 lbs. 5 ounces. To every 60 pounds of wheat, the produce is 45 pounds of flour.

There appears to be two kinds cultivated here, the white and red chaff. The heads of both varieties are guarded by a stout and long beard. The red chaff is generally preferred to the white. The berry of this wheat is large and of a dark color, very hard, and not subject to shed in the gathering; it requires a threshing machine to beat out the grain; it also requires more moisture to swell the berry, and is not as liable to grow by standing out in the field as any other kind cultivated here.

Weybridge, Vt., Jan. 31, 1845. S. W. Jewett.

SQUASHES—POULTRY.

L. Tucker, Esq.—Having received a number of letters of inquiry respecting some statements in an article of mine in the Cultivator for October last, I take the liberty of answering some of them through your paper.

1. The Valparaiso Squash.—I am not aware of any peculiar difficulty in raising them. They require a warm, rich soil, a good exposure to the sun, and an ample space for the vines. They should also be planted early, so as to have the benefit of the whole season. At the State Cattle Show and Fair at Poughkeepsie last fall, I saw a number of varieties of this squash, some grey, some yellow, &c., but generally of an oblong shape, and the largest was said to weigh 200 lbs. and another 152 lbs. The seeds can doubtless be procured at the principal seed stores through the country.

The Cuba pumpkins, of which eighteen, as the product of one seed, and weighing 776½ lbs. were exhibited at the fair, appeared to have many qualities to recommend them to the farmers; but when told that they were sold for nothing less than twelve and a half cents per seed, I concluded to forego the pleasure of trying them for the present.

2. The Price of pure Poland and Dorking Fowls.—When cooped and sent away, the price is $1.50 per pair, or five for $3; and letters on the subject should be post paid.

3. Crested Fowls.—From extensive observation and inquiry, I am led to believe that the Poland is the only original variety of crested fowls, and that all others are a cross between this and the common varieties. Of these cross breeds I saw several lots last fall in Fulton market, New-York, which were sold at high prices under the name of *French pheasants*.

4. How long will Eggs keep so as to produce Chickens?—I have made no experiments to ascertain this, but believe if they should be put in salt immediately after being laid, and kept from the air and frost, that chickens might be hatched from them at least a year afterwards. Eggs laid in Europe have been brought to this country and hatched; and if some one will procure and send me some of Victoria's mahogany colored eggs from her China fowls, I will engage to try the experiment again.

5. How did you ascertain that a Hen, changed to a new Cock, would continue for four or five weeks to produce eggs impregnated by the former one?—Finding nothing in any poultry book in relation to this matter, I substituted a white cock for a black one, and then by marking and hatching all the eggs a hen produced in six weeks, and repeating the experiment a number of times, I came to the conclusion that the time was between four and five weeks. Other experiments have convinced me that the notion entertained by some, that a cock running with a lot of hens for a few days will impregnate their eggs for a whole season, is without any foundation in fact.

6. Poultry House.—A Mr. Lyman has recently begun an experiment near this city, of keeping fowls on a large scale. He has erected a poultry house seventy-two feet long, twelve feet wide and fourteen feet high, divided into upper and lower rooms the whole length. At one end is a room for various conveniences of the owner, and over it a room for storing grain. The rest of the building in the upper story is fitted up exclusively with roosting perches for the fowls, and the room below it, connected by a flight of stairs, is fitted out with numerous feeding hoppers and tiers of boxes to lay in, &c. A door from this room opens into a yard of some half an acre, enclosed with paling eight feet high. Mr. L. has already 1,200 fowls in his establishment, and is seeking to increase the number to 2,000. He intends to keep an accurate account of debtor and credit, and will be able to show in a year or two something of the profits of such an enterprize. May we not hope that, what a king of France wished in regard to his subjects—a fowl in every one's pot—may be soon enjoyed by every family among us.

Buffalo, February, 1845. H. A. Parsons.

FARMING EXPERIENCE.

Mr. Editor—In farming, as well as in other operations, mere theory and speculation is worth but little; *practical experience* is what is wanted to uphold the business. The results of experience in farm management, are what farmers want to read and study. Every farmer has a system of management, which to his own mind seems most correct. It may be the system practiced by his father, of increasing to the greatest possible extent, his number of acres. Now I would never leave the old way for a new one, so long as it was certain that the old way was the best, nor would I follow the old track for the reason that it was old, when convinced, after careful examination, that a new one was to be preferred.

Reading agricultural papers, may perhaps be said to constitute the first step towards improvement. This reading gives an opportunity of becoming acquainted with the practical experience of farmers. It is much to be desired that more of this class of farmers could be induced to give their views. There is too frequently a reluctance to writing. This reluctance should be overcome. It is not to be expected that plain farmers should always frame sentences in the style of *literary* writers, nor is this necessary—give us the *facts* in an intelligible manner. Any man that can give his ideas to his neighbor in conversation, can do this, and this is all that is necessary. L. Durand.

Derby, Ct., Jan. 1845.

Fattening Cattle.—It is not often that the "*reductio ad absurdum*" is used as a mode of demonstration in agriculture. So good an example has occurred to me that I cannot but offer it. I had directed my manager, a young and inexperienced man, to fatten three or four steers, while kept up, instead of permitting them to run at large with the rest, (bad management, too; I hope to adopt shortly the soiling system.) "What are these?" I exclaimed in astonishment, at seeing the lean and ill-favored kine. They had been placed on the *north* side of a shelter, were fully exposed to wind and rain, and were up to their knees in mud, which the overseer hoped to make dry and comfortable by drawing in leaves, straw, &c. !!!—and hoped to fatten them by furnishing abundance of corn!!! Enough had been wasted on them to have fatted a herd, while he could not conceive why they remained so poor! "Turn them out," said I, "till we can put up more houses." The situation had been selected for convenience of watering. S.

Milk.—It is estimated that 2,000,000 quarts of milk are annually consumed at Rochester, which, at four cents per quart, would amouut to $80,000.

PHOSPHATE OF LIME—PEAT FOR MANURE.

In the August number of the Cultivator I gave you a few hasty notes upon the subject of Phosphate of Lime, in reply to the inquiries of "*A Practical Farmer*," of Staten Island. Although it is doubtless true, as there stated, that there are no localities yet known in the state, where this mineral exists in sufficient quantity for agricultural purposes, yet I indicated its existence under circumstances which doubtless yield an unfailing supply.

Since the phosphates are known to form an essential part of cultivated grains, and this supply coming from no other source than the soil and what is derived from it, it follows that these substances exist there. Now there is no other source for its occurrence in soils, but from the decomposition of rock, for it is fully acknowledged that all soils are derived from this source. The phosphates must exist then, in the rocks originally, either visible to the eye, or so combined as to be invisible. I alluded to the analyses of coral, made by Mr. Silliman, Jr., proving the existence of phospates in all cases. Now it is well known that nearly all our limestones contain corals, and some of them are almost entirely composed of the broken and comminuted skeletons of these zoophytes; consequently the phosphates must be as widely diffused as our calcareous rocks, and equally a consequence is the limit of the wheat growing region.

I make these remarks incidentally, as showing the wide diffusion of a mineral substance essential in grain growing soils. Now it is one of the most important objects to the future agriculture of the state, that a full analysis be made of all the calcareous rocks of the state, both limestones and shales. And not only should an analysis of these be made from single specimens, but of specimens from numerous and distant localities in the same rock, so that its value in this particular may be known throughout its range. This is equally essential with an analysis of the soils, the marls and muck, and every agriculturist should endeavor to facilitate an object so much to be desired. The present generation may not require this knowledge to enable them to raise bread, but others are coming upon the stage, and every advance made by us enables them to advance still another step. Therefore as a foundation for agriculture, the rocks, and especially the calcareous rocks which are every where loaded with corals, shells and other organic remains, should receive a thorough chemical examination.

I have been led into these remarks incidentally from perceiving the attention which is now being given to natural fertilizers of all descriptions. The facts here stated may perhaps offer an explanation of the variable effects, as stated, of lime. In some instances the use of this substance is said to produce no beneficial effects upon soils, while in others its effects are acknowledged to be important and beneficial. Might it not be worth while to ascertain whether lime from the same rock or same locality, is uniform in its effects? And also in other cases, where no benefit is derived, may it not be desirable to inquire if the limestone originally contained corals and other organic remains? Perhaps the presence or absence of these may exert an influence not appreciated. This subject is of high interest to agricultural chemists, and may perhaps have received attention, though I am not aware of it.

That some limestones are, or at least appear to be, destitute of organic matter is true. All our crystalline limestones are apparently destitute of organic matter, but in most cases of this kind they have been obliterated by the process of metamorphism, or the change by heat from an ordinary sedimentary to a crystalline one. Many of these limestones contain crystals of phosphate of lime, and these are doubtless derived from corals or other organic matter in the rock, and segregated and crystallized by the same process which resolved the whole mass crystalline.

The inquiries to be made, therefore, respecting limestones are, whether they contain organic matter—whether crystalline or not, and if so, whether containing phosphate of lime disseminated. The effect of the different limes, and analyses of the original rock, would be a subject of agricultural interest and importance.

This fruitful subject of theory and investigation has led me into a longer digression than I intended, and I perceive plainly that with a few more facts and experiments, an interesting paper could be made. This however is not my design, being engaged in other pressing avocations, though still feeling an interest in agricultural subjects; which interest induced me, in the earlier annual reports to give some space to the subject. I should have done more, but I fancied they received little attention, and therefore in the Final Report, instead of gathering the whole matter into a chapter, left it for the agricultural surveyor.

My attention, as before remarked, was called to the subject by the inquiries of a "Practical Farmer" of Staten Island, and I perceive the same gentleman has addressed to me a communication, in the November number of the Cultivator, relating to muck or peat.

In the annual reports of the Geologists of the state, numerous localities, and almost inexhaustible supplies of this substance were given; but in a few instances only had application been made of its properties as a fertilizer. One example of this kind, which now occurs to me I will briefly notice. Mr. Merry, of Wheatland, Monroe county, whose farm embraced part of a large marl and muck swamp, drained a small portion near the margin, and seeded it with Timothy, sometime in June if I recollect aright. He cut three and a half tons to the acre. About three fourths of an acre of the same ground was sowed with onions, and the produce was 400 bushels.

But to test the virtues of this material as manure, a compost of muck and marl was made with some stable manure, and thus applied to a heavy soil which produced but poor crops. The effect was a large crop of wheat in a season when much of the country around produced but very small crops. The same field, when I saw it, was just cleared of a crop of corn of between 50 and 60 bushels to the acre, while an adjoining field, where the soil was in its natural state, produced only 15 bushels! Such were the effects of a compost of marl and muck; and not only were the crops [illegible]s improved, but from a stiff clay soil it had become friable and pulvurulent, thus saving a great amount of labor in cultivation.

But it is not necessary to quote examples of this kind. Your correspondent of Staten Island, has shown full well the beneficial results of the use of muck, and I apprehend if used with a little lime, even more benefit might result.* At least it would hasten the decomposition of vegetable fibre, neutralize any acids that might exist, and decompose sulphate of iron which is often present in muck.

We will now proceed to mention some of the more important localities of this substance in the state; premising that from north to south, and east to west, there appears to be an inexhaustible supply. The localities cited are from the Annual Geological Reports, and numerous others doubtless exist, which from circumstances beyond control, could not be examined or even known to the Geologists.

In the First Geological District, Mr. Mather remarks that peat is so abundant that it would be superfluous to mention localities, and that it occurs on nearly every square mile, and in almost every marsh. In his first report, Mr. Mather gives no localities, but in the second he enumerates a large number in the counties of Queens, Kings, Richmond, Columbia and Dutchess. In these counties about 50 localities are enumerated, which is doubtless but a small proportion of the whole. The aggregate amount of peat estimated to be contained in these marshes at that time, was 3,000,000 cords. This estimate was for peat as fuel, and there would probably be nearly as much more which would be equally good for manure.

The principal localities enumerated are Kinderhook pond containing 60 or 70 acres. The marshes and shallows of Kinderhook. A marsh of 6 acres three miles north of Kinderhook, and another similar one in the north part of Stuyvesant. A marsh of 30 acres one mile southwest of Kinderhook. Two or three localities are mentioned in New Lebanon, one of 15 and another of 30 acres. In the township of Canaan alone, Mr. M. estimates 400,000 cords of peat. There is a small marsh near Upper Red Hook, and several between Fishkill and Hopewell, containing altogether about 40 acres, and estimated to contain 40,000 cords of peat. Another marsh extending north from Long pond is estimated to contain 300,000 cords of peat. Marshes of from two or three to ten or fifteen acres, occur in the towns of Ghent, Malden, Hillsdale and other places. In the town of Amenia there is an extensive bog containing about 150 acres, and estimated to contain 150,000 cords of peat. Others in the town of Dover contain above 75,000 cords. There are also several peat bogs northeast of Dover, near Elbow mountain, one containing 40 and another 60 acres. Large quantities of peat occur near Pine Plains, in Copake and Taghkanic. The marsh in the valley of Stessing pond is estimated to contain 500,000 cords.

A marsh three miles east of Poughkeepsie is estimated to contain 130,000 cords, also several near Union Corners, one containing 60,000 and another 90,000 cords, and in Staford one about 60,000 cords.

Numerous other localities of this material are enumerated in the same region of country, but it does not appear necessary to swell the detail in this communication. The immense amount of this extremely valuable substance in these counties should be sufficient to direct the attention of farmers to the subject. Here is presented an almost inexhaustible supply of natural manure, and a product too, which in all swamps and waste low lands is constantly accumulating. In a few localities only has any attention been given to these deposits of peat or muck, and in still fewer have persevering trials been made of its application to and effects upon crops. To some crops it is doubtless more applicable than to others, but either alone or in combination with other substances it is unquestionably of great importance to all crops. Carbonaceous matter is of the first importance in soils, and the condition of this material is peculiarly favorable to the absorption of moisture and gases, and mechanically fitted to loosen and render friable the closest soils.

In a future number we shall give some farther notice of localities of this substance, with some remarks upon its uses.

Albany, February, 1846. JAMES HALL.

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* Perhaps I might here introduce as a note the mode of making manure on sugar and coffee plantations of the West Indies, as detailed to me by a gentleman of Barbadoes. Vegetable matter of all kinds, leaves, grass, twigs the refuse of cane, and in fact every thing of vegetable matter with stems not larger than one's little finger, is gathered together; a pit is made of sufficient depth, a layer of the vegetable matter thrown on, then a layer of lime, and again of vegetable matter and so on until the pit is filled. The place is then enclosed, and cattle yarded there for six months, when the whole will be found in a state of decomposition, and fit for removal. This is one of the best manures. What a lesson to those farmers who burn their wheat straw in view of limekilns, and suffer tons of leaves, weeds and other vegetable matter to decay upon the surface, "wasting its sweetness upon the desert air," instead of yielding it to the crop of the succeeding year. How many thousand tons of manure could be made in this way annually in New-York, and as a consequence how many thousand dollars would *actually* be added to her wealth?

Foreign Correspondence.

MR. NORTON'S LETTERS—No. VIII.

Lab. of Ag. Chemistry Association,
Edinburgh, Dec. 31, 1844.

L. TUCKER, Esq.—In my last letter, I alluded to some rather remarkable improvements of peat moss, that I had seen upon the estate of Mr. Fleming of Barochan, near Paisley, in Renfrewshire. These improvements are as yet but of small extent, embracing by far the least portion of a moss of about 150 acres. It seemed to me however, that they had been both skillfully and economically conducted, and I will endeavor to give some account of the method pursued.

A large part of the land now under cultivation, has been reclaimed by a tenant named Weddle, a fine specimen of a hard working, shrewd, practical man, making up for the want of means, by industry and foresight. His house stands where the peat was once 20 feet in thickness, and at the distance of a few hundred yards in front, where the improvements terminate, it yet rises, a perpendicular wall of about 12 feet. He is allowed the privilege of cutting as much of it for sale as he chooses, and all spare time is employed in this business, so that nearly an acre of ground was dotted with large stacks, piled up in such a way as to be thoroughly exposed to the sun and wind.

The chief difficulty in improving peat moss is to obtain a good soil on the surface of the peat. In this case, the clay lying immediately underneath, is of excellent quality, and yields good crops when it can be brought to the surface; but bringing it up from beneath 10 feet and upwards of solid peat, is of course not to be thought of. Many plans have been proposed for reducing the thickness of such immense masses; a proprietor a few miles from Barochan, is pursuing a method which has found favor in other parts of Scotland. He has erected a steam engine, which pumps a large quantity of water from an adjoining river, into a sloping canal, the mouth of which is opened at intervals, and masses of peat thrown into it, are swept by the current into the river, and finally to the sea. This method is painfully slow, and the capital required, forbids its employment by any but the wealthy.

Mr. Weddle's plan is far simpler and more economical. After the peat is dug away for sale to within from 2½ to 4 feet of the underlying clay, he makes the surface into conical piles, each containing some dry peat in the center; when the preparations are complete, the dry portion in the center is kindled and causes, before it expires, a slow combustion of the surrounding mass; when fairly started, it is only necessary to throw on from time to time, the wet peat dug up around each heap. In this way several feet in depth *may* be burned away in a season, with comparatively little expense. But this is not the only advantage. Peat, as it is a product of vegetable life, contains the substances necessary to sustain that life. In the state of peat, however, various organic acids are present in injurious excess, and it is otherwise not in a condition to readily give up its valuable constituents as plants require them; but when burned, noxious ingredients are driven off, and the ash which remains, is a valuable manure, so much so, that it is largely imported from Holland under the name of Dutch ashes.

When the thickness of the peat is considered sufficiently reduced, the whole is thoroughly trenched, and a foot of the subjacent clay brought up and spread upon the surface. This clay, in itself good, is further improved by mixing with the ashes resulting from the burned peat, and the two together, form a soil scarcely to be surpassed. Each field is well drained at the same time that the trenching is performed.

It is obvious, that even with the exercise of the most rigid economy, the redeeming of this land must be expensive. We were favored with a statement of all the various expenses incurred in subduing an area of one and a half Scotch acres; the Scotch acre is about one-fourth more than the English imperial acre. Draining, trenching three and a half feet and bringing up 12 inches of clay, cost for the whole, £42, or $200. A heavy dressing of manure and 6 tons of lime to the acre, together with the operation of wheeling on by barrows, the ground being still soft, cost $270 more, making £97, or about $470, before a crop.

The first crop was potatoes, and the sale realized £54, from this deduct £9 for seed and working, and £2 7s. for rent, there remains as clear profit £42 15. 2. Oat crop, 108 bushels, brought £15 10s. deduct for seed and labor, £3 and £2 5s. for rent, leaves £8 5s. 3. Oat crop, larger in quantity than the previous year, but the price lower, being £8 8s.; deduct as before £5 5s. for seed, labor, and rent and £2 additional for grass seed, leaves only £1 8s. 4. Grass being the present year, two cuttings, worth £12, from which deduct rent, and £9 15s. are left. He has thus from four crops, made £62 3s., from which must still be deducted interest, and there remains £49 15s., or $240, being $60 a year, or more than 12 per cent per annum, or the original capital.

I have been thus particular in giving these statistics, because I think they show in a striking light, that *judicious* enterprise, is sure to be profitable, and because they may incite some of our *proprietors*, who complain that they cannot afford to improve their land. What a small *tenant* farmer, with small capital, can do, may at least be equaled by a *proprietor*, with even less means.

I have said that the peat ash, containing the substance of dead plants, is therefore fitted for the food of living ones. This is beautifully illustrated, as by chemical research, many practical points are here, under my eyes daily, by an analysis of the ash of two different layers of peat, analyzed lately under the direction of Prof. Johnston, the results of which I am permitted to insert in contrast with an analysis of Dutch ashes, also made here.

	White Peat Ashes.	Black Peat Ashes from Barochan.	Dutch ashes.
Organic matter (charred turf,)	54.12 pr ct.	3.02 pr ct.	25.77 pr ct.
Sul. and carb. of potash & soda,	6.57	5.16	2.78
Alumina, ...	2.99	2.48	11.19
Sulphate of lime, (gypsum,) .	10.49	21.23	16.36
Carbonate of lime, ...	8.54	3.50	1.21
Oxide of iron, ...	4.61	18.66	trace.
Oxide of manganese & magnesia,			3.39
Phosphate of lime, ...	0.90	0.40	1.24
Siliceous matter, ...	10.88	43.91	37.24
	99.10	98.36	99.17

With a few observations on these analyses, I will close. It will be perceived that the ash of the White Peat, was very imperfectly burned, more than half of its weight consisting of unburned organic matter; it is therefore necessary to double the weight of its other constituents in order to compare it with the Black Peat from the same moss. Compared with the Black Peat, it is especially rich in phosphates, as doubling the per centage, makes them 1.80 per cent or nearly 2 lbs. in 100. The White Peat is the upper layer of the moss, and therefore consists of newer plants. A striking feature of these ashes, is the quantity of sulphate of lime, (gypsum or plaster) which they contain, amounting in the two first, to fully one-fifth of the whole weight. The sulphate and carbonate of potash, too, is worthy of special notice as a very important ingredient. On the whole, we have in the two first about 40, and in the third, about 20 lbs. in 100, of substances necessary to our cultivated crops, and even indispensable. I think that the mere presentation of such facts, obviates the necessity of any further argument, and I am quite confident, that those of oor farmers who consider the matter, will never again waste so valuable a portion of their possessions. I am, yours truly,

JOHN P. NORTON.

MR. MITCHELL'S LETTERS—NO. III.

Liverpool, 20*th December*, 1845.

LUTHER TUCKER, Esq.—Do not expect too much of these letters. All I hope is to give your readers the advantage of my own observation, which, though limited, it will be my aim to make discriminating and practical. I cannot hope to possess the advantage of communication with high anthorities which some enjoy—still, I mean to keep my eyes all the while open, and shall not let placards or "spring guns," or fears of apprehension, deter me from occasional rambles through the grounds of gentlemen farmers; nay, shall even presume, with yankee imprudence, (when I visit his lordship's estate,) to question, *sotto voce*, Earl Spencer's chief steward or under gardener.

The grass in the fields is still green, and cattle, fattened for Christmas, still feeding upon the herbage, with only an occasional lock of hay. The frosts, for this climate, have been very severe, yet there has been no snow. The farmers hereabouts have now little to do. Some are carting manure from town, or heaping it in their yards, or scraping refuse leaves and dirt from the road side. Others are taking the dead wood from hedges, repairing their farm buildings and implements, or possibly breaking in young horses. Great numbers of them have been attracted by the fat cattle shows in various counties, which as usual preceded the Christmas holidays. That of the Smithfield Club is worthy of special mention, as having been visited by thousands, as well as by the Queen, Prince Albert, &c. There were on show 100 head of cattle, 300 of sheep. A very large polled Angus ox of Prince Albert's, was particularly remarked. You will find full accounts in the Mark-Lane Express.

At the Christmas *market*, were exhibited, of beasts 5,713, of sheep 36,970, being an increase over last year's show of 1,000 in cattle, and over 10,000 in sheep. The comparative prices of the two years range thus, per quarter of eight pounds:

	1843.	1844.
Beef, ············	3s. 8*d.* to 4s. 4*d.*	2s. 10*d.* to 4s. 6*d.*
Mutton, ···········	2s. 8*d.* to 4s. 4*d.*	2s. 10*d.* to 4s. 4*d.*
Veal, ············	3s. 4*d.* to 4s. 6*d.*	3s. 4*d.* to 4s. 4*d.*
Pork, ············	3s. to 4s.	3s. to 4s.

Notwithstanding the amazing quantity of meats which are so temptingly displayed in all the city stalls at this holiday time, yet there are many poor fellows who have to rest satisfied with the sight only. Before my eyes every day a dozen cabmen, who stand exposed to all weathers, eat their two meals upon the stand, consisting, in no instance, of more than four slices of barley bread and a cup of coffee. The most efficient workmen can be hired for 1s. and 9*d.* (38 cents) a day, finding themselves. And the cases are almost numberless of a cabman being obliged to support a wife and two or three children upon wages of seven shillings a week, out of which he has to pay two or three shillings rent! Do some of your readers want to emigrate, where they may find so cheap labor? Hear the other side of the story first. If you hire land you will have to pay from £3 to £8 the acre, and in most instances the taxes beside, which are enormous; moreover, the purchase of implements, &c. (at English prices) would require an investment sufficient to buy and enclose a hundred acres in Illinois. If actual purchase is considered, let me suggest that it would be hard to buy land at a price to live by, from those who are content to hold it while paying them but two per cent under high improvement. It requires no long residence here to discover that money is a cheaper commodity than with you, but while cheap, confined to comparatively a few, and those few the landholders.

The St. Johns' market—the largest in the world—makes a grand show as Christmas approaches. The dressing of the meats, and their fatness, in themselves a show, to say nothing of the immense displays of every variety of fruit and vegetable, and flowers and evergreens, stretching down the three hundred and fifty yards of tabling, and the fanciful festoons and holly branches, and boughs of the mistletoe, hung over every stall, and the thousands thronging the stone pave from eight in the morning till eleven at night. The rents of St. Johns' market, the last year, amounted to 6,578 pounds. It covers an area of 8,235 square yards, with roof supported by one hundred and sixteen cast iron pillars twenty-five feet high. There are besides, in Liverpool, three other markets for the sale of meats, covering nearly an acre of ground each; in addition to which are the fish market, the pedlar's market, the pig market, the hay market, and the cattle market. Venders of butter and poultry in many cases bring their produce directly from the country to the doors of their customers, in a bit of a rough cart, drawn by as rough a donkey. The Irish butter comes in tubs, with the several balls rolled in muslin; some of it is very nice, selling from 10*d.* to 14*d.* at retail. The best English fresh made butter fetches 14*d.* to 18*d.*, being now unusually high. An importer told me a day or two since, that a lot on hand would turn thirty per cent over the invoice price to the shipper. This was from the Canadas, though United States butter, the duty on that imported direct being very great. This reminds me that a corrected scale of the British tariff on American agricultural produce will be acceptable to many of your readers. I therefore append one, which I have submitted to inspection at the custom's rooms, and is pronounced correct. The sliding scale of duties on bread stuffs, I omit. Price of wheat the past week, has averaged 45*s.* a quarter—duty 20*s.*; that being the duty whenever the price is under 51*s.* a quarter. Of this sliding scale, the advantages and disadvantages, its advocates and opponents, I will speak more fully in a future communication.

British Tariff.

	From For'n Countries.	*From British Prov's.*
Apples, raw, bush ·······	$0 11	$0 04
Apples, dried, bush ······	46	46
Bacon and hams, cwt. ····	3 22	80
Beef, cwt. ···············	2 04	46
Butter, cwt. ··············	4 75	1 15
Cheese, cwt. ·············	2 41	57
Cranberries, gall. ···· ···	2	2
Fruit, £100 value, ···· ···	23 75	23 75
Hay, load, ················	3 68	1 84
Lard, cwt. ················	46	11
Pork, cwt. ················	1 84	46
Tallow, cwt. ···· ········	72	6
Teasles, 1000, ············	6	6

In my next I will give you the prices of all marketable produce as retailed in the market houses.

Till then, yours, &c.

D. Y. Mitchell.

FOREIGN ITEMS.

Tiles for Draining.—Cottam and Hallen exhibited a new drain tile machine, at the late Smithfield show, said to be capable of making 10,000 tiles per day.

A new kind of Roofing is coming into use in England. It is called the Patent Asphaltefelt. Its cost is one penny per square foot. The felt being impervious to rain, frost and snow, and a non-conductor of heat, makes a warm and durable covering, and from its lightness, economy and portability, is particularly well suited for cattle and sheep sheds, and other out buildings.

Death of Fellenberg.—The celebrated M. Fellenberg, founder of the agricultural school at Hofwyll, in Switzerland, died on the 21st of November last.

Allotments.—The average acreable products under the allotment system in England, for 1842, are said to have been as follows: Potatoes 413 bushels, wheat 43¾ bushels, barley 53½ bushels, peas 45 bushels, beans 56¾ bushels.

☞ It appears that the quantity of wheat imported into Canada from the United States, from the 11th of October, 1843, to the 5th of July last, (to which day the returns received only extend,) was by sea 634 quarters, and by inland navigation or land carriage 21,161 quarters.

RAISING EARLY CUCUMBERS.

H. G. Dickerson, of Lyons, Wayne county, N. Y. one of the most successful cultivators of garden vegetables, adopts the following mode of raising early cucumbers. He makes his hot-bed at the usual time, and when the soil is placed upon the stack of manure, pieces of turf are placed just below the surface, on which the seed are planted. If the grass of this turf is alive, it is to be put upside downwards. On the arrival of warm weather, and when the soil in the open air becomes fit for cultivation, these pieces of turf are removed entire, with the young plants upon them, and placed in highly manured ground where they are finally to grow. In this way the roots are taken up without the least mutilation, consequently no check is given to their growth. Afterwards, whenever there is any probability of a night frost, each hill is covered with a bell glass. These glasses have a small opening at top, which prevents the sun scorching the plants in case they are not removed in time; they are obtained at the glass-works in the neighborhood, for four cents a piece; but where they cannot be had, boxes with panes inserted, will answer nearly as well.

By this means, cucumbers fit for the table, were raised the past season, by the first of sixth month, (June.)

New-York State Agricultural Society.

Cattle Show and Fair for 1845, *to be held at Utica, Sept.* 16, 17 *and* 18.

PREMIUM LIST FOR 1845.

ON FARMS.

For the best cultivated farm, of not less than 50 acres, exclusive of woodland, regard being had to the quantity of produce, the manner and expense of cultivation, and the actual profits :

First Premium;............	$50	Second do.................	$30
Third do..................	$20		

The persons making application for these premiums, must submit written answers to a series of questions which will hereafter be published.

ON ESSAYS.

For the best series of Essays on the importance of scientific knowledge in prosecuting successfully the ordinary pursuits of Agriculture,................................	$100
For the best Agricultural Text Book for Schools,............	100
For the best Text Book on Horticulture,.....................	50
For the best essay on Subsoil Plowing, with the results of actual experiments in the State of New-York,...............	20
For the best essay on Draining, with details of the results of actual experiments, showing the expense and supposed increased value of the land,...........................	10
For the best essay on Irrigation,............................	10
For the best essay on the Culture and Manufacture of Silk,...	20
For the best essay on the prevalent Disease in Potatoes,......	20

CATTLE.

CLASS I.—Durhams.

Best Bull, over 3 years old,	$15	Second best,..............	$10
Third best,		Diploma.	
Best Bull, 2 years old,......	$10	Second best,....	Colman's Tour.
Third best,		Diploma.	
Best yearling bull,.........	$10	Second best,....	Colman's Tour.
Third best,		Diploma.	
Best bull calf,...	Colman's Tour.	Second best,..........	Diploma.
Best cow, over 3 years old,	$15	Second best,..............	$10
Third best,		Diploma.	
Best heifer, 2 years old,....	$10	Second best,....	Colman's Tour.
Third best,		Diploma.	
Best yearling heifer,.......	$10	Second best,....	Colman's Tour.
Third best,		Diploma.	
Best heifer calf, .	Colman's Tour.	Second best,..........	Diploma.

CLASS II.—Herefords.

Best bull, over 3 years old,	$15	Best cow,.................	$15
Second best,...............	10	Second best,..............	10
Best bull, between 1 and 3 years old,................	10	Best heifer, between 1 and 3 3 years old,.............	10
Second best, ...	Diploma.	Second best,..........	Diploma.

CLASS III.—Devons.

Best bull, 3 years old,......	$15	Best cow,.................	$15
Second best,...............	10	Second best, ...	10
Best bull, between 1 and 3 years old,................	10	Best heifer, between 1 and 3 years old,...............	10
Second best, ...	Diploma.	Second best,..........	Diploma.

CLASS IV.—Ayrshires.

Best bull, over 2 years old,.	$15	Best cow,.................	$15
Second best,...............	10	Second best,..............	10
Best bull, between 1 and 3 years old,................	10	Best heifer, between 1 and 3 years old,...............	10
Second best,..........	Diploma.	Second best,..........	Diploma.

CLASS V.—Crosses of Native and Improved.

Best cow, over 3 years old,.	$15	Best heifer, 2 years old,....	$15
Second best,...............	10	Second best,..............	10
Third best,..........	vol. Trans.	Third best,..........	vol. Trans.

CLASS VI.—Native Cattle.

Best cow, over 3 years old,.	$15	Best heifer, 2 years old,....	$15
Second best,...............	10	Second best,..............	10
Third best,..........	vol. Trans.	Third best,..........	vol. Trans.

WORKING OXEN.

Best team of 20 yoke from any one county,..........	$25	Best 10 yoke of oxen from any one town,...........	$20
Second best,...............	15	Second best,..............	10
Best yoke of oxen,.........	15	Third best,.....	Colman's Tour.
Second best,...............	10		
Third best,..........	vol. Trans.		

In awarding the premiums on working oxen, the single teams will be subjected to a trial on a loaded cart or wagon, under the direction of the committee; and particular reference will be had to the matching, training and docility of the animals, as well as their general appearance.

THREE YEAR OLD STEERS.

Best yoke, ...	$15	Second best, ...	$10
Third best,		Diploma.	

TWO-YEAR-OLD STEERS.

Best yoke, ...	$10	Second best....	Colman's Tour.
Third best,		vol. Trans.	

YEARLING STEERS.

Best yoke, ...	$8	Second best,....	Colman's Tour
Third best,		vol. Trans.	

FAT CATTLE.

Best pair fat oxen,.........	$15	Second best, ...	$10
Third best,		Colman's Tour.	
Best ox, cow, or heifer,....	$10	Second best,...............	$5
Third best,		vol. Trans.	

A fat ox taking a premium as one of a pair, cannot compete singly for another premium.

HORSES.

Best stallion, 4 years old,...	$20	Third best,...........	Diploma.
Second best,...............	10	Best gelding horse, ...	$10
Third best,..........	vol. Trans.	Second best,........	vol. Trans
Fourth best,...........	Diploma.	Best breeding mare,........	$20
Best stallion, 3 years old,...	$15	Second best,..............	10
Second best,...............	10	Third best,...........	Diploma.
Third best,............	Diploma.	Best mare, 3 years old, ...	$10
Best pair matched horses, ..	$10	Second best,........	vol. Trans.
Second best,......	2 vols. Trans.	Third best,...........	Diploma.

The variety of horses which possesses size, strength and endurance for field labor, combined with that action which qualifies them for the carriage or saddle—in short, the "horse of all work"—is probably the most profitable class which our farmers can now engage in rearing; and to such, therefore, will the preference of the society be given. Horses taking premiums in pairs, cannot compete singly for the premium for geldings.

SHEEP.

CLASS I.—Long Wooled.

Best buck, ...	$10	Best five ewes,............	$10
Second best,....	Colman's Tour.	Second best,....	Colman's Tour.
Third best,............	Diploma.	Third best,...........	Diploma.

Best pen 5 lambs, $5.

CLASS II.—Middle Wooled.

Best buck,................	$10	Best five ewes,............	$10
Second best,....	Colman's Tour.	Second best,....	Colman's Tour.
Third best,............	Diploma.	Third best,...........	Diploma.

Best pen 5 lambs, $5.

CLASS III.—Merinoes and their Grades.

Best buck,................	$10	Best five ewes,...........	$10
Second best,....	Colman's Tour.	Second best,....	Colman's Tour.
Third best,............	Diploma	Third best,...........	Diploma.

Best pen 5 lambs, $5.

CLASS IV.—Saxons and their Grades.

Best buck, ...	$10	Best five ewes,...........	$10
Second best,....	Colman's Tour.	Second best,....	Colman's Tour.
Third best,............	Diploma.	Third best,...........	Diploma.

Best pen five lambs, $5.

Class I, is designed to include the Leicesters, Lincolns, Cotswolds, and all the varieties of sheep which furnish the quality of wool suitable for combing—Class II, includes the South-Down, Norfolk, Dorset, Native, &c.—and Classes III and IV, all those generally denominated Merinoes and Saxons, whether of pure or mixed bloods.

CLASS V.—Fat Sheep.

Best,......................	$10	Second best,....	Colman's Tour.
Third best,		vol. Trans.	

Applicants for the premiums on fat cattle and sheep, must furnish statements of the manner of feeding the animals, and the kind, quantity and cost of the food.

SWINE.

Best boar, over 10 months,.	$10	Best sow,.................	$10
Second best,....	Colman's Tour.	Second best,....	Colman's Tour.
Third best,............	Diploma.	Third best,...........	Diploma.

Best lot of pigs under 10 months, not less than 4 in no. Col. Tour.
Second best, Diploma.

In awarding premiums on hogs, reference will be had not merely to size or present condition, but to that proportion between bone and meat which promises the greatest value from the least amount of feed.

POULTRY.

For the best lot of Dorking fowls, not less than 3, one cock and two hens,.........	$3	For the best pair of ducks,...	3
For the best lot of Black Poland, not less than 3, ...	3	" " " turkeys,.	3
For the best lot of large fowls not less than 3,............	3	" " " geese, ..	3
		For the best and greatest variety of fowls, by any one individual,................	10

VEGETABLES.

For 6 best stalks celery,....	$2	2 best purple egg plants, ...	$1
3 best heads cauliflower,...	2	Best half peck Lima beans,..	1
3 best heads broccoli,.......	2	Best " Windsor beans,	1
12 best white table turneps,.	1	Best bunch double parsley,..	1
12 best carrots,.............	1	3 best squashes,............	1
12 best table beets,.........	1	Largest pumpkin,...........	1
12 best parsneps,...........	1	12 best ears seed corn,......	1
12 best onions,.............	1	Best half peck table potatoes,	2
3 best heads of cabbage,....	1	Second best " "	1
12 best tomatoes,...........	1	Best variety seedling "	5

Discretionary premiums will be awarded on choice garden products not enumerated above.

FARM IMPLEMENTS.

Best plow,	$15
Second best,	Silver Medal.
Third best,	Diploma.
Best subsoil plow,	$10
Best farm wagon,	10
Second best,	vol. Trans.
Best half doz. hand rakes,	Dip.
Best grain cradle,	$3
Second best,	Diploma.
Best half doz. hay forks,	Diploma.
Best harrow,	Colman's Tour.
Second best,	vol. Trans.
Third best,	Diploma.
Best fanning mill,	Silver Medal.
Second best,	vol. Trans.
Third best,	Diploma.
Best improved ox-yoke,	Col. T.
Second best,	Diploma.
Best axe,	$2
Best farm harness,	10
Best saddle,	5
Best machine for cutting cornstalks,	5
Best horse power machine,	10
Best cultivator,	Colman's Tour.
Second best,	Diploma.
Best drill barrow,	Colman's T.
Second best,	vol. Trans.
Best farm horse cart,	Col. Tour.
Best ox cart,	Colman's Tour.
Best horse rake,	Colman's Tour.
Second best,	vol. Trans.
Best half doz. grass scythes,	Dip.
Best " cradle "	Dip.
Best " dung forks,	Dip.
Best threshing machine,	$10
Second best,	vol. Trans.
Third best,	Diploma.
Best straw cutter,	Silver Medal.
Second best,	vol. Trans.
Third best,	Diploma.
Best clover machine,	$10
Second best,	Diploma.
Best hoe,	$2
Best flax and hemp dressing machine,	$10

Articles not presenting any new and valuable improvements, will not be entitled to premiums. Implements and machines must be tested as far as possible, in the presence of the committee.

BUTTER.

For the best lot made from five cows, in 30 successive days—quality as well as quantity considered—25 lbs. of the butter to be exhibited, $25.

Second best,........... 15

Third best,............ 10

Compliance with the following rules will be strictly required of those who compete for these premiums, viz: The cows to be fed on pasture, green corn-stalk fodder, or grass cut for the purpose, only. No grain, roots or slops of any description, to be fed during the trial, nor for 15 days preceding the trial. The cows to be owned by the competitors previous to the 1st day of April, 1845. The milk drawn from the cows on some one day during the trial, to be accurately weighed and measured, and the result stated. A sample of at least 25 lbs. of the butter so made to be exhibited at the Fair at Utica, for the inspection of the examining committee. The particular breed of the cows to be stated, if known, and the method of making and preserving the butter. A certificate signed by the owners of the cows, and at least one other person who assisted in milking and making the butter, detailing the above particulars, will be required.

The Executive Committee believe that few if any premiums offered on neat cattle will result in greater benefit to the farming interest, than those on the products of the dairy, providing fixed rules, requiring uniformity of feed, be faithfully enforced. The increased list of premiums is offered with the hope it will induce extensive competition throughout the state. Let this object be accomplished, and an opinion approximating to accuracy may be formed by the public which of the several breeds of cows are the best for dairy purposes, and from those that prove the best, further improvement may be made.

Best 25 lbs. made in June,	$10
Second best,	Colman's Tour.
Third best,	vol. Trans.
Best 50 lbs. made at any time,	$15
Second best,	Silver Medal.
Third best,	do.
Fourth best,	do.
Fifth best,	do.

The claimants for premiums must state in writing the time when it was made; the number of cows kept on the farm; the mode of keeping; the treatment of the cream and milk before churning; the mode of churning, winter and summer; the method of freeing the butter from the milk; the quantity and kind of salt used; whether saltpetre or any other substances have been employed.

The butter offered for premiums must be presented in butter tubs, jars or firkins.

CHEESE.—Not less than 100 lbs.

One year old or over.

Best,	$15
Second best,	Silver Medal.
Third do.	do.
Fourth best,	Silver Medal.
Fifth do.	do.

Less than one year old.

Best,	$15
Second and Third,	Silver Medals.
Fourth best,	Silver Medal.
Fifth best,	do.

Those who present cheese for the premiums offered, must state in writing the time when it was made; the number of cows kept; whether the cheese was made from one, two or more milkings; whether any addition is made of cream; the quantity and kind of salt used; the quantity of rennet used, and the mode of preparing it; the mode of pressure and the treatment of cheese afterwards.

MAPLE SUGAR.

Best 25 lbs.,	$15
Second best,	10
Third best,	Colman's Tour.
Fourth best,	Diploma.

CORNSTALK SUGAR.

For the best experiment in the manufacture of sugar from cornstalks, from one acre of northern corn cultivated for the purpose, so as to obtain the greatest quantity of sugar, $25.

The process of manufacture and clarifying must be particularly stated in reference to the maple and cornstalk sugar.

SILK.

Best specimen manufactu'd,	$15
Second best,	10
Third best,	Colman's Tour.
Fourth best,	vol. Trans.
Best pound reeled silk,	$10
Second best,	Colman's Tour.
Third best,	Diploma.
Best half bu. cocoons, 1845,	$10
Second best,	Colman's Tour.
Third best,	Diploma.

DOMESTIC MANUFACTURES.

Best woollen blankets, $5—Second, 4—Third 3.

Best ten yards flannel, $5—Second, 4—Third, 3.

Best 10 yards woolen cloth, $5—Second, 4—Third, 3.

Best woolen carpet, $5—Second, 4—Third, 3.

Best tow cloth, 15 yards, $1—Second, diploma.

Best 10 yards linen, $5—Second, 4—Third, 3.

Best 10 yards linen diaper, $5—Second, 4—Third, 3.

Best hearth rug, $5—Second, 4—Third, 3—Fourth, 2—Fifth, 1—Sixth, Diploma.

Best 10 yards kersey, $3—Second best, 2—Third, 1.

Best rag carpet, 15 yards, $3—Second, 2—Third, 1.

Best double carpet coverlet, $4—Second, 3—Third, 2—Fourth, 1

Best pair woolen knit stockings, $2—Second, 1—Third, Diploma.

Best wove woolen stockings, $2—Second, 1—Third, Diploma.

Best cotton wove stockings, $2—Second, 1—Third, Diploma.

Best lb. of linen sewing thread, $2—Second, 1—Third, Dip.

Best linen woven stockings, $2—Second, 1—Third, Diploma.

Best linen knit stockings, $2—Second, 1—Third, Diploma.

Best knit cotton stockings, $2—Second, 1—Third, Diploma.

FRUITS.

For the greatest variety of table apples, $5.

For the second greatest,..... $3

For the third greatest,..vol. Tr.

For the best twelve sorts, not less than three of each, $3.

Best new seedling apple, $3.

For the greatest variety of table pears, $3.

For the second greatest,	Vol. Transactions.
For the greatest variety of winter pears,	" "
For the best twelve Quinces,	" "
For the best twelve peaches,	" "
For the best twenty-four plums,	" "
For the best six bunches of native graves,	" "
For the best six bunches of foreign grapes,	" "

FLOWERS.

For the greatest variety and quantity, Gold Medal.

For the second greatest, ... $5

For the third greatest,...vol. Tr.

For the best Floral ornament, Silver Medal.

For the second best,	$3
For the third best,	vol. Trans.
For the best seedling Dahlia,	$3
For the second best,	2

For the best twenty-five varieties of Dahlias, $5.

For the second best,........ $3

For the third best,...vol. Trans

PLOWING MATCH.

First premium,	$15
Second do.	12
Third premium,	$10
Fourth do.	Colman's Tour.

Fifth, vol. Transactions.

For boys under 18 years of age.

First premium,............ $10

Second,...................... $5

Third, vol. Transactions.

Each competitor will be required to plow one-fourth of an acre of sward land in 75 minutes, the furrows not less than 10 inches wide and 6 deep—plowman to drive his team.

FIELD CROPS.—At Winter Meeting.

Best crop of wheat not less than two acres, $15.

Second best,............... $10

Third best,........2 vols. Trans

Best two acres of spring wheat, $15.

Second best,............... $10

Third best,........2 vols. Trans.

Best crop of Indian corn, not less than two acres, $15.

Second best,.............. $10

Third best,........2 vols. Trans

Best crop of barley, not less than two acres, $10.

Second best,................ $5

Third best, ...vol. Trans.

Best crop of rye not less than two acres, $10.

Second best,................ $5

Third best,..........vol. Trans.

Best crop of oats, not less than two acres, $10.

Second best,................ $5

Third best,..........vol. Trans.

Best crop of potatoes for table, not less than one acre, $10.

Second best,................ $5

Third best,..........vol. Trans.

Best crop of potatoes, quantity considered, not less than 1 acre, $10.

Second best,................ $5

Third best,..........vol. Trans.

Best crop of sugar beets, not less than half an acre, $10.

Second best,................ $5

Third best,..........vol. Trans

Best crop of Mangel Wurzel, not less than half an acre, $10.

Second best,................ $5

Third best,..........vol. Trans.

Best crop of Ruta Baga, not less than one acre, $10.

Second best,................ $5

Third best,..........vol. Trans

Best crop of carrots, not less than one acre, $10.

Second best,................ $5

Third best,..........vol. Trans.

Best crop of peas, not less than one acre, $10.

Second best,................ $5

Third best,..........vol. Trans.

Best acre of corn for fodder, $5.

Best half acre of hops,	$5
Best " " flax,	5
Best half acre of tobacco,	$5
Best acre of cabbage,	5

Best acre of broom corn, $5.

Best acre of clover seed, $10.

Second best,....Colman's Tour.

Third best,..........vol. Trans.

Best acre of grass seed, $10.

Second best,....Colman's Tour.

Third best,............Diploma.

Those who present claims to premiums for farm crops, must state in writing the following particulars:—The condition of the soil at the commencement of cultivation for the crop; the previous crop and cultivation, and quantity of manure used upon it; the quantity and kind of manure the present season; the quantity and sort of seed used; the time and manner of sowing, cleaning and harvesting the crop; the amount of the crop determined by actual weight or measurement; and the expense of cultivation. The land shall be measured by some surveyor, who shall swear to the correctness of his survey, and that it was made with a chain and compass—and the claimant of the premium, with two other persons who assisted in measuring, shall certify under oath as to the quantity produced from the piece of land mentioned in the certificate of the surveyor—and a sample of grain shall be presented at the annual meeting with the oath of the applicant that that the same is a fair sample of the whole crop.

MISCELLANEOUS.

Wrought Iron Gate with cast iron pillars,	$10
Best iron wheel barrow,	Silver Medal.
Ornamental cast iron vase on pedestal,	8
Best sample drain tile,	Silver Medal.
Best quarter of an acre ozier willow,	8

DISCRETIONARY PREMIUMS

Will be awarded for such implements, products, &c., not enumerated, as shall be deemed worthy of notice or encouragement.

REGULATIONS.

The premiums for Essays and Agricultural Implements, will be open to citizens of other states; all others will be confined to residents of this state, who are members of this society, or who may become so by the payment of one dollar on entering their articles.

The trial of plows will take place at Utica, on Tuesday, the 15th day of September.

No premiums will be paid on any animals or articles taken away before the close of the Fair.

Premiums not claimed within four months after they are awarded will be considered as donations to the Society.

All persons who intend to exhibit Cattle, Horses, Sheep or Swine, should give notice to Theodore S. Faxon, Utica, or Luther Tucker, Recording Secretary, Albany, previous to the 10th of September, that the necessary arrangements may be made for their accommodation—and all animals must be on the ground by 9 o'clock, A. M. of the 17th September.

All those who intend to compete for the premiums on agricultural implements, butter and cheese, sugar, cocoons, silk, &c. should have their specimens on the ground on the 16th, that they may be deposited in their appropriate places, and the rooms suitably arranged on the day previous to the Fair.

Applicants for premiums are requested to pay particular attention to the notes attached to the premiums on Fat Cattle and Fat Sheep, Butter and Cheecse, Field Crops, Maple Sugar, &c.

The statements required from those who compete for field crops, must be sent to Luther Tucker, Recording Secretary, Albany, previous to the 1st of January, 1846, and the premiums will be awarded at the annual meeting of the society, on the third Wednesday of January.

Competitors for the premiums on Essays, must forward their manuscripts to the Rec. Secretary, Albany, previous to the 1st of January, 1846, free of postage.

No premium will be awarded, unless, in the opinion of the Judges of the Class in which it is offered, the animal or article is worthy of such premium.

Prize animals and implements at the previous exhibitions, will be allowed to compete for the prizes: but they must receive a higher prize, or in a different class, to entitle them to a premium. Should the same premium heretofore given them be awarded, they will receive a certificate to that effect, instead of the prize.

Animals and other articles offered for competition, must be labelled with the names and residence of the owners at full length.

No viewing committee, with the exception of the committee on Discretionary Premiums, shall award any discretionary premium, without the previous permission of the Executive Board, expressed through the President.

CONDENSED CORRESPON DENCE.

Virginia.—Extract of a letter from our correspondent **Za. Drummond**, Esq., dated Amherst, Jan. 22:—"We have had but three snows this winter; one about three inches deep, and lying about three days; and the other two about one inch, and lying a few hours. Our plows have been in motion nearly all winter. Our wheat looks well, and grass is beginning to spring. Good land, lying well, four to five dollars. Richest kind of mountain land one dollar. The finest sheep walks in the world. What a fortune a yankee could make here. Come and see."

Items.—Mr. Geo. L. Beckwith, of West Henrietta, Monroe county, informs us that the wheat crop in that neighborhood last year, was better in quantity and quality than it had been for several previous years. The *potatoe rot* made its appearance last season, and effected the crop to some extent, but did not do much damage.

Sweet and sour apple.—Mr. B. says he has two trees which produce this kind of fruit. The sour fruit resembles the Rhode Island Greening, &c.

Geology—Mr. B. says—"Some writers speak in glowing terms of the benefit the State works now publishing are to the farmer, but I can hardly understand this, if they are not placed where the farmer can obtain them, and at prices which he can afford to pay. Would not the State show its liberality, by placing a few copies in regularly organized public libraries in the different counties, or at least, deposit a few copies in some central places in each county, giving due notice thereof, that farmers may at least see what they are?"

Trimming Grape Vines.—Mr. Sidney Weller of Brinkleyville, North Carolina, has a vineyard of five or six acres, and makes eight to ten barrels of wine yearly. He thinks it best, for his location *not* to trim grape-vines after the first two or three years. He practices on this mode, and states that his vines produce abundantly. He keeps swine in his vineyard to eat the fallen fruit, and keep the ground clear of weeds and grass. He says—"I keep all clear underneath, from the first start of the vines, so as to leave a free passage for the wind, as well as for persons, and for the team used in scarifying the ground."

Subsoil Plowing.—We give the following from a letter of H. W. S. C., Oatlands, N. J.—"As I think experiments which do not succeed are as deserving of record as those which do—in order that the public may see both sides of a question, I wish to inform you that I procured a subsoil plow last spring, and used it for three different crops, viz: corn, potatoes and barley. The corn was planted on a light sandy loam, the potatoes on a rich loam inclining to be clayey, and the barley on a rich mellow loam. One half of each field was subsoiled to the depth of eight inches, the other half having only an ordinary plowing. There was no perceptible difference in the appearance of either of the crops during the season of growth, and as the difference at harvesting, if any, was not enough for us to discover it by careful observation and comparison of portions of the field, I did not think it worth while to make an accurate measure of the whole of each division."

Pomegranate Melon.—A correspondent at Syracuse who signs "B," informs us that he obtained from Indiana last year, some seeds of a melon with this name. He gives the following description of it. He hopes to have seed to spare another year. "The seed is nearly the shape of a muskmelon, but smaller. The vines are nearly like the muskmelon. The fruit is round and about the size of a large orange, and is, when growing, dark and light green; when ripe, yellow, with irregular greenish spots and streaks presenting a beautiful fruit. The taste nearly like a muskmelon. I think them a very good fruit, but not particularly delicious, though some of my family and friends who tasted them liked them very much."

Melons.—**Mr. L. Durand**, remarks in reference to the inquiry of "W." of Troy, given in a former number, that the variety of the muskmelon called the "citron," or as Mr. D. thinks it should more properly be called, the "pine-apple melon," is one of the richest of fruits, and is thought by some to resemble the pine-apple in taste. He says they grow from the size of a quart to a two-quart measure. Mr. D. kindly promises to send us a paper of seeds in the course of the winter.

Rapid Growth of Pigs.—Extract of a letter from S. Root, Esq., Middlefield, Mass.—"Worcester Taylor of this town, slaughtered a pig just 10 months old, which weighed when dressed, 410 lbs.; several others have been killed, which weighed over 360 lbs., from 9 to 10 months old."

Clinton Co. Ag. Society—At the winter meeting of this Society, as we are informed, by Mr. Willet Keese, there were applications for premiums on wheat for crops varying from forty to forty-nine bushels to the acre—one of corn, over 100 bushels—one of potatoes, 496 bushels—which, says Mr. K., "will be considered not bad for this cold region."

Cortland County Agricultural Society.—Extract of a letter from P. Barber, Homer:—"Our Agricultural Society held its annual meeting last week for the election of officers, &c. Rufus Boies of Cortlandville, President; George Chamberlain, Homer, Rec. Sec.; Paris Barber, Cor. Sec.; Amos Rice, Treasurer."

Oneida County Agricultural Society.—At the annual meeting of this society, on the 6th ult., the following gentlemen were elected officers for the ensuing year: Elon Comstock, Rome, President. Henry Rhodes, Trenton; John Townsend, Westmoreland; George L. Brigham, Augusta; Alanson S. Filer, Florence; Lewis Benedict, Vernon; Benjamin F. Jewett, New-Hartford;

Horace H. Eastman, Marshall; Lewis Eames, Lee; Horatio N. Cary, Marcy; and Philo Griswold, Vernon, V. Prest's. N. S. Wright, Vernon Centre, Cor., and B. N. Huntington, Rome, Rec. Sec'ys. Wm. Bristol, Utica, Treasurer. John S. Peckham, Utica; Hiram G. Everett, Kirkland; Ira Lillybridge, Annsville; A. S. Newberry, Sangerfield; and Ephraim Storrs, Trenton, Managers.

CONNECTICUT SEED LEAF TOBACCO SEED.

THE true broad and narrow Seed Leaf Tobacco Seed, selected from growth of 1844, for sale at the Seed Store of the Hartford County Agricultural Society, by E W. BULL, Seedsman.

Feb. 1—3t.

LOUISVILLE KY. SEED AND AGRICULTURAL STORE.

GEORGE, LAPPING & Co., keep constantly on hand
Kentucky Blue Grass, extra clean for Lawns.
Kentucky do. do. in strips,
Hemp seed,
Timothy,
Clover,
Orchard Grass,
Red Top.
All orders promptly attended to. MUNN & PETTIBONE,
206 Pearl St., N. Y., Agents.

SPLENDID FARM AND COUNTRY SEAT FOR SALE.

I NOW offer for sale my farm, consisting of 170 acres of the richest of the Mohawk Flats, all under improvement and in a highly productive state, together with the substantial and superbly finished brick mansion erected by the late Gen. John G. Weaver, at an expense of about $10,000. It is one and three-quarter miles from the city of Utica, on the north bank of the Mohawk, over a McAdam road. It has a beautiful orchard, garden, farm-house, barns, stables, sheds, &c., and is finely watered, and now stocked with choice Durham and grade cattle, Bakewell and Southdown Sheep, and all necessary farm implements; all of which will be sold at a great bargain to the purchaser. D. SKINNER.

Utica, January 1, 1845—3t*

HUSSEY'S REAPING MACHINE.

THE subscriber has now brought his Reaping Machine to the highest state of improvement. The cutting of four harvests has proved the last improvements to be permanent and durable. The four horse machine is warranted to cut from 15 to 20 acres per day—price, $170. The light two horse machine is warranted to cut from 12 to 15 acres per day—price $100. Medium size, price, $140. Farmers who intend getting machines to cut their next harvest, will please send their orders soon. References are given in the Dec. number of the Cultivator, 1844. Also for sale, my corn and cob crusher, an improved article; price 25 dollars. OBED HUSSEY.

Baltimore, Nov. 1844—4t*

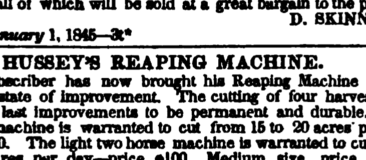
FOR SALE.

THE splendid two years old Bull "Marius," belonging to Thomas Oliver Esq., of Riversdale, Sing Sing. Marius was imported in 1843 from the far famed stock of Earl Spencer, of Wiseton, Northamptonshire, and was subsequently exhibited at the State fair, held at Po'keepsie, in 1844, at which place he took the first premium of the yearlings in the short-horned class, as also that of the year olds against all classes then exhibited. Subsequently at the Fair of the American Institute last autumn, he was again awarded the first prize for the yearlings of his class. He is a Roan Bull of the most complete symmetry, and although only two years old on the 5th of last Dec., weighs about 20 cwt.

Pedigree—Marius, a Roan Bull—calved December 5th, 1842, got by Roman, dam by Waverly—gr. dam by Satalite—gr. g. dam by Cato—gr. g. g. dam by St. John—gr. g. g. g. dam by Chilton—gr. g. g. g. g. dam by the White Bull—gr. g. g. g. g. gr. dam by Favorite—gr. g. g. g. g. g. gr. dam by Duke. Signed, George Earl Spencer.

Letters, post paid, may be addressed to the subscriber.

Sing-Sing, N. Y. Jan. 28, 1845.—tf. JOHN LUMSDEN.



ISABELLA GRAPES, of proper age for forming Vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the Vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their location is not too far North.) All communications, post paid addressed to R. T. UNDERHILL, M. D., 400 Broadway, New York, will receive attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his Vineyards and Nurseries, by improved cultivation, pruning, &c., that they will generally ripen well and produce good fruit when planted in most of the Northern, and all the Western, Middle and Southern States.

January 20.—2t.

AMERICAN Farmers Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale at the office of "The Cultivator."

BOMMER'S METHOD AT REDUCED PRICES.

THE cheapness and expedition, by which manure may be manufactured with the Bommer process, and the various substances to which it may be successfully and advantageously applied, render it a valuable acquisition to every farmer that will adopt it. To facilitate its general introduction, it is proposed to sell the method uniformly at five dollars. Any individual shall be promptly furnished with a copy of the method without charge of postage, who shall remit the cash by mail to the general agent. It is intended to employ a competent travelling agent, as soon as practicable, in each county. My general agency includes the States of New-York, New Jersey, Virginia, Delaware, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine and Vermont.

ONE HUNDRED AGENTS WANTED.

Wanted immediately, 100 active, intelligent and enterprising men to engage as travelling agents in the above mentioned States. Unquestionable testimonials will be required; and responsible securities will be expected, as guarantees, for the faithful discharge of the duties of the appointment. Persons of suitable qualifications, will find this both a useful and lucrative employment. Applications, if by mail, should be post paid and directed to me, at Westville, New Haven Co. Connecticut. ELI BARNETT, General Agent.

Westville, March 1, 1845.

FARMS FOR SALE.

THE farm in West Groton, known as 60 acres in the North East corner of Lot No. 68 Locke, consisting of a farm house nearly new, barn, and about 40 acres of improvement surrounded by a good fence, and now occupied by Robert Armstrong. Price, $1,500. One thousand dollars can remain on mortgage for ten years, at legal interest, half yearly.

ALSO—The farm known as the State 100 acres in the South East corner of Lot No. 2, Cicero, about a mile from the town of Brewerton, on the outlet of Oneida Lake, consisting of an improvement of 40 acres fenced, with log buildings, and sixty acres of woodlands.

ALSO—The farm known as the State 100 acres in the South East corner of Lot No. 54 Hannibal, a short distance from the town of Fulton, on the Oswego river, a good woodland, with a small clearing.

ALSO—The wood lot known as the State 100 acres in the South East corner of lot No. 5 Manlius, a few miles from Syracuse, and in a good neighborhood.

ALSO,

Wood lot	known as the	S.	100 ac. in the	S. E. c.	of lot No.	7	Solon
do	do	do	do	do	do	19	do
do	do	Survey	50 acres	do	do.	25	do
do	do	do	50 do	do	do	29	do
do	do	do	50 do	N. W.	do	36	do
do	do	do	50 do	N. E.	do	39	do
do	do	do	50 do	S. E.	do	58	do
do	do	Sub 1	83 do		of lot	76	do
do	do	do 7	30 do		do	76	do
do	do	Survey	50 do	N. W.	do	98	do
do	do	State	100 do	S. E.	do	65	Virgil
do	do	Survey	50 do	N. E.	do	68	do
do	do	Survey	60 do	N. W.	do	69	do

Apply to JAS. L. BRINCKERHOFF,
March 1, 1845—6t No. 32 Leight-street, New-York.

FINE FARMS FOR SALE AT AUCTION.

THE property known as the Stimson Farm, situated at Galway in the county of Saratoga and State of New-York, will be sold at auction, at the Court House in Ballston Spa, on Wednesday the second day of April next, at 12 o'clock noon. It contains in the whole about 325 acres and is so divided as to make three farms, each having on it the necessary farming buildings. The roads from Schenectady to the Fish House, and from Saratoga and Ballston to Johnstown, run through the property at right angles, dividing it into four parts. The two pieces lying north of the road, said to contain about 190 acres, will be sold together. On this part are, a large hotel, capable of accommodating one hundred boarders, with the most extensive and convenient buildings for agricultural purposes. It is a favorite place of resort for families in the summer season. This part of the property will be a most desirable investment for any person desiring to connect the business of farming with that of keeping a hotel of this description.

The south-eastern portion, said to contain about 90 acres, has a farm house and the necessary out buildings, with a wagon maker's and a blacksmith's shop. The south-western portion, said to contain about 50 acres, has on it a store and dwelling-house attached, farm house and barns, and is a most desirable property for any person wishing a small farm. Each farm has on it the proper proportion of woodland, and the whole is of the best quality for farming, there being no waste land, and in the highest state of cultivation. The situation is high, commanding a most beautiful and extensive prospect in all directions.

The sale will be positive and without reserve, to the highest bidder, and perfect titles will be given. The terms will be 5 per cent cash, to be paid to the auctioneer at the time of sale; 50 per cent may remain on bond and mortgage for five years, or a longer term, at 6 per cent interest, payable half yearly in the city of New-York, on the first of May and November, and the balance to be paid in cash on the delivery of the deed. For further particulars, apply to JOHN W. THOMPSON, Esq., Ballston Spa, or to J. OAKLEY, No. 77 Nassau-street, New-York.

Dated New-York, Dec. 9, 1844—3t.

FARM IN ILLINOIS.

FOR SALE—A good farm, with valuable improvements. The subscriber being about changing his business, will sell a great bargain. Also has in immediate vicinity, 2,000 acres choice land, which he will sell at a discount from government price. Address ISAAC HINCKLEY, P. M., Audubon, Montgomery Co., Illinois.

Dec. 1, 1844—tf.

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☞ **ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

AGRICULTURAL AND BUSINESS AGENCY.

KNOWING the convenience that such an Agency will be to his distant friends, the subscriber offers his services for the purchase of Match and Single Horses, Cattle, Sheep, &c.

Wagons, Carts, and Carriages.

Plows, Cultivators, Harrows, Rollers, Corn-Shellers, Corn and Cob Grinders, Threshing Machines, Grain-Reapers, Horse Power, and all other agricultural implements.

Seeds and Merchandise of every kind.

Manures.—Peruvian and African Guano, Ground Plaster, Ground Bones, Oyster Shell and Stone Lime.

Agricultural and other books.

From his long experience as a farmer and stock breeder, and general acquaintance with business, the subscriber trusts that he shall be able to give satisfaction. The commission charged for his services in purchasing or selling, will be moderate. Cash or produce must invariably be in hand, before orders can be executed.

Feb. 18, 1845—3t. **A. B. ALLEN, 205 Broadway, New-York.**

AGRICULTURAL CHEMISTRY AND GEOLOGY.

CATECHISM of Agricultural Chemistry and Geology, by James F. W. Johnston, M. A. F. R. S. S., L. & E. with an Introduction by John Pitkin Norton of Farmington, Ct., from the 8th English edition with notes and additions by the author, prepared expressly for this edition.

N. B.—The above work, first published a year ago, has already gone through eight large editions, and is now used in 3,000 schools in Ireland, and nearly all the schools in Scotland. The present edition, improved from the eighth, and adapted to this country, is now ready—price 18¾ cents. A liberal discount allowed to the trade. All orders promptly attended to.

ERASTUS H. PEASE,
Albany, March 1, 1845. Publisher, 82 State-street.

ALBANY SEED STORE

THE proprietor is now receiving from his seed growers, a full and complete assortment of American Garden Seeds, all of which are selected with care, being grown from the best varieties of vegetables to be found in the country; also European seeds, plants and flower seeds from the best establishments in Europe and America.

Fruit trees of all the choicest kinds furnished to order at the lowest market prices, and warranted true as represented. Agricultural and horticultural implements of American and European manufacture. Also, Root-Slicers, Corn-Shellers, Straw-Cutters, &c. Those who wish to purchase or examine are respectfully invited to call.

W. THORBURN, Seedsman & Florist.
March 1, 1846—3 t. corner of Broadway and Maiden Lane.

HEDGES.

THE subscribers offer for sale 30,000 Osage Orange, (Maclura,) one year old, strong thrifty plants, admirably adapted for hedging. Price, ten dollars per thousand. Address post-paid,

D. LANDRETH & FULTON,
Philadelphia, March 1—1t. Nurserymen and Florists.

SILK WORM EGGS.

SIXTEEN ounces of the best Lombardy silk worm eggs on cloths, received lately from Italy, in good order. Arrangements will be made for sale of the whole or part, by applying early or by letter post-paid, to

G. W. HAYWOOD, & Co.
New-York, March 1, 1845. 38 Beaver street.

SEED STORE AND AGRICULTURAL WARE-HOUSE.

OUR Spring supply of seeds is now ready, and we shall be happy to receive orders for Field or Garden Seeds, of every description. Black Sea, Italian and Siberian Spring Wheat, Barley, Peas, Clover Seed, Timothy Seed, Seed Corn, Shaker and other Garden seeds, &c. Also, a full assortment of farming tools selected from the best manufacturers in the country. Hoes, Scythes, Forks, &c. cheap by the dozen.

E. COMSTOCK.
Rome, Oneida county, March 1, 1845.

SPRING WHEAT.

THE subscriber has for sale, an excellent sample of Italian Spring Wheat. The original seed was obtained by him many years ago. It has therefore become perfectly acclimated, and great care having been taken to always save the best and heaviest for sowing, it has much improved, both in weight and productiveness. The price is $2 per bushel. A sample may be seen at the Cultivator office.

Guilderland, Feb. 1845 WILLIAM MERRIFIELD.

ROME PLOW FACTORY.

THE DIAMOND PLOW which received the first premium at the State Fair at Poughkeepsie, as well as at every County Fair where it has been shown, is manufactured by the subscribers in the very best style, and for sale at wholesale or retail. Also, some eight or ten patterns of approved plans, as well as Scrapers, Cultivators, Cradles, Mott's Agricultural Furnaces, &c. Orders from abroad promptly filled, and a liberal discount to dealers.

March 1, 1845. BRAINERD & COMSTOCK.
Rome, Oneida county.

WARREN'S IMPROVED PORTABLE HORSE POWER AND THRESHING MACHINES.

THE principle of these celebrated Machines is admitted to be correct and superior to any others; and the important improvements now completed in their construction, entitles them to the fullest confidence of agriculturists, while their price brings them within the means of all farmers, as increasing demands prove.

Prices of one horse power and thresher together, $60—two horse power and thresher together, $75—four horse power and thresher together, $110. Leather bands, $4 and $5.

Orders for any number will be promptly met this season on the usual terms—payment on delivery in this city in cash or approved paper.

H. BARTLETT & Co.
Successors to L. Bostwick & Co.
March 1—1t. 146 Front-street, New-York.

FARM AND VILLA AT AUCTION.

INTENDING to change my residence, I will, on Tuesday the 18th day of March, (unless previously disposed of at private sale,) sell at public auction on the premises, my present mansion, situated one mile from the city of Troy, consisting of a new and substantial brick cottage, containing eleven rooms, finished in a chaste style, but in the very best manner; stable and carriage-house, ice-house, &c., with 15 acres of land; an orchard just beginning to bear, and a garden furnished with choice shrubbery in full bearing. The surrounding landscape is highly picturesque and beautiful.

Also, a farm adjoining, containing 87 acres excellent land, well watered, and suitable for any agricultural purpose, but especially for the milk business. There are on it 3 dwellings, 2 of them built in 1840—2 barns, with stables and sheds for stock.

Also, the stock and farming utensils, and most of the furniture of the house.

Those wishing to purchase, are respectfully invited to call and view the premises, when the terms of payment and other particulars of the sale will be made known. A. D. SPOOR.

Brunswick Place, March 1, 1845—1t*

FOR SALE.

THE subscriber offers for sale his fine Durham bull Osceola. He is now two years and a half old, and has taken the 1st premium at two successive State Fairs; for pedigree and further description, see Cultivator, Sept. 1843.

Also, his thorough bred Stallion Young Florizel.

Watervliet, Dec. 16, 1844—tf. CLARKSON F. CROSBY.

Printed at the Steam Press of C. Van Benthuysen & Co.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. II. ALBANY, APRIL, 1845. No. 4.

THE CULTIVATOR

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LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

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☞ This paper is subject to newspaper postage only, being one cent within the state or within 100 miles of Albany, and 1½ cent for any greater distance.

THE CULTIVATOR.

MONTHLY NOTICES.

COMMUNICATIONS received, since our last, from J. P. Norton, D. K. Minor, Chas. Hamilton, J. W. Williams, S. W., C. Hamilton, W. Jennison, T. H. Hyatt, Za. Drummond, J. M. B., S. W., B. P. Johnson, H. Boyd, W. Wadsworth, E. N. Horsford, E. Comstock, L. Durand, John Crary, J. A. Rhodes, Vindex, D. G. Mitchell, A. L. Bingham, H. Gardner, H. Ford, A Farmer's Son, S. W. Jewett, D. K. Young.

From Messrs. WILEY & PUTNAM, publishers, New-York, we have received No. 1 of "The Chemistry of Vegetable and Animal Physiology," translated from the Dutch of Dr. G. T. MULDER—"Guano, its origin, properties and uses, with directions for using it;" and "A Lecture on the Philosophy of Vegetation, by W. A. SEELEY, Esq."—From some unknown friend, "Transactions of Clinton Co. Ag. Society for 1844"—Catalogue of Western Reserve College for 1845—From Hon. H. L. ELLSWORTH, his Annual Report from the Patent Office—From the Authors, an Address before the Addison Co. (Vt.) Ag. Society, by S. H. JENISON, Esq., and an Address before the Litchfield Co. (Ct.) Ag. Society, by T. S. GOLD, Esq.—From the publishers, Messrs. APPLETON & Co. New-York, Stewart's "Stable Economy," reprinted from the last English edition, with notes and additions by A. B. Allen, Esq.

☞ Our respectful acknowledgments are due to Governor REID, of the Island of Bermuda, for a copy of his work entitled "An attempt to develop the LAW OF STORMS, by means of Facts arranged according to Place and Time; and hence to point out a course for the VARIABLE WINDS, with a view to PRACTICAL USE IN NAVIGATION." The volume embraces 572 pages, and is executed in beautiful style. The design of the work seems to be rather to embody facts and excite inquiry, than to defend theories. A large amount of interesting and valuable matter seems to be here collected relative to the science of meteorology, and the work is eminently worthy the attention of those whose taste and opportunities may lead to an investigation of the laws of atmospheric phenomena.

An interesting communication from WM. WEBB, Esq. of Wilmington, (Del.) on the proper culture of corn, and the process of making sugar from its stalk, reached us too late for this number. It will appear in our next. We shall be glad to receive the sample of sugar spoken of, by Express.

CIRCULATION OF THE CULTIVATOR.—We have the pleasure of announcing to our agents and friends, that through their kind and efficient exertions, the circulation of "The Cultivator" now amounts to over THIRTEEN THOUSAND copies, being an average accession of one thousand copies a week since the commencement of the present volume. This is a much larger circulation than we have had for the last two years at this season of the year. For these tokens of the public approbation of our labors, we are by no means ungrateful; and while tendering our thanks to those who have so efficiently aided us in our efforts to "improve the soil and the mind," both by their contributions to our pages and their exertions to extend the circulation of our paper, we beg to assure them that we shall spare no exertions in our power to make The Cultivator more and more worthy of their regard.

CORRESPONDENCE OF THE CULTIVATOR.—The extensive correspondence of our publication, we presume is regarded with interest by our numerous patrons. It scarcely requires an argument to show that every individual is more or less concerned with the doings of others, especially with those of his fellow men, who are engaged in the same occupation with himself. Aside from the innate desire for the acquirement of information, and the pleasure which every one feels in attaining it, we can easily perceive that all knowledge may in some way become subservient to our *interest*. *All* facts or truths should be collected and preserved—thus constituting a treasure from which we may draw at our need, and from which we may derive light to illumine many a path which it may be our fortune to tread. In this view, should be regarded the information brought out by the correspondence of men of enlightened minds and observing habits, in various parts of the world. Our stock of knowledge, our store of *facts* of the most valuable kind, is thus increased.

In our present number, we give letters from three highly intelligent American gentlemen in Europe, viz: Mr. NORTON in Scotland, Mr. MITCHELL in England, and Mr. HORSFORD in Germany. In addition to this, our columns show a broad correspondence in our own country—embracing communications, as will be seen, from no less than twelve States, from Maine to Missouri. Among these will be found the letters of our traveling correspondent, SOLON ROBINSON, which we cannot doubt will be read with interest and advantage. Mr. R.'s narratives and descriptions are graphic and spirited; and we have no doubt that the nature and advantages of the various sections of the country through which he passes, as well as the condition of agriculture, &c., so far as can be learned, are generally faithfully delineated. It is possible that there may be occasionally an unnecessary degree of *pungency* in his remarks, but we feel confident that there is, in no case, the least design to give any unfair coloring, or to make statements not in accordance with the public good.

MR. DOWNING'S WORKS.—We invite the attention of all lovers of rural improvement to the advertisement of

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Messrs. Wiley & Putnam, booksellers, New-York, published in this number. Every man of taste should possess copies of these books. Should any of our readers at a distance, desire our agency in procuring any one or more of them, it will afford us pleasure to attend to their orders.

Great sale of Improved Cattle.—It will be seen by an advertisement in this paper, that the extensive and well known herd of Improved Short Horn Cattle, the property of E. P. Prentice, Esq., Mount Hope, near this city, are to be sold at auction in June next. This sale is well worth the attention of all who wish to procure pure bred animals of this breed, as the public may rely upon the assurance that the animals will all be offered, and struck off to the highest bidder, without reserve. The list embraces a large number of animals of both sexes and all ages, many of which have taken prizes at the exhibition of the N. Y. State Ag. Society. Gentlemen at a distance, who cannot attend the sale, may find it to their advantage to avail themselves of the offer of our associate, Mr. Howard, an excellent judge of cattle, and upon whose judgment in selecting and purchasing such animals as they may wish to procure, they may safely rely.

Norman Horses.—We would call attention to Mr. Harris' advertisement in this number, for the sale of Norman horses. From what we can learn, we have no doubt that they are a valuable stock, and well worthy the attention of those wishing to purchase.

Sweet, Sour and Coreless Apples.—We have condensed the communications of several correspondents on these subjects, but they will still occupy too much room to admit of their publication during the present pressure on our pages. We may make room for them hereafter.

Samples of Wool.—We have received from J. R. Speed, Esq. of Caroline, N. Y., several samples of wool. Mr. Speed has a flock of 45 merino sheep, which averaged 5 lbs. of wool per head, which sold for 50 cents per pound. The samples marked 2, 4, 8, 9, are of excellent quality. They must be a valuable flock.

Seward's Patent Seed-Sower.—We have been shown one of these machines, which we think from its simplicity, and the perfect manner in which it performs its work, is one of the best we have seen. The manufacturers are M. and S. L. Seward, Guilford, New-Haven county, Conn. The machine will sow onions, turneps of all kinds, carrots, beets, peas, &c., at any desired distance, from 3 to 16 inches. Two acres of onions may be readily sown in a day, by one man, in the best manner. Mr. Thorburn of this city, will shortly have the machines for sale.

☞ We are much pleased to see the awakening spirit of improvement in the South-west. We learn from the *Shield*, published at Eufalla, Ala., that our friend and correspondent, Alexander McDonald, is elected President of the Barbour county Agricultural Society. The efforts of this association, appear judicious and effective.

Butter in Wells.—Our correspondent "Indicator," thinks there must have been some mistake about the circumstance mentioned in our last vol., page 70, of Mrs. Bement's butter having been kept two years in a well; and he doubts whether butter will sink in water at all. The case we mentioned is not a solitary one. As long ago as 1831, a correspondent of the Genessee Farmer gave an account of a roll of butter being taken from a well, which had been dropped in *twenty-one* years before. The writer says a piece of it was presented him, which "was as fine and sweet as the day it was churned," and for aught he knew, "better, for it was the very *cream* of butter."

Large Calves.—The Elmira Republican says, a Durham bull-calf owned by W. W. Ballard, of Southport, weighed at birth, 98 pounds; at the age of four months and twenty-nine days, 588 pounds: and at 11 months and 24 days, 1,141 pounds. The same paper also states, that Mr. Brower, of Moreau, Saratoga county, has a bull-calf which weighed, at birth, 95 pounds; and at six months and one day old, 774 pounds.

Bermuda Grasses.—Mr. Redfield of New-York, informs us that the botanical names affixed to the specimens of Bermuda grass, noticed in our Dec. number of last vol., were furnished by Prof. Torrey of that city.

The Medal of the N. Y. State Ag. Society.—The dies for the new medal of this Society, cut by Mr. Taylor, of Birmingham, England, have been received, together with some specimens of the medals. For the emblamatic design of this chaste and beautiful article, the society is indebted to the good taste and judgment of our countryman, F. Rotch, Esq., now in England. On the face of the medal is an elegant figure of Ceres, the head adorned with a garland, on the left arm a cornucopia, in the right hand a wreath; in the back ground, sheaves of wheat. On the reverse, a circular wreath, embracing fruits and heads of grains, on the outer margin of which are the words "New-York State Agricultural Society," the space in the centre being designed for the names, &c., of the individual to whom it may be awarded. The medal is in every respect creditable to the society and to the individuals by whom it has been executed.

Largest of all Pigs.—We are informed that Sam'l Robbins, of Salisbury, Conn., lately slaughtered two pigs, in part of the Byfield breed, nine months and seventeen days old, one of which weighed 388, and the other 432 pound.

Howell's Patent Tanning Machine.—The New York Farmer & Mechanic highly recommends this machine. It is said to effect a great saving of time, labor, and expense. Calf-skins tanned in a week; upper leather in a week, and sole-leather in from fifteen to thirty days. The editor says he has examined various specimens of the leather tanned by this machine in the above space of time, and he pronounces them excellent.

Balls of wool in lamb's stomachs.—Lambs which are dropped in the winter, frequently exhibit a habit of chewing and swallowing locks of wool which they pull from their mothers and other sheep. From this wool, balls are sometimes formed in the lambs' stomachs, which it is supposed occasions their death. In the Maine Farmer, Maj. E. Wood mentions a case of this kind having happened in the flock of his son, Mr. T. Wood. This unnatural habit of lambs seems to be caused by a desire to fill the stomach with some bulky substance on which it may ruminate, or chew the cud; and not finding its natural food for this purpose, it is induced to swallow the indigestible wool. The trouble would no doubt be prevented by giving the lambs suitable hay with turneps or potatoes, and feeding the ewe with those substances which would prevent the milk from having a costive tendency. We have frequently reared lambs in winter, but have been careful in providing suitable and abundant food, and never had them troubled with wool in the stomach.

Scotch Cattle.—In the report of the commissioner of patents, we notice a letter from Stephenson Scott, on the subject of provisions for exportation, by which we discover that that gentleman is the author of a valuable series of letters on agricultural subjects, published twenty-five years since in the American Farmer, with the signature of "Albion." We read those letters at the time of their publication with great interest, but have never been able till now to learn their authorship. Mr. Scott appears to be well acquainted with the peculiar properties of various breeds of cattle, and though he thinks very highly of the Herefords and Durhams, he observes that he is inclined to think that some of the Scotch cattle are better adapted to a large portion of our country than any of the English breeds. The polled Galloways, particularly, he thinks would be very useful, and observes that—"They, like their countrymen, are hardy and thrive almost everywhere, and are large enough for all purposes and pastures."

Puppies suckled by a sheep.—The Prairie Farmer says that Mr. S. S. Crocker has a pair of puppies, a cross of the bull and shepherd's dog, which are suckled by a sheep. The ewe, it is said, manifests great kindness for them.

POTATOES.

The malady which has prevailed for a year or two, among potatoes, may operate as a discouragement to planting them as extensively as formerly. We venture not to give an opinion, from the little that is yet known, in regard to the origin of this disease, or to recommend any specific remedy; but from what we have seen, should not hesitate to adopt the following rules in planting, cultivation, &c. 1. To plant on loamy soils, of medium dryness. 2. If stable manure is used, let it be well mixed with the soil, and not left (especially if unfermented,) in too great quantity in the hill. 3. Plant good sized, *sound* potatoes, cutting only the largest ones. Very small potatoes, or small pieces, are not likely to sprout so vigorously as large ones. The first food of the young plant is the substance of the old potatoe, and the greater the supply of this food, the more rapid, of course, is the early growth of the shoot. It is true that under entirely favorable circumstances of soil, season, &c., the shoot from a small potatoe or from small pieces, may succeed, and the product from them in such cases, may not be much less; but it is reasonable that the shoot from a good sized and sound potatoe would be stronger, and less predisposed to suffer from any unfavorable influences belonging either to the soil or atmosphere. 4. Plant as early as the ground is in a proper state. Many cases might be cited where early planted potatoes escaped the blight or disease, and produced a good crop, when the same variety, planted later on a piece immediately adjoining, were much injured. 5. Plant only varieties of known hardiness. Much depends on this. Some kinds have always been remarkable for their healthy, hardy constitutions; at the same time producing more than others under the same circumstances. Of the feeble sorts, there is the Mercer, called also Chenango, Meshanic, (corrupted from Neshannock,) which from its supposed or acknowledged good qualities for the table, has been widely cultivated for several years past; but which has always been subject to blight—more so than most other kinds. We are not aware of any good qualities possessed by this potatoe that are not to be had in several other kinds, which have the advantage of greater hardiness and productiveness as well as soundness. 6. In cultivation, keep the crop clean from the "first start," but avoid plowing or working it when the ground is so wet as to be in the least *muddy*, and do not use the plow or cultivator after the blossoms appear; as a mutilation of the roots after this, may damage the *setting* of the tubers. Having used all these, and other reasonable precautions, we may say in the language of a witty disciple of Esculapius,

"If after that they choose to die,
Why, verily I let's 'em."

MAKING FENCE.

Every man knows that a good, strong, neat and straight fence is better than a crooked, ugly, and inefficient one. We have plenty of awkwardly built board fence all through the country; a little more pains, and some knowledge, would have made them better in every respect, with the same or less material, with no more labor. Indeed, working by rule, is not only nearer and better, but is generally much faster than by irregularity.

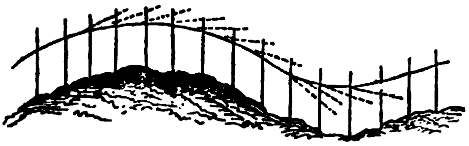
In *digging the holes*, they should be large enough to allow the pounder to work freely all round, and should in no case be less than two feet and a half deep. If less in depth, the fence will be in danger of leaning and becoming twisted, drawing the nails, lessening its strength, and destroying its good appearance.

To *set the posts perfectly straight*, stakes should first be driven on the line as accurately as possible, and two posts several rods distant, firmly set, perpendicularly, and precisely on the line. A strong cord, with a length twice as great as the distance between these two posts, is then to be very tightly stretched from one post to the other, near the surface of the ground; and passing back again from the second post to the first, near the top of each post. The face of each post is then to be set against these two cords; in this way, the workmen form a true right line with them, not varying half an inch, with the greatest facility. The *pounder*, for beating the earth firmly about them, should be shod at the lower end with a cast iron head. One hand should shovel in slowly, while another beats the successive layers firmly with the pounder; and if water is occasionally poured in, to soften the earth to the consistency of very stiff brick clay, it will pack more closely, and the post stand firmer when it becomes dry.

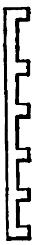
This mode of setting by two stretched cords, will enable a common operator to set nearly twice as many in a day, as by simply ranging with stakes without a line; and in addition, the work will be more accurately done. The cord, to be sufficiently strong, should not be much less than common bed-cord.

In *nailing on the boards*, the top board is first to be very accurately placed, as a guide for the rest of the fence. Where the surface of the ground is level, the top of this board should be perfectly straight, which may be done by stretching a cord tightly across the face of the line of posts, raising it from the slight curve it falls into, by a nail driven a quarter of an inch into each post. A little experience will enable any one to dispense with the use of the line, driving the nails in an exact range. Against this line of nails, the top board is to be placed and secured by nailing.

Where the surface of the ground is uneven, the fence, to suit it, should not be broken into awkward and irregular angles, but should pass over it by a succession of graceful curves. Such curves are easily made by a row of nails as already stated, each successive nail being driven a quarter of an inch or less, above the right line, in passing over a hollow, and below the right line, when rounding over a hill. These successive distances are easily estimated by the eye, with sufficient accuracy, without measuring. The annexed figure, strongly represented, to exhibit more plainly, will show how this is done. An experienced hand will thus lay off fifty rods in half a day. Marking the height of the fence on every fifth post with chalk, previously, will be useful.


(Fig. 33.)

To assist in nailing on the other boards, accurately and rapidly, procure two pieces of board, the length of which is to be equal to the height of the fence, or a little more, and saw notches in them, as represented in the annexed figure. The projections thus left, support the boards while they are nailed to the posts, these pieces of board being hung, by the upper projection, upon the top board, already in its place. All the distances between the different boards are thus measured without error, and one hand will proceed alone with the work as fast as two could do without this contrivance.


(Fig. 34.)

Then nail in blocks, made of square pieces of the fence board, on the face of the posts, between the boards; and over the whole of these, nail an upright facing board against each post, which secures the whole firmly to their places. These blocks may be made from small waste pieces, and require very little time to fit and nail them, while they afford great and permanent strength to the fence, as it is impossible to tear off or crowd from its position a single board without tearing down the whole fence. As but a single nail is thus needed for a board at each post, and also a single nail for each block, a less quantity of nails is needed in constructing it.

A neatly made fence, with narrow horizontal boards, has a much better appearance in the immediate vicinity of a dwelling, and among trees, than a *picket* fence. Where made of rough boards, as common farm fences they may as well be made neatly as awkwardly; and a coat of lime white-wash, early in summer, for a few successive seasons, will render these rough materials less liable to decay than a covering of oil paint.

A proper width of the boards, and of the distances between them, is a matter of some importance. A neat farm fence may be made of boards four inches, five inches, and nine inches wide, as follows—the top and cap board, four inches wide each; the three next, five inches wide; and the bottom one nine inches. The distances asunder may be, between the two upper, seven inches; next five and a half inches; next, four inches, and the lowest, two and a half inches. A lighter and more elegant appearance will be given by using boards one inch narrower, and increasing slightly the distances asunder. For a finished fence near a dwelling, five boards only, three inches wide, should be used besides the bottom board, which should be eleven inches wide; and the distances apart should be five inches, four and a half, four, three and a half, and three inches. The posts should be square and cased handsomely.

Salt, which renders posts more durable, may be applied by boring an inch hole, downwards, into each post, before the hole is quite filled with earth, putting in the salt, and plugging it in.

FARMER'S DUTIES TO THEIR CHILDREN.

Hartford County (Ct.) Ag. Society.—We have received the Transactions of this Society for 1843 and 1844. They contain much useful matter. A "Report on Blood Stock," by **Charles A. Goodrich**, gives, in our opinion, a very judicious view of the subject of improving our neat cattle.

The address delivered before the Society in October last, by **Ralph R. Phelps**, Esq., is really one of the most valuable productions of the kind we have ever seen. Whether we regard the subject matter, or the point and perspicuity of expression, it is, we might say, a *model*. We regret that the great press of communications, prevents our giving more than a brief notice. We must, however, find space for the following extract: Mr. Phelps observes—"It has been a source of complaint with farmers, that they cannot keep their boys at home; that they must leave the farm for a profession, a clerkship, a trade, or even a pedler's trunk or cart. This I consider a great evil, which demands a remedy."

After speaking of the causes of the evil, among which he enumerates false ideas of honor and respectability, "surly, morose, and scolding habits of parents," and "the rough, uncouth, and comfortless appearance of many farmer's houses and out-buildings," Mr. P. proceeds to point out a remedy as follows:

> "Let no farmer's wife think her children too good to labor; but, on the contrary, let her strive early to fix habits of industry. Let every mother teach her sons, that while labor on the farm is honorable, idleness, ignorance and vice alone bring reproach. And when this lesson is thoroughly impressed on the mind of her son, and corresponding habits are formed, that son will be likely to make an efficient man and a useful citizen, whether he be following a profession, or be engaged in the more safe and more pleasant pursuit of agriculture. But when the mother, without this lesson, and without these habits, undertakes to make her son a gentleman, she is far more likely to make him a loafer.
>
> "Let parents labor to give all their children a good education. Let the absurd notion, that a farmer needs no education, be banished from every dwelling. There is no pursuit, where intelligence, and a well cultivated, and a well disciplined mind is more necessary, than in the proper management of the farm. Let the mind be enlarged by a knowledge of history, political economy, and especially the sciences connected with agriculture. Let the young farmer enrich his mind by general reading. Let him thoroughly understand our political institutions; and be able to judge of his political rights and duties, without the aid of some demagogue, who had rather devote his time to watching over the public interests, than to the pursuit of honest industry. In short, let the farmer be able to reason, to examine and to judge for himself, and he will soon take the elevated rank in society to which his calling entitles him, and he will no longer have the opportunity of complaining that professional men have too much influence. This will have a great tendency to attach farmer's sons to their homes and to their farms."

PRODUCTIVE COWS.

A correspondent at Norwich (Mass.) informs us that "Mr. Joseph Kirkland of that town, has kept on his farm the last year, six cows; three of them calved near the first of March, the others the last of May. From their milk he has made 981 lbs. of butter; at 14 cents per lb., the price at which the most of it was sold, it would amount to $137,34. To which add the value of the skim milk, at $3,11 per cow, and the calves which were all raised, at $3 a-piece, at the time of weaning, and it amounts to $174,00, which will give to each cow on an average as the value of her product for one year, the sum of $29. The cows were raised on the farm, and are from 3 to 6 years old; their keeping has been grass and hay. One cow gave, during the first week in June, on one day, 40 lbs. of milk, and on the next day 38 lbs., from which was made 4 lbs. of butter, or 2 lbs. each day; her milk was weighed several times in the months of July and August, and was found to weigh from 35 to 37 lbs. a day."

LABELS FOR STANDARD FRUIT TREES.

The owners of fine and valuable collections of fruit, are often very much at a loss, and serious inconvenience and mistakes often arise, from the want of permanent names attached to the trees. In our last volume, two modes of making labels, one of painted wood, the other of zinc, were described by correspondents. A third, a very neat and permanent label, is made of stamped lead as follows: An iron plate, A. fig. 36, about six inches long and an inch wide, is screwed on another plate, B. of the same length, and twice as wide, by means of the screws at the ends, turned by their button-heads. A piece of sheet lead, with a width equal to the intended length of the label, is inserted between these two iron plates, as shown in the figure, and secured firmly to its place by means of the screws. The letter-punches are then applied to the lead successively, the edge of the upper plate, which should be thin, preserving them in a true line. Steel punches are best, but common printing types will answer. The imprinted end is then cut off; a hole is made in one end, which is neatly and quickly done by a shoemaker's nipping-punch; and by means of a copper wire a little larger than a common pin, it is attached to one of the branches of the tree. The copper wire sho'd form a loop one or two inches in diameter, so as not to cut the branch by the growth of the latter. Iron wire will do, but is more difficult to bend than copper, and is more liable to break off. Fig. 35 represents the label as finished. The wire should be twisted first closely at the hole in the label, to prevent the lead becoming worn by its motion in the wind, and again twisted at the ends to form the loop round the branch. A side branch should be selected, as being less liable to out-grow the loop. The leisure of the winter season, is a good time for the performance of this work.

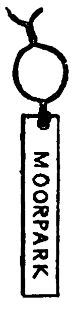


Fig. 35.

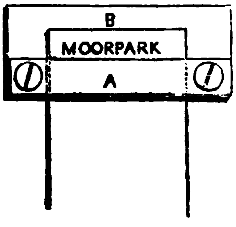


Fig. 36.

SUCCESSFUL CULTURE OF TURNEPS.

It is a fact, familiar to most farmers, that when the soil is heavy, newly cleared land is finely adapted to the raising of the common flat turnep; but that after a few years, this quality seems to disappear, owing chiefly, as is generally supposed, to the ravages of the turnep fly.

A farmer in the western part of this State, entirely obviates this difficulty by a very simple expedient. His farm is a heavy fertile soil, and though well adapted to most farm crops, it appeared to be entirely unfitted to the turnep, like all others of a similar character. The successful mode he adopted, is as follows:—After having plowed and harrowed his ground, and reduced it to a fine tilth, he spreads over the surface several inches of old straw, which is suffered to lie a few weeks. Just before sowing time, it is burned, the surface is harrowed, the seed sown and brushed in. In this way, he uniformly obtains the finest crops. He ascribes his success to the destruction of the insects by fire; but whatever may be the cause, the practice is well worthy of trial by all possessing land of a similar character

AGRICULTURAL MEETINGS IN ALBANY.

These meeting have been continued weekly from the first, on the 16th Jan. of which we gave a brief notice in the Feb. number. We have furnished full reports of the discussions for the daily papers here; but for our own pages we are under the necessity of greatly abridging them, in order to find room for a sketch of all in our columns.

At the second meeting, Jan 23d, the subject for discussion was *"The best means of advancing the Agricultural interest."*

Mr. HOWARD, Assistant Editor of the Cultivator, after speaking of other causes of the depression of agriculture, and suggesting means for improvement, remarked that the prevalence of an inveterate habit of carelessness and negligence among farmers, in his opinion constituted a very great obstacle to improvement. Pass through the country, and we too plainly see the evidence of the existence and consequences of this habit. We see this in the neglected fences, badly arranged farm-buildings and barn-yards—and in the trees and fruits of the garden and orchard, destroyed by the caterpillar and curculio.

In offering a remedy for this, Mr. H. would proceed as he should do in attempting all other great revolutions: that is, he would begin with the *rising generation*. He would endeavor to enlist the feelings of the boy, at an early age, in the business of his future vocation—would induce him to bring the MIND to aid the hands in the prosecution of his labors. Teach him habits of observation and reflection. Especially induce in him the observance of systematic rules in the laying out and management of his business. Induce him to adopt as a motto, the advice of FRANKLIN to his young friend: "Lay down a little PLAN for yourself, and all your operations will become easy." Let him study the principles of his art—trace effects to their causes, and from well established truths be able to draw correct and useful inferences. Permit him not to imbibe the idea, heretofore too common, that the profession of agriculture is a menial drudgery, fit only for the ignorant and degraded; but show him that it is a noble calling, where the powers of the mind may find full scope, and in the study and practice of which, the mysterious and most beautiful operations of nature are unfolded to view.

Mr. H. would particularly encourage boys in reading books and papers on subjects connected with agricultural pursuits. The school libraries may furnish to all our youth an excellent medium for obtaining useful reading of this kind. Excite in them, if possible, a habit of reading books on natural history. Provide suitable rudimentary works on entomology and botany. As the boy studies these, stimulate his interest by permitting him to combine the knowledge there obtained, with his every day business. When, in his field labors, he meets with a worm, a moth, or a beetle, let him put it in a box carried in his pocket for the purpose. On returning home, he will find out its name and character, and give it its proper place in his entomological cabinet.

Mr. H. thought the establishment of a MODEL and EXPERIMENTAL FARM, under judicious management, would be a very effectual means of advancing the agricultural interest. He urged this matter with much earnestness, and advanced various arguments in favor of such an institution. Its great design and object should be the decision of doubtful points in husbandry and rural economy. There, the various breeds of animals might be subjected to an impartial test, and their relative value for specific purposes, fairly made known. Theories, deducible from experiments in the laboratory, are being every day thrown before the public. These, would there be subjected to the test of field culture—*nature's laboratory*—and without such tests, they could never become safe guides to the farmer. These points will never be decided by individuals acting in their ordinary capacity. Some persons are incapable of conducting experiments in such a manner that correct inferences can be drawn from them. Others cannot afford to risk time and money upon uncertain results; and others are so biassed in favor of some favorite theory, as to preclude the possibility of arriving at the true result of an experiment. An establishment conducted by competent persons, with a single eye to the development of TRUTH, would be liable to none of these difficulties or objections.

The appointment of an *agricultural missionary*, or lecturer, Mr. H. said, would, as he believed, be an important auxiliary, in connection with other means of advancing the cause of agricultural improvement. We may find in other countries an example in point. Mr. Blacker of Ireland, and Prof. Johnston of Scotland, have rendered very important services by their labors of this kind. It was not to be expected, perhaps, that an individual could be found for this business, whose opinions were in all respects so perfectly orthodox that no one could possibly make any objections to them; nor was it necessary that a lecturer of infallibility should be procured. The great benefit which would accrue from his mission and exhortations would be the stimulus given to study and investigation. Farmers would be aroused—they would devote their thoughts to their business—an examination would be commenced, to ascertain the truth of any new doctrines which might be promulgated; and the result would not fail to be beneficial.

Dr. D. LEE, of the Assembly, observed, that Sir Humphrey Davy had defined SCIENCE to be "refined common sense." Dr. L. thought the use of this "science," or this form of "common sense," would greatly advance the agricultural interest. He thought the farmer should be better educated—especially, that he should have more of that kind of knowledge which would enable him to reap a better return for his labor—would enable him to keep more of what he earns. Ten days' work of the farmer, Dr. L. said, frequently did not bring him more than one day's work brought the lawyer. He thought the diffusion of knowledge, of the *right kind*, would tend to equalise the value of labor—would advance the interest of the farmer, as well as the whole community.

The meeting was further addressed by Mr. BETTS, member of the Assembly from Rensselaer county, Judge LELAND, of Steuben county, Mr. McVEAN and Mr. YOUNG of the Assembly, and by Judge CHEEVER.

Judge C. thought the benefits of agricultural societies had been undervalued. It was a great misfortune to the agricultural interest, that farmers did not act sufficiently in concert. The people of other classes saw the benefits of association, and they so combined their forces that their action was felt. Their influence on the policy of government was obvious. Now he would arouse farmers to the importance of protecting their interests—he would have them united and firm in claiming of government their rights—the government should know that their voice is not to be unheeded.

At the third meeting, Jan. 30th, the question discussed was

"What Breed or Breeds of Cattle, are best adapted to the purposes of Farmers in the State of New-York?"

Mr. SOTHAM said he was an advocate of the Herefords. He believed they would make more flesh with the same expense than any breed in the country—that they would carry themselves to market with less loss; and that their beef would, from its superior quality, command the highest price. In selecting these cattle, he had done so from a conviction that they would prove more generally useful here, than any other breed in England. He had had frequent opportunities of examining all the breeds there, and thought he was acquainted with the peculiarities of each. He had been perfectly satisfied with the Herefords here; and he only asked a fair trial for them, to satisfy others. He however considered mere opinions as of but little consequence in regard to cattle; he therefore proposed to have the Herefords tried on their own merits; and for this purpose was willing to put three steers and three cows, to a trial with the same number owned at this time by one man, of any other breed, under such regulations as impartial individuals should deem proper. He made this public offer for no other purpose than to have a fair comparison made with various breeds.

Mr. DANFORTH, of Jefferson county, member of the Assembly, said he began breeding with what is called the native stock. About sixteen years ago, he purchased a Short-Horn bull of the late Matthew Bullock, of Albany county. The calves produced from this animal and the old stock, were much improved for dairy purposes—they were also better for fattening. He kept them as he had formerly kept stock. They were more tender in constitution—did not winter so well—were not quite so good for labor—their dispositions were more sluggish; but on the whole, they were more profitable by at least twenty per cent, than the old stock. Some years since, Mr. D. used a Devon bull in his herd. The cross from him on that of the Short-horn bull, had proved excellent. They are more hardy, require less food, fatten easier, are better for work, and are as good for milk. Their superiority for labor and fattening is quite obvious—for beef, the Devon cross is better at three, than the others are at four years of age. Both Durhams and Devons had improved his native stock; but he thought the Devon had benefitted him the most.

Mr. BEMENT said, within the last eighteen years he had had more or less experience with the Durhams, Devons, Herefords, Ayrshires, and natives, as they are called. He had found both good and bad milkers among the Durhams—generally speaking, the higher bred they were, the less valuable they were as milkers. But he was satisfied it was practicable to select from certain families of the Short-Horns, those from which a very superior breed of milkers might be reared—a race perhaps superior in this respect to all others. For his land, however, which was rather sandy and light, he liked the Ayrshires; and so far, was very well satisfied with them. He thought Durhams were better workers than had generally been allowed. He had seen them tried, and they did exceedingly well.

Judge LELAND, of Steuben county, said they had tried several breeds in his section—the Short-Horns, Herefords, and Devons, had all been there. Several years ago, Mordecai Hale, Esq., who was in some way connected with the U. S. Navy, sent some Herefords into that county; and perhaps he ought, in justice to the advocates of Herefords, to say that they proved the most generally useful of any stock they had tried. They were very hardy, were powerful in the yoke, and a decided improvement on the native stock, for the dairy. Comparing those Herefords with the herd owned at this time by Messrs. Corning and Sotham, he thought the latter showed that the breed had been improved in regard to a disposition to accumulate fat on the most valuable parts—the "*quality* pieces," as Mr. Sotham had called them; but while this had been gained, it was a question in his mind, whether they had not lost something on the score of muscular strength and constitution.

Judge L. remarked that his experience and observation had convinced him, that the *native* stock of this section would be improved either by the Durhams, Herefords, or Devons—that is, a cross from either of these made more *profitable* stock for general purposes.

The discussion was continued by Messrs. BETTS, HOWARD, STEVENS, and others.

The subject of discussion at the fourth meeting was

"The best mode of managing and applying Vegetable and Animal Manures."

No report of this meeting was made, but this was the less necessary, as the subject was continued for the fifth and sixth meeting, Feb. 13th and 20th.

At the fifth meeting

Dr. LEE opened the discussion by remarking that by the term manures, was understood any substance that might serve as food for plants. The food of plants was derived partly from the soil and partly from the atmosphere—from the soil by means of the roots, from the atmosphere by the leaves. If it be an organized substance, it must undergo decomposition. For instance, one spire of grass cannot enter into the composition of another spire—it must be dissolved. It is most important in the preparation of manures, that while this decomposition should be thoroughly performed, none of the manure should be lost. It is for this purpose that compost heaps are made.

They promote fermentation and decomposition, by which new affinities are formed. In the ordinary preparation of manures, large portions are dissolved and lost in the shape of gases—in consequence of exposure to the atmosphere. Other portions are lost by leaching—from want of shelter from rains and snows. This should not be so. They should be carefully sheltered, and the gases absorbed and retained by a covering of charcoal, peat, or other absorbing substance. In regard to the preparation, there were a great variety of opinions and practices. The first object, however, was to promote a decomposition. This was sometimes done by putting water upon the compost heap to induce fermentation; which generates much heat—especially in the winter. Compost heaps were also serviceable to absorb the liquid excretions of animals, which are liable to be washed way.

Mr. J. B. NOTT thought the farmer must rely mainly for the present and probably for some time to come, on the manures of the barn-yard. And it should be the object, in the first place, so to manage these manures that nothing may be lost. We should not allow its strength to be taken from it by frost and snow, to be drained off by rains, or dissipated by the winds. The fermentation of manures is often allowed to take place in such a manner that the most valuable portion is carried off, and it becomes nearly worthless. It has been well said that no farmer ever smelled his manure, without witnessing a waste of his property. The question had been raised in regard to the propriety of composting manures. It was the opinion of the late Judge Buel, and also of some other distinguished farmers, that the practice was useless. It was argued that the richness of the manure was lessened by fermentation. But there was one great disadvantage attending the use of long manure, and that was the seeds of weeds, &c., which would vegetate in the land and annoy the farmer. Fermentatiou in the compost heap would destroy most of these seeds—and cannot this fermentation be so conducted that no loss will accrue to the farmer? The "best method of applying manures," is an important question. He had had some experience, and had endeavored to observe the effects of different modes. He had come to these conclusions—that it was not proper to bury them very deeply, nor to leave them entirely uncovered. His soil was rather sandy, and plowing in manures to the depth of 6 or 7 inches had generally been attended with comparatively little benefit, but when they had been covered 2 or 3 inches, the greatest good had been produced.

Mr. SOTHAM agreed generally with Mr. Nott in regard to the mode of applying manures. But perhaps one reason why that gentleman had supposed there was but little benefit to be derived from plowing in manures, was, that he did not wait long enough for the manure to be decomposed. He thought plowing in long manures, for a tenacious soil, was highly beneficial. The soil is thus rendered more friable and adapted to the circulation of the roots of plants.

Mr. S. would briefly state his mode of managing barn-yard manures. He mixed various kinds together, in the following manner: First, he put down a layer of manure from the cattle-stalls; next, a layer from the horse-stables, and next a layer from the slaughter-houses—then the kind first used, and so on alternately till the pile was raised as high as convenient. In this situation it underwent a moderate fermentation, and when it was carted away for use, it was so cut down that all the various ingredients were mixed well together. He thought it very important that all animal manures should be saved, for they undoubtedly contained all the organic elements of plants—carbon, hydrogen, oxygen and nitrogen.

Mr. NOTT asked—"When is it best to apply manure to a corn-crop?"

Dr. LEE answered—when you plant the corn. The experiment spoken of at one of our meetings last winter, by Mr. Humphrey, the Mayor, was in point. He planted some corn on a very poor, sandy soil, with a small quantity of horn shavings in the hill. The result was that where the shavings were applied, he got 60 bushels to the acre, but where the shavings were not applied, he only got 15 bushels. He proposed to a friend of his last winter to soak his corn in muriate of ammonia. He did, and on a poor chestnut ridge he got 94 bushels of corn to the acre. There are certain salts necessary to the perfection of plants. Wheat contains phosphate of lime, without which it is imperfect. This substance escapes from animals in their urine. This should be preserved. It is probable that in this state there is millions of pounds of this phosphate of lime taken from the land annually. This loss must be made good, or the soil will grow poor. Seeds, Dr. L. said, should be steeped in those substances necessary to the perfection of the plant, before sowing.

Prof. EMMONS said he could not altogether agree with Dr. Lee in some points of vegetable economy. He, (Prof. E.) thought plants derived their sustenance almost entirely through their roots—the roots were evidently designed to take in the food of the plant—their spongioles were extended in every direction for this purpose. Leaves may be considered the stomach of the plant, where the food taken through the roots is digested. This is a question of practical importance, for if plants derive their nutriment from the atmosphere, then let manures be applied so as to ascend. It was possible that plants may absorb carbonic acid by their leaves; but was this their proper function?

Dr. LEE replied that he thought Prof. Emmons had misunderstood him—it was conceded that plants derive part of their food from the soil. The question was, how much? If we could know this exactly, we should know just how much manure to apply. It is clear that we must restore more than we take away. We were at present in the dark about this, but it was his impression that in taking off 100 lbs. in crops, 80 of the quantity comes from the atmosphere, which would leave 20 to be restored.

Professor HALL said different plants possess different powers. Some absorb more from the atmosphere than others. Take peas, for instance: the tops will remain green and flourishing, while an inch or two of the stalk near the ground may be nearly dried up. This shows that they absorb nutriment from the atmosphere. Besides it was known that plants flourish more luxuriantly in the vicinity of odors arising from animal and vegetable decomposition. A vine would move in the direction of a dung-hill, and flourish better if suffered to run over it. Some plants will flourish in pounded glass watered only with distilled water—others will grow without the roots being covered at all.

The President, Mr. PRENTICE, being called on, observed that the call had been unexpected, and he was not prepared with any data from which to give the information asked. He would state, however, that the peculiar manure alluded to, was the refuse of a [illegible] factory, and was composed mostly of the fatty substance, or blubber, adhering to the skins of seals, with portions of the skins and hair. Of this refuse, there was sometimes as much as three pounds from a single skin. Owing to the trifling estimation in which manures had formerly been held by the farmers in this vicinity, he experienced great difficulty in getting rid of this refuse. He had offered to give it away, and afford any facilities for loading it, &c., but strange as it may seem, the farmers would not take the trouble to cart it away, and he was actually under the necessity of purchasing a piece of land on which to deposit it. Its effects, as had been remarked, were quite remarkable. He had never seen so powerful a manure. He had applied it, with results astonishingly beneficial, as a top-dressing to his pasture grounds, but the effluvium from it when applied in that shape, was exceedingly offensive. He had mixed it with the sweepings of the streets, so as to absorb the gases; and for cultivated crops, he preferred to use it in this form, worked into the soil. For a top-dressing to grass, it was perhaps as well to spread it on without mixture. Where he had so applied it, the crop had been increased from one ton to three tons per acre. Care was needed lest too much should be applied. In one instance where it had been applied to a potatoe-crop, an enormous growth of vines was produced, some of them 8 or 9 feet long, but very few potatoes. On corn it had done well, when used in moderate quantities—giving, he thought, a third more than he had got by other manures. He had once applied it to his orchard, but put on so much that it destroyed about one-half his trees. He was unable to state, from recollection, the precise quantity he had used per acre in all cases.

NEW-YORK STATE AGRICULTURAL SOCIETY.

At a meeting of the Executive Committee of the New-York State Agricultural Society, on the 15th February, 1845, the following gentlemen were appointed

COUNTY CORRESPONDING COMMITTEES.

Albany—C. N. Bement, Albany; Joel B. Nott, Guilderland; Amos Crary, Knox.

Allegany—Alvin Burr, Laurens Hull, Angelica.

Broome—Dr. A. Doubleday, Binghampton.

Cayuga—J. M. Sherwood, Auburn; David Thomas, Aurora; Judge Hollister, Cato 4 Corners.

Chautauque—T. B. Campbell, Westfield; Samuel A. Brown, Jamestown; Wm. Risley, Fredonia.

Chemung—E. C. Frost, Catherine.

Clinton—Edwin Benedict, Plattsburgh.

Columbia—J. P. Beekman, Kinderhook; John S. Gould, Stockport; Abm. P. Holdridge, Austerlitz.

Cortland—Jedediah Barber, Homer; Dan. Hibbard, Cortland.

Chenango—Dr. Mitchell, Norwich; Isaac Foote, Smyrna.

Cattaraugus—Abraham Searl, Ellicottville.

Delaware—Cornelius R. Fitch, Delhi.

Dutchess—Thomas Swift, Amenia; Dudley B. Fuller, Hyde Park; J. W. Kneevels, Fishkill.

Erie—R. L. Allen, Buffalo; Augustus Raynor, Clarence; Ezra Chaffey, Boston.

Greene—A. Van Bergen, Coxsackie; A. Marks, Durham.

Herkimer—A. Loomis, Little Falls; A. L. Fish, Cedarville; Mr. Crane, Warren.

Jefferson—Charles E. Clarke, Albert P. Brayton, Watertown; William Ives.

Livingston—Jas. S. Wadsworth, C. H. Bryan, Geneseo.

Lewis—Ela Merriam, Turin.

Madison—Geo. B. Rowe, Canastota; S. B. Burchard, Ham

Monroe—R. Harmon, Jr. Wheatland; Thos. H. Hyatt, Rochester; Abel Baldwin, Clarkson.

Montgomery—George Goertner; John Frey, Palatine.

Niagara—Wm. Parsons, Wm. A. Townsend, Lockport.

Orleans—Charles Lee, Barre; B. L. Bessar, Albion.

Orange—F. J. Betts, Newburgh; Robert Deniston, Salisbury Mills; J. W. Gott, Goshen.

Onondaga—Squire M. Brown, Elbridge; James M. Ellis, Onondago; Wm. Fuller, Skaneateles; Silas Cheesebrough, De Witt.

Oneida—Elon Comstock, Rome; N. L. Wright, Vernon Center; Henry Rhodes, Trenton; H. B. Bartlett, Paris.

Oswego—H. E. Sanford, Volney; B. E. Bowen, Mexico; S. B. Ludlow, Oswego.

Otsego—Joseph Bennett; Henry Phinney, Cooperstown; K. H. Van Rensselaer, Butternuts.

Queens—A. G. Carll, Jericho.

Rensselaer—Wm. P. Van Rensselaer, Bath; John J. Viele, Lansingburgh; Samuel Hoag, Nassau; Joseph Hastings, Brunswick.

Richmond—Dr. S. Akerly, Richmond.

Saratoga—David Rogers, Corinth; Seth Whalen, Ballston, P. O.; Howell Gardner, Greenfield.

Scoharie—Jedediah Miller, Cobleskill; Wm. Mann, Scoharie.

Seneca—John Delafield, Geneva P. O.; Samuel Williams, Waterloo.

Suffolk—John G. Floyd, Mastic.

Tompkins—L. A. Morrell, Lake Ridge; J R. Speed, Caroline; E. Mack, Ithaca.

Tioga—G. J. Pumpelly, Owego; Chas. T. Johnson.

Ulster—Lewis Bevier, Rochester, P. O.; Joseph Arnold, Kingston.

Washington—John McDonald, Salem; Asa Fitch, Jr.; Henry Holmes, Greenwich.

Westchester—Tyler Fountain, Peekskill.

Wyoming—James C. Ferris, Wyoming; A. W. Young, Warsaw.

March 13.—At the meeting of the Executive Committee this day—present, Messrs. Prentice, McIntyre, Hillhouse, Enos and Tucker—Mr. Prentice, Vice Pres't, in the chair.

The Recording Secretary reported that he had received from F. Rotch, Esq. the dies for Medals, ordered some time last year; together with samples of the Medals in gold, silver, gilt, bronze and metal—the account for which was audited and ordered paid. The design and execution of the medals were much admired.

A letter from L. F. Allen, Esq. on the subject of Premiums on Horses, was read, and its consideration deferred to a more full meeting of the Board.

A letter from Mr. Adams, relative to the Premium on Cornstalk Sugar, having been read, on motion of Mr. Tucker,

Resolved, That the offer of a premium for Cornstalk Sugar, be amended so as to read—"For the best 25 lbs. sugar, manufactured from the juice of the cornstalk, $25—the premium not to be awarded, unless the samples offered, shall be deemed worthy of it."

The Committee on Diplomas were directed to have the Design for a Diploma, adopted at the December meeting, engraved on steel.

CULTIVATION OF FOREST TREES.

The propagation of forest trees is becoming every year more important. In some sections they are wanted for ornament and shade, in others for wood and timber. There is a large portion of the western country, in which the natural destitution of timber constitutes a great obstacle to its cultivation—indeed, there are many districts which can never be much improved, until some substitute can be found for the forest. There is no reasonable doubt that those bleak prairies might, in the course of a few years, if proper care were used, be covered with various kinds of trees.

Of valuable kinds of trees which may be readily cultivated, there are the various species of maple, ash, oak, chestnut, walnut, pines, larch, &c.

In transplanting from the woods, it is not advisable to choose very large trees; we have found small ones preferable, as they more readily accommodate themselves to the change from a protected situation to the open air. *Evergreens* do best when transplanted in the fore part of the winter, when the ground is just so much frozen that the earth to the depth of six or eight inches will adhere to the roots, and by transferring them in this manner to their new location, there is much more certainty of their succeeding.

But the best mode of propagation is by seed. It is true, however, that a difficulty is often experienced in causing the seeds or nuts to vegetate. The principal cause of this difficulty, is owing to the nuts becoming too dry before they are put in the ground. The best course is, to plant them as soon as they fall from the tree. The seeds of the elm, and the white and red maples, (*Acer dasycarpum*, and *A. rubrum*,) fall early in the season. The blossoms put out before the leaves appear, and in this latitude the seeds generally fall before the middle of June. Attached to the pericarps or seed coverings, are thin fibrous appendages, (that of the maple bearing no small resemblance to the wing of an insect,) by which the wind disperses the seeds in different directions till they come in contact with earth or some object upon its surface, where, if circumstances are favorable, they vegetate. We have had some experience in rearing trees of these varieties. The seeds should be gathered as soon as they fall, and immediately planted. They may be sown as thick as we sow peas, in rows sixteen or eighteen inches apart, as they will occupy but little room the first year. The next spring they should be transplanted, in the same manner as apple-trees are, from the seed-bed.

The rock or sugar maple (*A. saccharinum*) does not drop its seeds as early as the white and red kinds do; they do not fall till autumn, and seldom, (perhaps never) vegetate till the succeeding spring. In the vicinity of old trees, the young ones may be found in great numbers, just as they appear above-ground, which is about the time the trees become full set with foliage. They may then be readily taken up with the spade and transplanted in the nursery. Care, however, should be taken to get, as far as possible, those young trees which have come up in the open air, as those taken from the shade will hardly bear exposure to the hot sun in their new location. Cattle and other animals greedily eat these young trees, and it is therefore not easy to find them, long after they first come up, in situations where stock range. But the best course with the suger maple, is that recommended for the other kinds and for elms: that is, to gather the seeds as soon as they drop, and plant them in the seed-bed, where they will be sure to vegetate early the next spring. The seeds of the white ash and catalpa may be managed in the same way. If maples are planted in good moist soil, their growth is rapid. We have had them ten feet high in three years, from the seed.

Nuts of all kinds, the haws of thorns, &c., should be planted as soon as they fall from the tree, or else should be put immediately in boxes of moist earth, and there kept till spring.

The yellow and black locust are easily propagated from seed. They are of rapid growth, and when not attacked by insects, are highly valuable for timber. The pods containing the seeds are easily gathered when ripe, and the seeds may either be planted the same fall, or kept till spring. If they lay in the ground during winter, they will vegetate the next season. If the seeds are kept dry, they will retain their vegetating powers a long time; but if it is wished to have them come up soon, it is necessary, just as they are planted, to pour hot water on them, to soften the hard skins and allow the moisture to strike to the germ. The honey locust may be propagated in the same way as the other kinds, but is less valuable for timber, though we believe it is never attacked by the borer, and is sometimes recommended for hedges.

In some sections of the country, particularly in the eastern part of Massachusetts, we have noticed plantations of the white pine. The cultivation of the pine is a matter of much importance in those districts. In early times, lands were in many instances brought into cultivation there, which from their natural barrenness have long since ceased to produce crops that would pay the cost. These old fields, by a little attention, may be brought profitably into wood, and their unseemly nakedness and sterility changed for ornamental groves.

We believe the seed of the pine is usually sown broad-cast, in the cases we allude to; we are not, however, much acquainted with the mode pursued, but presume it is necessary to gather the cones containing the seed as soon as they fall, lest the seeds should be lost, or picked out and carried off by squirrels.

Will not some of our friends in the "old Colony," or elsewhere, give us the best mode of cultivating the pine and other forest trees on worn-out lands?

We would call attention to an able and very interesting article—by a correspondent from whom we hope to hear again—on the culture of the *larch*, in this number.

Onions.—The average yield of this crop (in the county of Essex, Mass.) is 300 bushels per acre; sometimes as high as 500 or 600 bushels. The ordinary expense of manure and labor to an acre may be estimated at *double* that required for Indian corn; this estimate is believed to be ample to cover all that will be requisite for a series of years, especially when it is taken into view that much of the labor of weeding and gardening may be done by children. For ten years past, from 30,000 to 60,000 bushels in a year have been raised in the single town of Danvers. The average value of the crop when brought to market, is fifty cents per bushel, or $150 per acre. In what way can so fair a profit be realized from the land?—*Proctor's Address.*

REWARD OF INDUSTRY AND SKILL.

Our correspondent "INDICATOR," gives some interesting facts in regard to the success of a man, who, under many discouragements, bought a farm of seventy four acres near Buffalo, about twelve years since. The man was an Englishman by birth, though he was not brought up to farming. At the time he bought the farm, it was thought so poor that while commencing operations, and making his garden, his neighbors told him he was throwing away his labor, for the land could not be made to produce anything. In purchasing and paying for the land he was forced to encounter serious difficulties and to forego many comforts. We are informed that he even had to trade away his watch to get a wagon, and his cloak or over-coat to get a part of a stack of hay, to feed his team upon before grass could be grown. But under all these discouraging hardships, he perseveringly continued his efforts, which have at last been crowned with success equal to his anticipations. "He harvests" (it is said) "as good crops as any one, and much better than many of those who are in possession of farms called the *best*." To the original seventy-four acres for which he had so hard a struggle to pay, he has added fifty more, giving him a farm of 124 acres, which we are told is all paid for, and that he has built on it one good frame barn, has cleared off the logs, stumps, and stones. His fences are said to be better than on most farms, and he is making experiments with live hedges. He has a flock of two hundred sheep, which it is said have been so much improved by a buck of the Leicestershire breed which he bought several years ago, that for three years in succession he has carried the first prizes for bucks of that kind, at the county show; and people come from a great distance to buy his young bucks. He has "nine head of cattle; a pair of fine stout mares; pigs and poultry; more and better tools than most farmers around him; with several hundred dollars out at interest!!

"Indicator" informs us that his neighbor, besides doing all this, "has always kept his children at school, summer and winter."

In conclusion "Indicator" says—"I fancy I hear some incredulous one say—'You tell us how well your neighbor has done, but you do not tell us *how* he has done it?' I answer, he has been constantly industrious and careful, and has observed the maxim of Dr. Franklin, published in his "Poor Richard" almanac—"Always spend something less than thy clear gains!" Lastly, we are informed, that "*he has for several years been a subscriber to the Cultivator.*"

FAT ANIMALS.

WE noticed the carcasses of some remarkable cattle, sheep, and hogs, exhibited in the Centre Market in this city, on the 22d of February. There was the Durham ox, not quite six years old, which received the first premium on fat oxen at the Poughkeepsie State Show, bred and fatted by D. D. CAMPBELL, Esq., of Schenectady, which weighed as follows:

Live weight, ...	2,546 lbs.,
Beef—four quarters, ...	1,726 "
Hide, ...	121 "
Loose fat, ...	255 "
	2,102 lbs.

A spayed heifer, between four and five years old, bred and fattened by P. N. RUST, of Syracuse, weighed—

Four quarters, ...	1,226 lbs.,
Hide, ...	84 "
Loose fat, ...	180 "
	1,490

This remarkable animal was said to have descended on one side from some cattle imported from Holland, several years since, by Mr. Linklean, of Madison county; but her fine bone, symmetry, and color, strongly indicated a mixture of Durham and Devon blood. We believe that she had always been kept in the stable; and we would suggest the query, whether this circumstance had any influence in lessening the weight of the hide? which it will be seen was of uncommon lightness.

Among the sheep, we noticed the carcass of a cross-bred South Down and Leicester wether, bred and fed by P. N. RUST; the neat weight of which was 183 lbs.—or over 45 lbs. per quarter.

All the above animals were exhibited at the stalls of KIRKPATRICK & Co.

At the stall of MCGUIGAN & WALSH, we observed the carcass of a Cotswold wether, weighing 172 lbs., fatted by Mr. KNICKERBACKER, of Schaghticoke. This was a most extraordinary carcass of mutton, exceeding anything we had before seen in weight, in proportion to bone.

But the greatest wonders and curiosities were in the *Pork* Department. Mr. G. SWARTZ exhibited the carcasses of three hogs—one of which, 2 years 7 months old, weighed 975 lbs! Another—of the Berkshire breed, a well-formed and symmetrical animal, 2 years 3 months old, 725 lbs. Another, ten months old, showing much China blood, 400 lbs., as perfect a pig as could well be imagined. The largest hog was said to be of the "Byfield breed," but it is evident that the blood of some larger and coarser breed must have predominated.

It may be interesting to compare the weights of these animals with some which have carried prizes at shows in England. The London Farmers' Journal gives the weights of some of the prize oxen, sheep, and pigs, which were exhibited at the last Smithfield Show. Of the cattle, the weight of the beef and loose fat or tallow only is given. A four yrs. old Durham ox—

Quarters, ...	1,768
Loose fat, ...	192
	1,960

A four years old Hereford ox—

Quarters, ...	1,590
Loose fat, ...	192
	1,782

Another Durham ox four years old, weighed—

Quarters, only—	1,840 lbs.

The weight of Mr. Campbell's ox—compared with these—that is, the beef and tallow only—was 1,981 lbs.—but there was a difference of near two years in his favor.

The weights of no Cotswold or other long-wooled sheep are mentioned. A South Down wether, bred by the Duke of Bedford, weighed 172 lbs—or 43 pounds per quarter.

WHEAT CULTURE.

Mr. W. ORCUM of Maryland, after proposing some inquiries in regard to the best mode of manuring the land for wheat, gives the following as his own management: "My plan has been to break my fallow fields before harvest; stir it after harvest; spread manure, and harrow it, then sow two bushels of wheat per acre, then harrow and cross harrow. I use three horse plows and three horse harrows, and plow about ten inches deep. Some farmers spread the manure first, and plow it in, and use the shovel plow to put the wheat in. I have tried this plan, but prefer the other. As to my pasture fields, I sow in March or April, 1¼ bushels ground plaster per acre. Some persons consider so large a quantity injurious to the land; but I have never found it so. But on the contrary, my clover crops have been remarkably fine, and I have attributed it entirely to the plaster. In the spring of 1843, I sowed in "a 35 acre field," 1¼ bushels plaster per acre, (which had been pastured for two years.) In the summer of 1843, it was pastured again, and after harvest, I had it broken up with a three horse plow, spread manure and harrowed it; sowed 69¼ bushels wheat, which was harrowed and cross harrowed. This was seeded Sept. 28, 1843, and harvested July 1st and 2d, 1844. The wheat weighed 63¼ lbs. per bushel, and I think there was from 27 to 30 bushels per acre. Whereas, in a field of 85 acres, I pursued the other plan. I did not sow any plaster, but manured with barn yard manure, spreading it before plowing, and plowing it under. I had the wheat put in with shovel plows; and although the soil was better, it did not produce more than 20 bushels per acre. I should like to have the opinion of others upon the subject."

HEATING CONSERVATORIES BY HOT WATER.

We visited in February last, the the neatly-managed conservatory of Mr. James Wilson, near this city. Among other objects of interest, we particulary noticed a mode of heating hot-houses by hot water. A boiler is placed at one end of the room, and a copper pipe, four inches in diameter, is inserted in it; carried from thence around one side of the building, connecting at the farther end with a vat or reservoir. From this reservoir, another pipe of the same size as the first, is carried back to the boiler, and inserted into it about six or eight inches above the other. The two pipes are placed vertically to each other, observing the same distance between them as at their connexion with the boiler. As the water in the boiler is heated, it rises, the colder water of the pipe flows in at the lower insertion, giving place to the warmer, which flows out at the uppermost insertion, thus keeping up a regular circulation till the whole is heated. The smoke-flue is carried round the room in the same manner as formerly; thus using to the best advantage, all the heat which is generated by the fire.

The largest of Mr. Wilson's houses is heated by one of these boilers with the pipes as described. The house is forty-three by twenty-seven feet, and 15¼ feet high, with span roof, both sides of which are of glass. Two boilers, each with pipes, were first provided, but one has been found amply sufficient, even in the coldest weather of the past winter. The cost of the two was $150, but as one has proved to answer, the whole cost of the necessary apparatus for heating the house is actually only $75.

COMPOSOTION OF SALERATUS—CURING MEAT.

We have received a long communication from "C. D." (on which fifty cents postage was charged us,) whose object is to show that saleratus consists largely of *sulphate of potash*, with bi-carbonate of potash. He quotes Thatcher's Dispensatory, who states that pearlash, (the basis of saleratus,) contains "a considerable proportion of foreign salts," which C. D. affirms are almost entirely *sulphate of potash*, as may be seen from his prescription for purifying them—by driving off the sulphuric acid by the heat of a crucible." Now it happens that sulphate of potash, according to chemists, decrepitates, but is not decomposed by heat. Hence this reasoning fails. He also says, so large is the proportion of sulphate of potash, that "the *potash maker* invariably uses *lime* to clarify his ley from the sulphuric acid." Now, it happens again, that sulphuric acid has a stronger affinity for potash than for lime; hence lime cannot decompose it. And hence, too, this reasoning fails. Our correspondent must excuse us for not publishing his reasoning at length, as a few accurate analyses of saleratus, which, so far as the presence of the sulphate is concerned, is one of the simplest operations in chemistry,[*] will settle all disputed points much better than any abstract reasoning.

Most of the cases which C. D. gives of the supposed efficacy of sulphate of potash in curig meat, are from the use of the mixture of common salt and wood ashes, the latter being supposed to consist largely of sulphate of potash. Admitting this to be so, the use of salt at the same time destroys the distinctive result of the experiment. But one experiment related is of a different character, which is as follows:—"Twenty-five years ago I had a quantity of pure sulphate of potash; I gave some to a friend, who cured his hams with it to his most perfect satisfaction. It imparts to them as much tenderness, and the same redish appearance which saltpetre does. In fine, the sulphate of potash has, in curing meat, all the good effects that saltpetre has, without its bad ones." [resulting from the poisonous nature of saltpetre.]

Human Blood.—Iron is found in venous blood alone, and no where else in the human body.

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[*] See Draper's Kane, p. 489; and Macnevin's Brande, p. 339.

ANSWERS TO INQUIRIES.

String Halt.—A "Subscriber" at Shoreham, Vt., inquires whether there is such a disease as "Spring halt." We presume the disease in question, is what is described in British works, as *string halt*. It exhibits itself in an involuntary twitching of the hind leg. Mr. Youatt says it is evidently an affection of some of the nerves which communicate motion to the muscles of the leg. "It is," says Mr. Y., "an irregular action of nervous energy; but what particular fibril is affected, or what muscle is chiefly spasmed, has never been ascertained. It is principally observed when the horse first comes from the stable, and gradually ceases after he has been exercised awhile." Mr. Y. observes that "the precise nature of the defect has never been determined, nor has any cure for it been discovered."

Pomegranate Melons.—Messrs. Gibson & Richie, Seedsmen, Newark, N. J., in a late letter, say—"In your January number 'W. of Troy,' inquires 'whether there is a species of the Muskmelon, called Pomegranate.' There is. It is about the size of a goose's egg, but more oval, and is worthless as a table fruit. It has, however, a most exquisite perfume, and one placed in a room, scents the whole air like a collection of the finest fruits. We never heard of the Citron Watermelon being used for any thing but preserves."

Tobacco.—In answer to the inquiry of Mr. Young, of Fallstown, North Carolina, we cannot at this time do better than to refer to an article on the culture of tobacco published in our last volume, page 84.

☞ We cannot answer the inquiries of "Indicator" in regard to Wiard's Gang-Plow. He had better address Mr. Wiard, at East-Avon, N. Y.

"How much is a 'load' of Manure ?"—A friend at the south asks us this question, and though it is a perfectly proper one, it is rather hard to answer. The term "load," is probably about as indefinite as "a piece of chalk." The officers of the Mass. Ag. Society, in using the term "load of manure," in connexion with some of their premiums, explain it as "meaning not less than 30 bushels." Perhaps this quantity (30 bushels,) may be considered as good a criterion as can be given of what is commonly understood by the word load when applied to manure in this section. Our correspondent suggests that it would be a great convenience to express by bushels, what is always meant by loads. We recommend the suggestion, being satisfied that it would effect an important improvement.

South Down Sheep.—In regard to the value of the South Down breed of sheep "compared with the Merino and Bakewell," about which Mr. Boyd inquires, all depends on the purpose for which the sheep are wanted. The flavor of the South Down mutton is considered very superior—the wool of medium quality, for short wool—average three to four pounds per fleece. The Bakewells or Leicesters, fatten very easily, and at an earlier age than others—wool suitable for combing or the manufacture of worsteds—average four to six pounds per fleece. The South Downs are considered more hardy than the Leicesters and Merinos. The South Downs can be bought of Messrs. Bement or McIntyre of this city, of Messrs. S. & J. Wait, Orange county. We do not know of any Bakewells or Leicesters for sale, that are unmixed with the Cotswold, and it is the impression here, we believe, that they are benefited by the cross. The Cotswolds, or crosses of these and the Leicesters, may be had of Messrs. Corning & Sotham, McIntyre, Merrifield, and Dunn. The prices are from $12 to $30 per head, according to quality.

Wm. Battaile, Esq. of Benton, Miss., asks what grasses are best adapted to his section of country, and whether clover would succeed there. Not being personally acquainted with that region, we beg to refer our correspondent to our friend Mr. **Affleck**, of Washington, Miss., who is in all respects well qualified to give the information desired. As to corn sown broadcast for fodder, we should think it would do well. The usual time of planting, is proper for putting in the crop for this purpose. From two to three bushels seed are here used per acre, and it may be worked in with a cultivator, or what is better, turned in with a small plow. Some prefer planting it thick in drills, about three feet apart, in order to give a chance of working among it and keeping down the weeds and grass. The growth is thus made more rapid, and some who practice it, assure us that the yield is as great, and on some soils greater than when sown broadcast. The best mode of curing, we think, is to cut it shortly after the blossoms fall, bind in small bundles close to the top, and set in small stooks or shocks, as open as possible at the butts, and so tight at the top as to turn off the rain. Let them remain in this situation till thoroughly dried, when they may be removed to large ricks, or put in a barn. As to the cheapest and best means of improving lands in Mississippi, stopping "washes," &c. we would refer to Mr. Affleck or to Dr. Phillips. Without a knowledge of the facilities for improvement, it is impossible for us to say what course would be cheapest or most expedient. The gullies or "washes," may be stopped by throwing in small stones, brush, or small trees with the limbs on, and covering over with earth, taking care to prevent as much as possible, the water from entering into the old channels.

Spent tan and saw-dust.—In regard to the inquiry of Mr. Andrew Bush, Coventry, Pa., we remark that tan has been found useful as manure, particularly for trees and shrubbery, after it has become well decomposed. It is also sometimes used in a fresher state, to keep up the heat in hot beds. Saw-dust has been found very useful in ameliorating heavy or clayey soils. It makes also good bedding for horses or cattle, and when put in their stalls, is a convenient absorbent of urine.

Windmill.—Mr. William Wadsworth of Middlesex county, Conn., inquires for a windmill that would be effective for threshing, sawing, &c. In our last volume page 202, we noticed a model of a windmill invented by George Parker, of Corinna, Penobscot county, Maine, which we thought simple and cheap. Further information in regard to it, we presume could be had by addressing Mr. Parker.

Mangel Wurtzel.—H. Boyd, Wilkinsburgh, Pa., asks some information in regard to mangel wurtzel. The best soil for this root, is a rich light loam. The usual time for planting corn may be taken as proper for planting this crop. It is frequently sown on ridges, two to three feet apart, and thinned to a foot or more in the row. If the soil is likely to suffer from drouth, it is best not to ridge it. The roots may be fed, cut in proper slices, to milch cows, at the rate of half a bushel per day, being careful to allow plenty of hay or other dry fodder, lest the roots too much relax the cows.

Virginia Lands, &c.—A correspondent, signing "Franklin," Washington, D. C., inquires for a remedy against the worm that eats the ends of the ears of green corn, or "roasting ears." He describes the worm as of a "green or grey color, from half an inch to two inches long." He says they frequently eat down the whole length of the ear—that "upon examination, there will generally be found a little hole perforating the husk, through which the worm made its ingress, or where the husk was punctured by a bee or insect for the purpose of laying an egg for producing the worm."

"Franklin" thinks more of the Northern hard-working farmers, with small means, might go to Virginia to their advantage. Land, which only requires good management to produce abundant crops, he says, can be had in Fairfax county, or on the Baltimore and Washington railroad, for from $10 to $30 per acre, according to the quality, situation, buildings, &c. In regard to the state of society, he observes—

"In Virginia, the New Englander will find the richer class of farmers more open-hearted, more courteous and polished in manners; and the poorer class more ignorant, and more coarse in all respects, than those he left. He will find less schools, less churches, and lose something of the quietude of the Sabbath; while in these respects, he will probably be better off, than by removing to the West."

Our correspondent at West Greenfield, "H. G." will find our views, together with the views of some others, on the subject about which he inquires, in this paper.

POTATOE ROT

We give the following from a letter from Hon. John Crary, of Salem, in this State. His suggestions are worthy the consideration of our farmers:

"The Cause of Rot in the Potatoe, and the way to prevent it.—The rot in the potatoe occurs in hot, dry seasons, and the heat and drouth prevent the ripening of the potatoe, and disease and decomposition follows. I observed during the last summer a difference in the potatoe crop, on the same land. Those potatoes that were covered deep were good as usual; those the covering of which was shallow were useless, particularly for the table. The first symptom of failure is in the stalks of the potatoe; they become dry and the leaves turn black, the growth then ceases, and the potatoe becomes rotten before it is ripe. The fibers that connect the stalk with the potatoe quit their hold, and when you grasp the stalk and pull with a view to raise the potatoes out of the hill, the roots break and leave the potatoes, or rather slip out of the hill without raising the potatoes."

Mr. Leroy Patillo, Monroe, Georgia, writes us that he thinks the rot is caused by small insects, and advises rolling the seed-potatoes in sulphur before planting them. He informs us that he has used sulphur with good effects around plum trees in which insects had perforated the bark, and from which the gum oozed out.

From a letter received from Elisha Hammond, of Conesville, N. Y., we extract the following facts in relation to the rot in potatoes. 1. "On dry, cool land, not very rich by putrescent manures, the crops almost entirely escaped." 2. Defective potatoes fed to hogs, in connexion with sulphur and charcoal, have produced no injury. 3. In a field of potatoes, some of the rows crossed places on which stumps had been burned, and other rows a spot where potatoes had been buried the year before, and the straw used about them turned under for manure. The crop was much more rotted on these places, especially over old potatoe-holes, than elsewhere. 4. Lime has been said to be a preventive of rot. It proved *not* so in this case. Some coarse lime had been spread on a part of the field. Some hills, where the lime happened to be scattered, were particularly examined, and found much more rotted than where nothing was put. 5. Plaster was used on most of the crop. Two rows were left through the field without plaster—no difference could be discovered between these and other rows, in the condition of the potatoes.

EXPERIMENTS IN THE USE OF POUDRETTE.

Mr. Tucker—I send you the following practical facts in relation to concentrated manures; a subject which is now commanding very general attention. I have selected these reports from distant parts of the country, that it may be seen that their effects are alike beneficial on different soils, and in somewhat different climates.

The first statement is an extract from a letter written by Augustus Shriver, Esq., of Carroll county, Md., dated November 22, 1844.

"I therefore mixed the poudrette with an equal quantity of ashes, and a little plaster, and when the corn was cleverly up, applied about a gill to each hill, leaving twelve rows in the field, to which I gave the same quantity of ashes and plaster *alone*, as has heretofore been my custom. The corn all grew finely, and there was no perceptible difference in that on which the poudrette had been applied, until the month of July, when we experienced a very severe drouth, lasting about six weeks, when the part dressed with ashes and plaster alone suffered somewhat and "fired" a little; but the balance on which I put the poudrette, held its own admirably, and did not "fire" a single blade, and looked flourishing and filled finely. I candidly believe that the poudrette, though so small a quantity, increased the yield at least ten per cent, and am so well pleased with this small experiment, that I will go into it on a larger scale next season."

The next report is from Mr. Floyd Howell, residing in the county of Onondaga, in this State—to whom nineteen barrels, or 76 bushels, were sent late in November

1843; upon which a freight of $1,37 per barrel was charged, which increased its cost to $2,87 *a barrel* on the farm. In reply to inquiries made in relation to its effects, the following answer is given, viz.:

"We took five acres of wheat-stubble which we supposed would yield, *without any manure*, from 35 to 40 bushels of corn to the acre; plowed and harrowed it once, the fore-part of May; then marked it out in rows four feet apart, but owing to the cold weather, did not plant until about the 16th of the month, when we dropped a handful of poudrette in each hill—or 14 barrels to the five acres—then planted it. After it came up, and *before the first hoeing*, we put 4 barrels more upon about *one half* of the field. The corn was hoed three times—and was ready to harvest a little earlier than our neighbors—but we could not perceive any *material* difference between that part of the field where the four barrels were applied as a top dressing, and the part where it was applied *only on the hill*. There was no other manure used than the poudrette. The *average* yield upon the five acres, was 80 bushels to the acre; but from one acre selected, we gathered 99 bushels and 18 pounds. The freight on the 40 barrels sent by you this year, will not exceed what was paid last year, $26 on 19 barrels, owing to its being shipped near the close of navigation."

From this it will be seen that, by the use of 18 barrels of 72 bushels of poudrette on the five acres, the yield was increased from 35 or 40 bushels, to eighty bushels, per acre, or over 200 bushels on the field.

Mr. Robert Henry, of Cranbury, N. J., says, under the date of Dec. 27th, 1844, that—

"For the last four or five years I have used poudrette with uniform success, on corn; and find it to answer on that crop, better than *any other manure* that I use. The corn, where it is used, is generally of a better color, and comes to maturity earlier, than where other manure is used. My mode of applying it, is in the hill; the ground being previously prepared with about 40 or 50 bushels of lime to the acre. This is the only way in which I have used it; and last season the corn was on a dry soil—although the season was also dry—the crop of corn was good, where poudrette was used. I consider it a cheap and profitable *manure*."

Mr. Peter Hall, of Norwalk, Conn., informs me that he "used poudrette in the fall of 1842, *with barn-yard* manure, on a field of wheat. The result was extraordinary—yielding *thirty-two and a half* bushels, weighing over 64 lbs. per bushel—to the acre. He also used it on corn the past year, 32 bushels, or 8 barrels, per acre. Part of it was put in the hill at planting, and the balance was spread on the surface previous to the second hoeing. The corn was planted a week *later* than his neighbors planted theirs, and was fit to harvest *nearly* two weeks earlier; and it was believed from the appearance, the produce was greater than upon any other field in the neighborhood.

On potatoes, also, its effects were remarked by every one who saw them. Those manured with poudrette could be distinguished from those treated with stable manure, as they passed along the road; and on digging them, very few, if any, were found diseased."

The poudrette used by the gentleman whose reports are herewith given, was obtained from the New York Poudrette Company, and prepared in this city, by

New York, February, 1845. D. K. Minor.

Cement for earthen Pipes.—A mode of cementing earthen pipes for conveying hot water, is given by a correspondent of the London Gardener's Chronicle, as follows: Take one pint of sweet milk, nearly two pints of buttermilk, mix the milks, and put them on a slow fire till they turn into curd; then strain them and save the curds. Previously get some good roche lime, pound it fine, and sift through a fine sieve. Mix the lime with the curd well, until it is tough, and then dilute the joints of the pipe well with it; the pipes should be dry when the cement is applied. It will be sufficiently hard in a few hours, and it is said will not be affected by hot water. More cement than can be used in half an hour ought not to be made at a time, as it will get so hard as to be unfit for use.

CONDENSED CORRESPONDENCE.

Horticultural Items.—Mr. Chas. Hamilton, of Canterbury informs us that a Rhode Island greening tree in that village, produced in 1843, twenty barrels of apples—that two trees, of which this is one, have for several seasons, produced twenty-two to twenty-three barrels suitable for market, besides what previously fell off. Mr. H. also informs us that the fruit of a single apricot tree, belonging to William T. Titus, of that village, sold in August last, for $12,55—being one cent each. The fruit of another tree belonging to Delaplain Gaunt, brought $17.

Strings for tying buds, &c.—Mr. Hamilton gives the following directions for preparing the bark of the Bass, or Linn tree, for this purpose—"About the 20th of June, cut the bark in strips about four feet long, which will make three lengths. Tie it up in bundles, and place it in clear running water, with stones on it to keep it down. In about four weeks, from six to ten courses of the inside bark will readily strip up finely. Having taken off this, put the rest back, and in three or four weeks more, it will again peel. The finest may be used for budding trees, and the coarser for tying trees to stakes, &c. The bark may be taken from the trees whenever they will peel."

In regard to the "*small brownish worm*," which Mr. Hamilton speaks of having eaten the buds from his plum trees, we know nothing, and without seeing the insect, or obtaining a more definite description, we can give no information in regard to it.

Proper depth of covering for Peas.—"Indicator" gives the result of an experiment which throws some light on this point. He plowed in some peas with a wheel attached to the plow, so regulated that the furrow was only three inches deep. Just before he had done plowing, the wheel came off, which permitted the plow to run the usual depth. He noticed that where he plowed after the wheel came off, the peas did not come up well—in some instances there would be a space of several yards without any.

Correction—Preparation of Muck.—In our notice of Mr. Camp's method of improving land, in the February number, it seems we made a mistake in substituting the word "if" for "of." Thus in the preparation of peat or muck, Mr. Camp is made to say he would advise mixing one bushel of lime, two bushels of ashes, four bushels of crushed charcoal, &c., with one load of peat: whereas it was only intended to recommend *one* of these articles in the quantity mentioned, instead of the whole of them. Mr. Camp says he does not suppose that *all* these ingredients would "*hurt* a load of muck," but it was his aim to direct to a cheap, as well as good mode of improvement;" and he thinks "if the peat or muck be thrown from the bed and well frozen through the winter the quantity mentioned of either of these ingredients will serve as corrective for one load." In the note just received from Mr. Camp, he speaks of the use of "charred cobs" as follows:—"I have, for years made use of charred cobs and find them to be one of the best absorbents, drinking in the dews and other liquids, and disposing of them to the great benefit of plants. If I have oyster shells which I wish to char, I place a thick coat over the cobs, then cover well with dirt; this holds the gas while burning, and is a benefit to the whole. My kilns have generally been made partly of wood."

Agricultural Papers.—The following extract from a letter received from a correspondent at East Hartford, Conn., sufficiently explains itself, and needs no comment: "In perusing the December number of the Cultivator, I saw a notice requesting subscribers to act as agents, and being desirous to extend the circulation of so valuable a paper, I called on one of my neighbors and asked him to subscribe. He said "no, I cannot afford it—I've purchased five hundred dollars worth of land this year, and every cent counts.' Now if this man had spent his five hundred dollars in enriching what land he already had, I think he would have been better off. I next called on another neighbor, and while showing him the size and quantity of reading matter in a number, I heard a voice from another room, which I supposed to be that of the good (?) housewife, saying 'if a farmer can't take care of his business without an agricultural paper to tell him how, I think he had better give up.' Now this man takes so good 'care of his business,' that he loses half a dozen creatures of some kind or other, in the course of a year. But enough of this. I have obtained several subscribers to your paper."

Heaves in Horses.—"A. S.," Lebanon, Cobb county, Georgia, gives us some remarks on heaves in horses. The article which he speaks of having seen in a "miscellaneous newspaper, credited to the Cultivator," we cannot find, though it may have been in some of our preceding volumes.

"A. S." thinks the heaves are usually brought on, in his section of the country, by confining the horses too much on bulky food, such as corn-blades, (cured leaves,) straw, &c., and, especially feeding these articles in a musty, or badly cured state. After having had much experience in feeding horses, he has adopted the following rule, which we quote in his own words:

"My rule is now, for every 24 hours, according to work, from 6 to ten quarts of corn, as near as we can come to it, on the cob, and never more than four sheaves of fodder, averaging 2 lbs. each; and when I am preparing for, or on a journey, on which I expect to drive rapidly, I come down to about four pounds of fodder in 24 hours, and as much corn as the horse can eat clean; and I am not afraid of watering, directly from the plow, on the hotest day, or putting to his feed as soon as I stop on a journey."

"**A Country Typo**," says—"One of your correspondents in your January number, complaining of the neglect of farmer's interests, asserts that they meet too little attention and support from the country press. No doubt the local papers are too much engrossed by politics—but if politicians only support the paper, the editor must be expected to devote himself chiefly to their service. Does your correspondent himself take and pay for a country paper? and do his farming neighbors generally do the same by their local press? If not, he has no cause of complaint. It will be time enough for that when the editor proves unfaithful to the great mass of his patrons and neglectful of their interests. The truth is, that farmers are to blame for not supporting the country press. Let every man who owns a farm, subscribe and pay for the nearest journal, and they will soon have newspapers able and ready to furnish matter to their tastes, and advocate their interests."

Necessity for Inquiry.—Extract from a letter received from A. Wiltse, Esq. Adamsville:—"The farmer has more need than ever, (under the present times,) to ascertain the best means of enriching his soil—the nature and adaptation of the different manures to the different soils—the extent to which labor saving machines can be introduced into his business. In short, to learn how to produce the most and best of every thing, with the least possible expense or labor. How mistaken are farmers in their notions of policy and pretended economy! There are thousands of farmers that might get some useful hints to store their minds with, these long winter evenings, if they would take an agricultural paper. Knowledge, if put in practice, would be a benefit to them in after life, and would increase their power and means of success."

Wages in Derbyshire in the 14th Century.—It is sometimes thought that the condition of the laboring classes in England, is worse in modern times, than it formerly was. The following, which we copy from a late English paper, seems to teach a different view of the case:—"By an act, called the Statute of Labourers, 25th Edw. III., passed in 1351, it is provided, 'That no carter, plowman, day or other servants, shall take in the time of sarcling, or hay-making, but a penny the day; and mowers of meadows for the acre five pence, or by the day fivepence; and reapers of corn in the first week of August, twopence, and the second threepence, and so till the end of August; and less in the country where less was wont to be given, without meat or drink or other courtesy."

NEW PUBLICATIONS.

Report of the Commissioner of Patents.—We are indebted to Hon. H. L. Ellsworth, for a copy of his annual report for the year 1844. The statistical information embraced in this document is varied and extensive; but we have not yet had an opportunity of making a thorough examination of all the articles. From the tabular estimate of the crops for the last year, we gather the following in regard to the total products of the U. States. Whole number of bushels of wheat, 95,607,000; barley, 3,627,000; oats, 172,247,000; rye, 26,450,000; buckwheat. 9,071,000; Indian corn, 421,953,000; potatoes, 99,493,000; hay, (tons,) 17,715,000; flax and hemp, (tons,) 22,800; tobacco, (pounds,) 151,705,000; cotton, 872,107,000; rice, 111,759,000; silk, 396,790; sugar, 201,107,000. We find no estimate of the amount of wool produced last year.

Among the discoveries of the age, the Commissioner mentions the electro-magnetic telegraph, as one of the most brilliant—an invention which he thinks is destined, by the rapidity of transmitting intelligence, to essentially affect the welfare of society.

In regard to the progress of agriculture, it is observed that it has now become a science and study—that "worn out lands that have been as it were, abandoned, are now being reclaimed under scientific treatment. Guess-work and hereditary notions are yielding to analysis, and the application of chemical principles. * * * The prejudice against book-farming, is happily more and more passing away, though there is still too much of it remaining; but compared with some twenty years back, there is a vast deal more information of this kind possessed, than formerly. The consequence is, that as information is more diffused, the minds of the farmers are set in action. Many become contributors to the agricultural journals; and the value of these latter is much heightened by the increased practical bearing they assume, and the extent and variety derived from these sources. A comparison of these papers at the present day, with those published some twenty years since, will show how the science and art of agriculture have advanced in this period."

In regard to *corn-stalk sugar*, the Commissioner observes, "there is every reason to believe that all the difficulties in making good sugar from this vegetable, will be removed," &c.

Among other valuable articles in the appendix to the report, is a communication from Dr. Jackson giving the results of an analysis of several varieties of Indian corn and other grains. The different constituents of the several kinds is quite surprising—some containing a much larger proportion of oil than others. The subject is well worthy of attention, as it has been long known that there is a great difference in the fattening tendency of different kinds of corn.

Medico-Chirurgical Review.—This is unquestionably the most valuable journal of Medicine and Surgery published in this country, and for those belonging to the faculty, we should suppose it must be of great service; indeed, every one whose taste inclines them to study such subjects, could not fail to be benefitted by its perusal. In the number for January, now before us, the publishers inform us that arrangements have been completed, to give their journal a development, that has not been attempted by any journal in Great Britain or elsewhere. "Each number," say they, "will contain three hundred pages of closely printed *Critical Analysis* of all the best works, foreign and domestic; forming a quarterly library of progressive practical Medicine and Surgery. By this arrangement, the profession in this country will be put in possession of the *best* parts of most of the works on Medicine, and the collateral branches, issuing from the European presses"

Published quarterly, by R. & G. S. Wood, *261 Pearl-street, New York.* Terms, $5 per annum, in advance.

Still Another.—We have received the Arkansas Farmer, published by J. Gish, at Little *Rock*, Arkansas, monthly, at one dollar a year. We trust it will be an aid in advancing agriculture in that quarter.

SHEEP IN OHIO.

It is computed that the capital invested in sheep-husbandry in the State of Ohio, is $12,000,000—the number of sheep in 1844, being 3,000,000, requiring 600,000 acres of land for their support. Great numbers of sheep have been slaughtered in this State during the last year. Besides the number killed for market, and domestic use, which is estimated at 200,000, it is stated that there were slaughtered for the pelts, hams and tallow alone, during the last season, at Cleveland, Columbus, Zanesville, and other places, 100,000—making the whole number killed in the State last year, 300,000.

If this statement is correct, and Ohio has furnished her quota of the number of sheep sent during the past year to Illinois, Wisconsin, Iowa, &c., we presume the natural increase would not be equal to the number exported and killed, and that there is a less number now in that State than there was a year ago.

According to the returns for 1840, the number of sheep in the United States was 19,311,374, and the whole amount of their wool, 35,802,114—giving an average of less than *two* pounds to each sheep. The average weight of fleeces in England, is over *four* pounds. The increased weight is to be attributed to the improvement of their breeds, and to superior attention and care in sheep-husbandry.

CHEAP MODE OF REARING HOGS.

The Maine Farmer contains an account of the mode in which Mr. True Remick raised six hogs, which is worthy of attention. It is stated that the pigs were farrowed in May or June, 1843. Four of them belonged to one litter, and the others to two other litters. The first summer they were kept in a close pen, and fed with skimmed milk and boiled potatoes. In the fall they had a run of an acre of pasture ground, and through the succeeding winter they were kept entirely on boiled potatoes. On the first of May last they were turned into the cow-pasture, with rings in their noses. While running in the pasture they had forty bushels of raw potatoes given them, but had no other food till put up to fat. Two of the sows raised pigs—eleven in all. The last of September they were put up, and fed with boiled potatoes and a little milk, but nothing more. The long, red potatoes were the kind used, and it is well known that swine are much more fond of these than any others. The hogs were killed from the 6th to the 28th January last, and their average weight, dressed, 398 pounds—the largest weighed 513 pounds. The account states that the whole six never ate so much as three bushels of meal of any kind. If this account should come to the ears of some of the French chemists and physiologists, what would they afterwards say about there being none of the fat-forming elements in potatoes?

DEFICIENCY IN THE SUPPLY OF PORK FOR 1844.

We are not surprised at the falling off in the amount of pork slaughtered in the west last season. From 1838 to 1841, it is well known that an excitement, amounting almost to a *mania*, prevailed through the country in relation to hogs. Improved breeds were sought after with great avidity, and in many instances very high prices were paid, particularly for Berkshires. The natural consequence of this excitement was, first, that unusual numbers of hogs were reared and fattened, and of course the pork-market was glutted. The unprecedently low prices of pork in the western markets for the years 1841 to '43, proved almost ruinous to those farmers who relied on that article for their chief income. Many farmers were forced to sell their hogs for no more than a dollar and fifty cents per hundred, "dead weight," and in some instances for less. They could not stand such low prices, and hence followed the second result of the former excitement, viz: the raising of but a small number of hogs, and the falling off in the quantity of pork killed in the western country last year. We see it stated in various papers that the amount packed at Cincinnati last year was less by one-third than for the year previous. At St. Louis, it is said, the decrease is still greater; and through the State of Illinois there is said to have been a falling off of from one-third to one-half. In Ohio the falling off was much greater, as we are informed, at the interior slaughtering places, than at Cincinnati. In the Scioto valley, for instance, where the number slaughtered at nine places, in 1843, was 121,800, the number for 1844 is only 48,350.

It seems probable, from present prospects, that pork will command, at least, remunerating prices the coming fall, and those farmers who had the foresight to see this, and have wisely provided themselves with a sufficient stock of a good breed of hogs, will be likely to reap their reward.

Union (Conn.) Ag. Society.—Good Cows.—We have before us a copy of the report of the Executive Committee of this Society, for the last year. It contains many interesting facts. The committee state that there were at the last exhibition, 104 yoke of oxen, which competed for the several awards. In reference to them, the committee say—"The exhibition was certainly creditable to their owners, from the appearance and ready obedience to the word of their driver, without a resort to the cruel infliction of the lash." Among the cows exhibited, there were two very highly commended. One of these, a heifer of two years of age, five months in milk with ordinary grass feed alone, produced 13 lbs. butter from October 9 to 15th inclusive, besides affording to the family 3 pints of new milk per day—the other a 6 year old cow, two months in milk, with grass feed alone, produced in seven days in the month of October 11½ lbs. of butter; in the month of September, the same cow produced 8 lbs. 6 oz. in four days in better feed.

Of horses, the committee speak highly of one, as a farm horse, owned by J. N. Blakeslee, of Watertown. Mr. Blakeslee's Merino sheep are likewise spoken of as a valuable stock. In the department of Farm Products, Butter and Cheeese, and Domestic Manufactures, are spoken of as highly creditable and encouraging.

Osage Orange.—This tree is found wild in Mississippi, Arkansas, &c., where it is said to attain the height of 20 to 25 feet. It has lately received considerable attention as a plant for hedges. It readily adapts itself to the climate of the middle and eastern States, and though not growing so large as in its natural location, it is one of our most beautiful ornamental shrubs. The American Farmer's Encyclopedia gives the following description of it: "It is very branching; each branch being armed with numerous sharp thorns. The wood is remarkably tough and solid. The male and female flowers are on separate trees. The fertile, or female tree, bears fruit abundantly in a very few years. These are round, rough, and greenish-colored, resembling somewhat an orange, and weighing from 12 to 18 ounces, containing from 100 to 250 seeds." The wood is said to be very elastic, being preferred for bows by the Indians to any other. The tree is said to be readily propagated from seed, and its growth is so rapid that it will make a very good hedge in from three to five years.

Number of Kernels in a Bushel of Grain, &c.—Our friend Holmes, of the Maine Farmer, says it has been ascertained by actual counting, that a bushel of

Wheat,	weighing	62	lbs. contained	550,000	ker'ls.
Barley,	"	52¼	"	520,000	"
Oats,	"	32	"	1,200,000	"
Eng. Horse Beans,		64	"	87,000	"
Poplar Pea, (Eng.)		64	"	110,000	"

Dr. Holmes suggests that if we were *sure* that every kernel of wheat which we put into the earth would grow and come to maturity, we could so place them that a small portion of a bushel would be sufficient to plant it. Taking 42,360 square feet for an acre, and dividing each foot into four compartments, and placing a kernel of wheat in the centre of each, Dr. H. says the acre will only require *four-fifths* of a bushel. This is, in effect, the dibbling system of England; and where land is dear and labor cheap, it has its advantages.

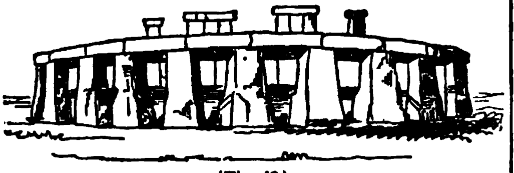
MR. HORSFORD'S LETTERS—No. II.

London, November, 1844.

Mr. Editor—At Blanford, I had the pleasure of looking upon an English Fair. The streets were crowded with little flocks of South Down lambs and yearlings, and flocks of other ages and breeds; little droves of swine, crates of poultry, loads of rakes, brooms, sheep-racks, groups of cows and calves, and indeed almost every kind of thing in the exchange of which, farmers could be engaged. Each pig drover kept his parcel in a compact group by the side of the street, and each shepherd, with the aid of a dog, kept his little flock, varying from a dozen to fifty, distinct from all the others. The sheep were moreover marked and branded, so that they could readily have been separated.

As we drove on from Blanford, gipsey encampments occasionally met our view; a little tent was pitched by the road side, and near it, a small house, upon wheels, which was entered by a ladder. Upon the grass, before the tent, the group of children and older persons, were seated, engaged in the manufacture of brooms, sheep-racks, &c. This most singular people have a physiognomy of their own, as well as a mode of life, and system of laws.

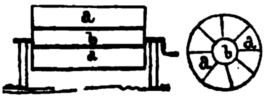
Stone-Henge, to which I think I alluded in my first letter, is about nine miles from Salisbury, in the midst of the *plains*, and very near a number of mounds. It consists of blocks of stone, dispersed in circular form, most of which are now thrown down. The outer circles of columns are surmounted by massive coping, and must have been not less than a hundred feet in diameter. The next inner circle was less complete, and the columns were dispersed upon three sides in pairs. A third inner circle was of columns much less in height, without coping, and far less regularly arranged. Within this, the so called *altar stone*, projects just above the surrounding soil. I subjoin a sketch of what I fancied, from a hasty examination just at evening, the temple once was. At what period in the history of Great Britain, this ancient work served the Druidical priests, remains to be ascertained. It must have been there long before the Christian era, as the Romans seem to have had as little knowledge of its origin, as the race of the present day. Its history is not more obscure, than is all knowledge of the mode of applying mechanical powers, which must have been employed in the transportation of the blocks of stone. Some of them are four by five and a half feet, and not less than twenty-five feet long. They are upon a foundation of chalk, which extends many miles in every direction, and are themselves of an exceedingly hard rock, whose original site, a guide assured me, was in the extreme west of England. A block of similar form, and identical as a mineral, lying in the bed of an intervening stream, favors this opinion. My conjecture on our way thither, from what I had read and heard of the vast size and weight of the masses of stone, was that the temple had been resolved from a gigantic boulder, floated upon Salisbury plain by an iceberg; but not a boulder, not even a pebble, did I see in all the region about. (The little sketch I have given, is from memory, and may be defective in some particulars, though it gives the idea of the circular form that I had not received from engravings.)



(Fig. 42.)

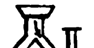
While in London, I had the pleasure of attending a meeting of the Society of Arts. This institution has for one of its objects, the patronage of improvements in arts and manufactures. It has a collection of paintings, and a museum of models, implements of handicraft of numerous kinds—specimens of manufactures, &c. &c. On the evening of my visit, a paper was read by the secretary, upon honey and the habits of the bee. It had been prepared by a gentleman, who I should think was a dealer in honey as well as an apiarian, for there had been brought to illustrate the paper, some twenty varieties of the article, from as many different localities and about as many different latitudes. Some of it was in the comb, and in little hives, boxes, glass vessels, &c., but most of it was in earthen jars. Some of the famed varieties were from the Islands and coast of the Mediterranean, and were impregnated with aromatic scents, said to increase greatly their value. The most expensive kinds were from Narbonne and Minorca. All the jars were passed among the audience of ladies and gentlemen, and tasted by all who cared to do so.

Besides this paper, there was a verbal description of two instruments for keeping wheat and other grain dry, and for exterminating insects. One of them was what may be readily understood, if to illustrate its construction, two wire gauze cylinders of equal length, but of unequal diameter, be placed one within the other, and partitions extending from end to end, be arranged so as to divide the space between into eight equal parts. The ends are closed, with the exception of a circular aperture at one end, in which a winnowing or exhausting wheel is placed; and the whole is mounted upon an axle which is made slowly to revolve. The model was about three feet long; but the instrument would hold, the gentleman who described it said, about 800 qrs. The circulation of air through the grain, was produced by the revolutions of the winnowing wheel, exhausting the interior of the cylinder, and the motion of the grain in the different apartments by slow revolutions of the whole machine. This motion dislodges also the insects. It is called the Grenier Mobile, and I see has been exhibited since, before the Royal Agricultural Society. (The accompanying little diagram will explain the structure—a. a. grain apartments in a gauze enclosure, supported by strong frames. B. the opening within the cylinder.)



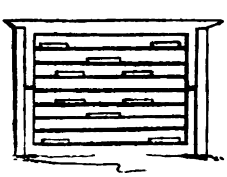
(Fig. 43.)

Another instrument for the same purpose was also exhibited and explained. It consisted of two cones one within the other, standing upon two similarly arranged cylinders. Within the inner one, a fire could be placed, the smoke from which passes out through an escape pipe, while the heat passed through myriads of minute apertures, with which both cylinders and cones are pierced into the grain. The heat expelled all the moisture, and with it, the maggots, it is said. The grain is introduced at the top, and discharged in a cart at the bottom. It can be detained any length of time on its passage, and subjected to as thorough drying as can be required. (The accompanying diagram was sketched while listening to the explanations, and is substantially correct.)



(Fig. 44.)

There was exhibited the same evening, a fixture for drying cheeses. It was a frame filled with shelves at a distance asunder exceeding a little the diameter of the cheeses; and was supported upon an axis. On one side of the shelves, perpendicular strips of board would prevent the cheeses from slipping off. When the cheeses which were disposed alternately on one side and the other, at the top and bottom, to maintain the equilibrium, had remained sufficiently long in one position, the whole frame of shelves was turned through half a revolution; and all of the cheeses were bottom side upwards, resting upon what was before the upper surface.



(Fig. 45.)

There was also exhibited a "Patent for freezing, cooling, preserving and churning apparatus."

This Society, Mr. Petty Vaughan,* whose name is not unknown in America, assured me, had greatly promoted improvements, by encouraging through reports from practical men, the use of such articles, and the adoption of such new suggestions as otherwise might never have been known.

May I not inquire if something of the kind can be incorporated with the State Agricultural Society? Might not the interest and usefulness of the agricultural meetings about to assemble, be greatly increased, if it could be announced in the morning papers, that such and such improvements, or new inventions, would be described, or reports upon some previously examined, be read, at the meeting of that evening? E. N. Horsford.

AURORA AGRICULTURAL INSTITUTE.

Mr. Editor—Agricultural schools are in Europe no longer an experiment. Their success has more than realized public expectation. Their great utility is now there unquestioned, and their commanding public importance acknowledged. In this country public opinion in their favor has been for some years gathering strength. Their utility and eventual success here is, by the well informed generally, not doubted; but their immediate success may not be so certain. Of late much has been said and written upon the subject. The late Judge Buel, in one of his last public addresses, closes some spirited remarks upon that topic by saying: "They should be established—they will be established—and the sooner they are established the better for our country." The same sentiments have been since very frequently uttered by other distinguished agriculturists. All seem anxious to have them established here, and various modes have been suggested. Several attempts have been made to organize an institution on an extensive scale and requiring a large amount of capital. These have all, thus far, failed, as all like attempts will, as we fear, for the present certainly fail—not for the want of well founded claims to public favor, but for the want of that knowledge of those claims which personal observation and experience alone can impart. Such schools are here an experiment, and like all experiments require to be tried with as small an expenditure of funds as practicable. On such a scale the experiment is within the power of individuals; and it now seems obvious that if any early progress is made in their establishment in our State, it must be effected by private enterprise. Some of the plans which have been suggested for a private institution would seem to be feasible and to promise success.

The undersigned, with his associates hereinafter named, have been waiting with some considerable degree of patience the movement of others in the matter. They feel a deep interest in the improvement of the agriculture of the country, and in the early establishment of professional schools devoted to that object. They would not knowingly hazard or delay the future triumph of the enterprise by any movement they might make; but they feel that some practical plan should be adopted, and executed too, without longer delay. And without the knowledge of any similar organization by others, they have themselves made arrangements for the commencement of a school under the above name and title.

The farm upon which the institute is located is situated in and directly adjoining the village of Aurora, on the east bank of Cayuga Lake, in Cayuga county, New-York, sixteen miles from Auburn, by stage, and twelve south from Cayuga Bridge and the Auburn and Rochester railroad, by steamboat in summer. It contains 212 acres, under a good state of cultivation, with good improvements. The soil is various, fruit abundant, and the buildings are sufficiently extensive for the present—part of them nearly new. The farm and dwelling houses front directly on the lake, and are only about 130 rods from the church, academy, and steam-boat landing. The location is considered one of the most desirable of the many beautiful situations on the borders of the lake, commanding an extensive and varied prospect of its waters and of the surrounding country, and is altogether admirably adapted to the end in view. The country adjacent, for a few miles east and along the lake, is believed to be unequalled for beauty and fertility by any section of the same extent in the State.

It is the intention of the undersigned and his associates that this institution shall afford every facility for young men to make themselves thoroughly acquainted with the principles of agricultural science, and their judicious application to practical husbandry; and particularly to afford young men from our large towns the most favorable opportunity for preparing themselves for country life and agricultural pursuits. In connection with lectures and recitations upon the different branches of natural science connected with agriculture and horticulture, regular labor in the field will be required, and there all principles involved will be explained and impressed upon the mind. It is also their intention to commence a course of experiments, in order to test the correctness of those principles in agriculture which may be now generally received, but are not yet well established.

The undersigned will have the general superintendence and management of the institution. He will receive its members into his family, and keep them under his immediate supervision and charge. Particular regard will also by him be had for their mental culture. A suitable person and competent farmer will be employed to superintend the field operations during his necessary absence therefrom.

Dr. Alexander Thompson, of this village, (a gentleman, in the judgment of Mr. David Thomas, every way competent,) will have the particular charge of the scientific department. Instruction in botany, geology, and agricultural chemistry will receive his particular attention.

Mr. David Thomas, who resides in the vicinity, will visit the institution and promote its object and design, by such advice and information as his well known scientific attainments, and long experience in practical agriculture and horticulture, will enable him to impart.

Terms $150 a year, payable quarterly in advance. No person under fourteen years of age will, as a general rule, will be received. Charles C. Young.

Aurora, March 12, 1845.

The publication of the above from Mr. Young, supersedes the necessity of publishing, at length, a letter we have received from B. P. Johnson, Esq., President of the N. Y. S. Ag. Soc'y, on the same subject. Mr. J. says —"From my acquaintance with Mr. Young, I am satisfied that he is fully competent to manage an institution of this kind, combining scientific with practical agriculture. The gentlemen associated with him are well known to the public, especially Mr. Thomas, who will aid and advise the principal in the management of his institution. I am much gratified that an experiment is about to be made to give instruction to our young men, many of whom, it is believed, will avail themselves of the advantages of this institution. Ten or twelve young men can yet be received at the institution this spring."

CUTTING TIMBER.

In cutting timber for farm buildings and other purposes, it often becomes requisite to know the height of the trees, more particularly of the straight part of the trunks or such as will do for single straight sticks of timber. Take a ten foot pole, (or one of any other known length,) and measure off the required distance from the tree, and make a mark on the ground. Then measure back the length of the pole towards the tree, let a second person hold it perpendicularly, place the eye at the mark on the ground, and ranging with the top of the pole towards the tree, of the top if the pole strikes above the straight part of the trunk, the stick of timber will be too short; if at or below the first crook, it will be long enough. A simpler, but somewhat less accurate way, is to take a stick just long enough to reach from the ground up to the observer's eye, who then paces the required distance from the tree, throws himself on his back, looking towards the tree, while a second person holds the stick upright at his feet, and he makes his observations as just stated.

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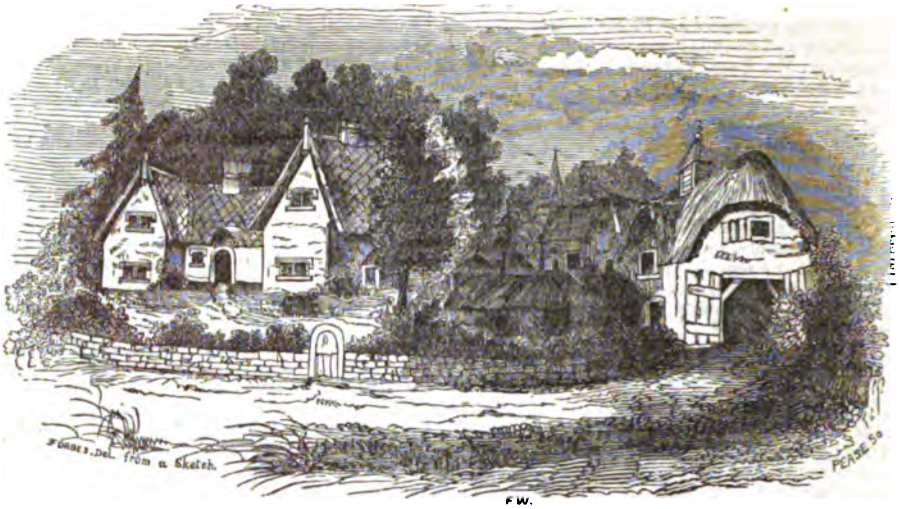
* Mr Petty Vaughan, is a son of the late much respected Benjamin Vaughan, Esq. of Hallowell, Maine.—Ed.


FORBES. Del. from a Sketch.
PEASE Sc.
F W.

ENGLISH FARM HOUSE AND OUT-BUILDINGS—(Fig. 38.)

(Drawn and Engraved for "The Cultivator.")

MR. MITCHELL'S LETTERS—NO. IV.

Liverpool, Eng., 4th Jan 1845.

LUTHER TUCKER, ESQ.—I send you with this, as promised, a little sketch which will give you a general idea of an English farm house and out buildings. The air of neatness which prevails about every country house I have seen, and which travelers universally remark upon, cannot be represented in such a sketch, much less by so poor a sketcher. Yet I am assured that the farm houses of Lancashire compare unfavorably with those of almost any county in England. Still there is a soberness, a quietness, a tastefulness, a rurality, and a home-look about nearly all I have seen, which once grafted upon the country houses in America, will go far toward making our landscapes equal to English in beauty. The roofs are in most instances in this country, slated; some are covered with tiles baked in the same manner with brick, and formed with a lip turning down upon the upper and under side, so as to hang upon the lathes which run horizontally. Thus the whole roof is laid without nailing. Others still are thatched; the thatch requiring renewal every five or six years. The extreme verge of the gable is generally covered with a tier of heavy stones clamped to each other. Every thing in England is arranged for permanence. Calculations in house building, in fence building and in draining, as in other matters, are made with a view not of one, or two or half a dozen years, but of a century. The barns and out buildings are invariably placed near the dwellings: indeed, not unfrequently the same roof covers both the farmer and his herd. Nor is this connection, from the peculiar structure of the dwelling, rendered disagreeable. I have not yet seen such a diversity of plans, nor so good a system of arrangement, as a whole, as to wish to make full communication of the order observed. I hope yet to have a glimpse of, and wander among the best farmers and farms of England. I give you the general course of cropping in the best regulated farms in this vicinity—Sandy land, Dairy Farm.

1st. *Oats* on grass ley. Plow in February; sow in March; heavy harrowed—light do. and rolled if dry.

2d. *Wheat.*—Plowed in October.

3d. *Swedish Turneps or Potatoes* in drills. Drawn in November; tops fed to milch cows; roots pitted for horses, cows and sheep.

4th. *Wheat or Barley,* with clover or rye grass—remains in grass 4 or 5 years.

On clayey lands—1st. *Wheat* on grass ley. 2d. *Oats.* 3d. *Fallow.* 4th. *Wheat.* 5th. *Clover,* and pastured 4 or 5 years.

The cattle are not superior in this region; some fine dairies of improved short horns. Though I am assured, that over the river in Cheshire—the great cheese county—Short Horns are not thought well of for milkers; where they have Ayrshires, Devons, Welsh and Irish. Scotch, Welsh, Irish, and some Yorkshire and Holderness are fed for fattening. For sheep, the prevailing *choice* stock is South Down and Leicester. Swine are many of them Irish; on the Cheshire side are a cross of the old long bodied with Berkshire and Leicester, or China and Neapolitan. The latter are considered too light and delicate for general favor. To fatten, they are put up early in the spring; 12 months pigs, to feed on offal of dairy, (one to five cows.) Nothing more given for three months; after this, potatoes and some barley meal. Weight, 10 to 14 score. Sows farrow twice a year, in February and August. Young stock is raised (on dairy farms in Cheshire,) 5 to 20 cows—those dropped in March. The food is a half pound of meal in a tub, with scalding water, or whey poured to it, well stirred; skimmed milk added; given till midsummer; then weaned, well pastured, well wintered with hay, bruised oats and turneps; turned to feed in April. Implements are various; perhaps fewer of the improved kinds in this, than in any other county. I send you two or three sheets of cuts with price attached. Tiles for draining are in most general favor; 1,000,000 a year are made upon the Marquis of Westminster's estate alone.

American apples still have a good sale; you will notice in rates given below, their value as compared with English. The English apples, such as I have seen, are small and without flavor. Good pears are in the market, but all from over sea. The "Underhill" apple brand (American) appears to be the favorite one in this part, doubtless from the good state of preservation in which they open. They are, I think, from near Sing-Sing. American cheese is plenty in the markets. Every ship from New-York or Philadelphia, brings a quantity. Its treatment upon the docks under custom officers, is most severe. The boxes or casks in which they are stowed, being knocked to pieces; if they open easily, (packers must take the hint) well; if not, they must come open—no gross weight being allowed. After weighing—one by one—they are tumbled upon the dirty dock from the scale, for the carman to replace in box or cask as he best knows how. I have seen many fine cheeses ruined under this treatment. The sale of American beef is in the cutting; this cannot be told too often; specially *is it so* in the London market, where inspection is most searching. I should have mentioned in my last, that the tax on beef and pork, for cask and pickle, is almost invariably one-third part; for canvass wrappers of hams, 8 oz. each. Tallow, 12 per cent.

I give you the ordinary retail prices of provisions *from* the market houses of Liverpool, that farmers at home may compare notes with the British farmer. In some subsequent letter I will give you a list of all the taxes to which the English farmer is subject, that so the comparison of situations may be more complete, and a still higher satisfaction, as I do not doubt it must rest with our countrymen. The duties on coffee and tea are enormous; on the first, 15 cents a pound! on tea, 45 cents! The price of

A goose in market, -	88 to $1 00	Cabbage, per head, -	02 to 04
Fowls per pair, [light,]	60 to 80	Celery, per root, - - -	04 to 08
Turkey, - - - - - - - -	$1 to $1.75	American wild ducks,	$1 to $1,25
Hare, (w't of 2 rabbits)	50 to $1.00	Apples, (Eng.)	30 for 22
Beef, per pound, - - -	14 to 20	" (Am.)	14 for 22
Mutton, " - - -	12 to 14	Cheese, (Stilton,) lb. -	25 to 30
Pork, " - - -	12 to 14	" (Cheshire,) " -	20 to 28
Veal, " - - -	12 to 14	" (American,) lb.	14 to 16
Potatoes, per bushel, -	40 to 50		

In my next, I will give you an epitome of such agricultural glimpses as can be taken in a *day's run* through England from Liverpool to Gravesend. After which, and until spring opens (with me,) look for a chapter or two about the pruning hooks and vineyards of France. Yours, &c.

D. G. Mitchell.

MR. NORTON'S LETTERS—No. IX.

Lab. of Ag. Chemistry Association,
Edinburgh, Jan. 21, 1845.

L. Tucker, Esq.—As I have now been long enough here to form an opinion as to the usefulness, and to become acquainted with the operations of the Agricultural Chemistry Association of Scotland, it has occurred to me that a sketch of its history, constitution and present prospects, may interest your readers, the more so as I perceive that the American papers teem with plans for the promotion of the great object of connecting science with agriculture.

Desirous, as an American, to share the benefits of this Association, even more fully than I am able to do in its Laboratory, by attendance upon the meetings of the subscribers, I have enrolled my name among its list of members, and a few days since had the pleasure of attending the second semi-annual meeting, being at the close of the first year of its existence.

The Association took its rise, and this cannot be too strongly urged in its favor, from tenant farmers chiefly; shrewd, practical men, who conceived this plan as most likely to promote, in its direct application to their interests, that science which they felt had become necessary to them.

The two leading objects proposed, were the diffusion of existing information, theoretical and practical; and the enlargement of our present knowledge. For the carrying out of these designs, Prof. Johnston was selected, and having received the appointment of Chemist to the Association, has been for eight months of the past year actively engaged in the prosecution of the arduous duties which devolved upon him.

In the prosecution of the first object, he has delivered no less than fifty-three lectures in nearly every part of Scotland, some of which I have sketched in previous letters. They have been eminently successful, and have awakened much interest in every instance; no less than eight or nine agricultural periodicals have sprung up at various points, as the visible first fruits of success. Private lecturers are also busy in many places following up his teaching, or supplying his place in localities which he has not yet visited. The school-masters too, are aroused, and are many of them actively engaged in the same work, so that the effects of his visits are likely to be permanent.

In this Laboratory, three assistants have been at work, nearly ten hours daily, through the year. Analyses are performed for subscribers, at certain fixed and very low rates, so low indeed as not by any means to repay the expense of the operations. Of the great privilege thus placed within their reach, the Scottish farmers have not been backward in availing themselves. The report says, that no fewer than 384 analyses have been made during the past year; the subjects as follows:

Soils, ...	134	Marls and Limestones,......	27
Guanos,......................	122	Potatoes and other vegetable products,..................	9
Ashes of Plants,............	25	Miscellaneous, ...	37
Oil Cakes,....	4		
Waters, ...	26		

The mere reading of this list shows that from the very large amount of work performed, much information and many useful results must have been obtained. With most of the analyses, letters of advice have been sent, and with some of them, elaborate reports. Among some of the more strictly practical points upon which light has been thrown, it may be mentioned that analysis has shown striking differences in the chemical constitution of turneps raised by dung and by guano. In consequence of this, experiments upon their feeding properties have been made, and the result so far, seems to indicate the superiority of those raised by dung. Oats have been found to yield in larger quantity than any grain used for food in this country, those ingredients which furnish muscle to animals.

The quantity of these ingredients in turneps, is under investigation, and it has been already ascertained, that they equal in this respect, 1-30th or 1-4th of their weight of wheat or barley. A variety of rocks have been analysed, with a view to the determination of the quantity of lime contained. The Trap rocks have been found uniformly to contain a very considerable proportion, while the clay slates scarcely contain any. These facts show that we may expect a decided difference in the quality of soil resulting from the decomposition of the two rocks.

These instances show the nature and utility of such researches, and they will I think, give your readers an idea of the sphere embraced by the labors of the Association. But analysis is not all; a very onerous portion of Prof. Johnston's duties has been the answering of questions upon practical and scientific points, for many of the farmers have commenced *thinking*, and propound queries which often touch upon the very verge of our present knowledge, and sometimes go beyond it, opening new fields of most difficult investigation.

I think that this institution may safely be said to have realised the expectations of its projectors. They were most fortunate in the selection of Prof. Johnston for the office which he has filled so well, and to which his energies have been so zealously devoted. By the co-operation of his scientific researches with the practical experience of the farmer, great advances have been made already, and a spirit awakened which will bring forth in all probability, still more remarkable results.

The Scottish farmers, thus have the credit of being the first to establish an institution purely for the purpose of applying chemistry to their profession; so far it has been successful, but remarkable as that success has been, it only opens the way to vast fields for research, yet untrodden. It has shown however, what may be done by united effort, by skill and perseverance, and I would in that light, recommend it to the notice of my countrymen, not that I would consider it absolutely necessary for us to found institutions constituted in exactly such a manner; the form is comparatively unimportant, it is the *conviction* and the *spirit*, that are indispensable.

I may suggest, however, that in the formation of agricultural colleges on an extended scale, such as now seem to be projected in our country, with each should be connected a branch for the pursuit of *chemistry* as connected with agriculture, and for the dissemination of knowledge on that subject. Only by means of such institutions can rapid progress be made, and until they are established the great mass of farmers will be unable fully to profit by the knowledge we already possess.

Our country opens a noble field for improvement, and I hope that we begin to perceive it. Other nations have commenced the work before us, but when our farmers arouse, and apply that American enterprise and perseverance which has outstripped the old world in the paths of commerce, we shall have no cause to blush at our deficiency, nor at the share that we shall take in completing one of the leading desiderata of our time, a system of scientific agriculture. Very truly yours,

John P. Norton.

Look to your bees and poultry.

EXPERIMENTS.

Sowing Indian Peas broadcast.—Several times in my life, I have plowed in seed peas, broad cast, to be used either for crop, manuring or sheep pasture. The quantity to the acre, according to the quality of the land, from one to two bushels. One who has surplus peas, and ground too poor to grow clover, may do well to sow them for improvement; but as they make superior pasturage for sheep, perhaps one may afford to buy seed for such purpose, even on poor land. The Indian pea yields well on poor land, (cold clays excepted,) and abundantly on ordinary; but on rich ground, a heavy crop of vines, but no peas. When sowed sufficiently thick, broad cast, the raising kind of this pea stands well for mowing.

Pumpkins and Cimlins in corn field.—It is folly to plant either pumpkins or cimlins in any other than rich land, and such, if properly seeded with corn, will produce with us, by the middle of July, a corn crop sufficiently luxuriant to smother every vine, pea, turnep, weed and grass. Whatever a corn field, properly planted, may yield in addition to corn, is just so much substracted from the corn.

Oat and Orchard Grass pasture.—Three years past, I sowed 8 or nine acres in oats and orchard grass. These acres lay in detached spots, and all within a pasture inclosure of about 200 acres; and which, not being fenced separately, was grazed closely from the beginning to this present time. The oats made an excellent pasture a good portion of the first year; and the orchard grass, where the land is rich, has made a good pasture ever since. New land of medium quality, will produce orchard grass very well, provided the soil is retained on the surface, to do which the coulter should be used to put in the seed.

Irrigation.—Seeing the many and great advantages arising from casting water on lands or crops, I am surprised and mortified to see so little of it done in my neighborhood, yea, and my country.

Arthur Young, in his Travels in Spain, says that "in the midst of an arid, wretched desert, he came to a spring which was immediately conducted into a reservoir, and thence used to irrigate maize, hemp, cabbages, and beans, which were all fine: As soon as the land is sown, it is watered, and periodically till the plants are up; moderately, while they are young, but every day and sometimes twice a day, when full grown. The effect is surprising, and infinitely exceeds that of the richest manure that can be spread on any land."

I can turn a creek on a portion of my bottom lands at pleasure, and have ascertained its effects on the following vegetables. Moderate irrigation improves rye at any stage of its growth, but there is danger of its rusting. When corn is in silk and tassel, it will grow and thrive wonderfully in mud the balance of its days. Irish potatoes and cabbages like frequent flashings, but as the cabbage should be worked often and during the whole summer, the farmer should calculate accordingly. Red clover likes a wetting, and white clover likes many. Profuse irrigation does not suit oats, peas, artichokes, pumpkins and cimlins; and will rot all the lower end of carrots, parsneps, beets, radishes, turneps, &c. Irrigation in the slightest degree does not suit tobacco or wheat, and to excess, is destructive.

Every person will of course know that casting water on a crop is useless labor when there is abundance of rain and consequently, the hotter and dryer the climate, the more necessity for irrigation. I wish some one, owning a few hundred acres of poor sandy land, which could command water sufficient for its irrigation, would exchange with me for as many acres of the richest kind of mountain land. Or if he will not do this, I wish he would go about its improvement, and let me know the result.

To kill wire worms and cut worms.—I have never been pestered with worms of any kind in my corn. when the land has been thoroughly plowed in winter; but have always suffered on rich ground, when this has been neglected.

Early planting and sowing.—The earlier we plant or sow spring crops, the better, provided they are not in danger of being frosted; and the earlier we sow wheat and rye, the better, provided they are not in danger of premature heading. The objects and advantages of early seeding in both cases are the same, viz: 1st, less labor and risk—2d, earlier maturity—3d, fewer weeds and grass to contend with—4th, less exhaustion of the soil by evaporation, because of the timely shelter afforded the earth—5th, a lower and stouter vegetable.

Manuring in advance.—The greater portion of my manures are spread broad cast on the surface one or two years in advance of a crop; and the ground generally not grazed. If any person can do better, let him go about it.

Ditch Mould.—I am now engaged carting on my meadow about 200 loads of mould, taken from a reservoir about 15 months past. It is black, rich and friable, and perhaps worth as much as so many loads of dung; particularly on that portion of my meadow on which it is spread, it being a red stiff clay. The ditch or reservoir is now filling again by means of a small stream, which is made to run out at either end at will.

Amherst, Va., Feb. 1845. Za. Drummond.

THE VALUE OF THE SCOTCH LARCH IN ARTIFICIAL PLANTATIONS.

Mr. Editor—One of your correspondents in the October number of your interesting journal, seems desirous of some information as to the adaptation of this valuable tree to our country, and also as to the distinguishing difference in the natural habit of growth, quality of wood, &c. between the foreign and the native species, more commonly known as the "Hackmatack."

Having paid considerable attention to the Scotch Larch, and imported some thousands for the purpose of ornamental plantations, I am happy that it is in my power to communicate some observations respecting this comparatively rare tree, that may not prove uninteresting.

Since the decline of the oak in England, from the vast inroads made in these once noble forests for the purpose of ship-building, the Larch may now be considered as the great timber tree not only of that country, but of Europe; and if it does not entirely and eventually supersede the oak, it will at best give it that breathing space that it so much requires to again equal those specimens of which so few, alas, now remain.

The European Larch, claims its birth among the Alps and Appenines; there its great hardihood causes it to flourish, where no other tree can survive; hanging over rocks and precipices, which have never been visited by mortal foot, it assumes that wildness that renders it invaluable as a picturesque tree. Strabo speaks of Larches of a very great size; many of them he says would measure eight feet in diameter, and at this day even, masts of larch from 100 to 110 and 120 feet in length, have been floated down the Valois through the lake of Geneva and down the Rhone to Toulon for the French dock yards. In the Memoirs of the Royal Society of Paris for the year 1787, there is an Essay by the President, M. De La Tom D'Aigue, on the culture of the Larch, in which it is celebrated as one of the most useful of timber trees; he tells us that he has in his own garden, rails that were put up partly of oak and partly of larch, in 1743. The former he says have yielded to time, while the latter are uninjured. Experiments to test the durability of this wood, have also been made within a more recent date in the river Thames; posts of equal thickness and strength, some of oak and some of larch, were driven down in the river, where they were alternately covered by the tide, and there left to dry by its fall; this species of alternation being of course the most trying to timber, and accordingly the oak posts decayed, and were twice renewed during a few years, while those of larch remained altogether unchanged; a particular advantage this tree possesses for naval architecture, is that the wood is almost indestructible by fire, and not liable to splinter in engagements. It is also valuable to the cabinet maker, as besides its great clearness and hardness, it is susceptible of so fine a polish as to be almost transparent, and may in this state be wrought into the most beautiful wainscot. Before the use of canvass became general by the old masters, it was much used to paint on; and many of Raphael's picures are painted on pannels of larch.

The superiority of the foreign over our native varieties, consists principally in the great rapidity of its growth, and its power of adaptation to the poorest soil; while the American larch is properly a swamp tree, and grows but indifferently in any soil not naturally moist and humid; the foreign, on the contrary, will grow in any soil or situation, no matter how meagre or bleak, and is therefore admirably adapted to plant upon our mountains and barren lands that are valueless for other purposes, since, in addition to its rapid growth, it possesses the peculiar property like the locust of manufacturing a soil as it increases, from the annual decomposition of its leaflets; thus we find in the extensive larch plantations of the Duke of Athol, that land not worth one shilling sterling per acre, before the larch was planted, became worth eight to ten shillings sterling per acre after the first thirty years, when all the thinnings were completed, and the trees left for naval purposes, at the rate of 6s., four hundred to the acre, and twelve feet apart.

The larch, as I before remarked, is a very quick grower, comparing, and in fact exceeding the poplar, and our most rapid growing trees. The anecdote is, I believe well known, of the Duke of Athol seeing a British frigate built in 1819, at Woolwich, of timber planted at Blair and Dunkeld by himself and the Duke, his predecessor. I have myself, trees that eighteen months ago were growing in England, that have made shoots of over five feet this season.

As regards the difference of appearance between the two species, as to foliage, habits, &c., I confess that to my taste, there is hardly a comparison; the foliage of the native sort is a bluish green, and though perhaps more delicate than the foreign, yet this is more than compensated by the picturesque and infinitely beautiful manner in which full grown trees feather to the ground—the American larch being more rigid and stiff, and possessing little of that graceful and pendulous manner which so distinguishes the foreign tree.

After these remarks, I cannot too warmly recommend the extensive introduction of the Scotch larch among us both for ornament and profit; when judiciously treated, nothing adds so much to the spirit or charm of artificial plantations, as this striking and picturesque tree, and for purposes of profit, it possesses all the valuable properties of the locust, while it exceeds it in durability and rapidity of growth, besides being less fastidious in the soil it requires, and I cannot therefore suggest a better appropriation of the many acres of the rocky, mountainous and barren land which exists among us, than plantations of larch. They can be imported into this country at a cost of less than two cents per tree of three feet high; and for extensive plantations, trees of one-third the cost and size would do better; and when we consider the lightning rapidity with which our primeval forests are disappearing under the axe of the *improver*, does it not become the duty of every prudent farmer and land-holder to ask himself, how are we to meet hereafter the deficiency in timber? I would answer, plant larch. You can at least emulate the Long Island farmer, who portioned off his children from his locust grove, planted on his marriage.

You may even do more with the larch, than he did with the locust; for your descendants may, in course of time, verify the saying of the Romans, "That a post of larch will outlive a pillar of iron."

By a careful comparison of the value for ship building, of the oak and larch, made in the government plantations in England it would appear that a larch of 50 years, produced as much available timber, as an oak of 100.

Fishkill Landing, Feb. 11, 1845.

AGRICULTURAL MEETINGS.

Mr. Editor—The weekly agricultural meetings at the Capital, are attracting much attention among farmers. The proceedings are read with great interest, and the inquiry is often made why the editors of country papers do not more frequently publish them. It will not however, be delayed much longer. The interest of the publishers will lead them to furnish such intelligence as the public require.

I was much pleased in reading the discussion at the sixth meeting, on the subject of *manures*. Having had some experience in top dressing grass lands with animal manure, and as the results were different from the views of my esteemed friend Bement, I will give you a brief statement. A few years since, having a piece of meadow land which produced very light grass, and being so situated that I could not plow it up, I determined to give it a good top dressing of stable manure. I drew on and spread early in the spring, about twenty loads to the acre. My workman was very sceptical as to the experiment, and said that there would be no grass. The same man, when the piece was mowed, became a convert to this method of improving the meadow. The crop was more than doubled, and the effects for three successive years, were most manifest.

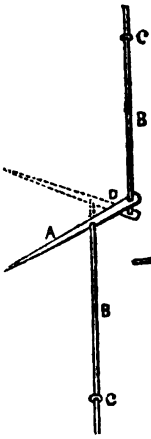
We want many carefully made experiments on the subject of the proper application of manures, especially those from the yard of the farmer. Upon these, we are mainly in this country to rely, and the investigations which are making, will, I trust, lead to the establishment of some general principles, that will materially aid in the application of manures.

I am preparing another piece of land the present season, in the same manner as the one alluded to, and should my life be spared, I shall give the result to the readers of the Cultivator. B. P. Johnson.

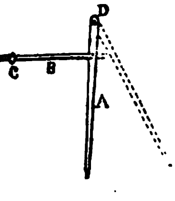
Rome, March, 1845.

BARN-DOOR FASTENINGS.

Mr. Editor—I have some barn-door fastenings of my own invention, which I find the most convenient of any I have seen, a description of which I forward you.



[Fig. 40]



[Fig. 41.]

A. (fig. 40,) handle, eighteen inches long, made of one-horse waggon tire, tapered to one-third its width, with three holes punched through the wide end, two inches apart.

B. B. two bolts, of three-quarter inch round iron, attached to the handle, either by splitting the end, or by a rivet.

C. C. two eyes, with screws or staples driven thro' the door at the top and bottom, thro' which the bolts pass to guide them to their proper places.

D. screw-bolt, which fastens the whole to the middle rail of the door frame, and passing through the middle hole of the handle; which I find is all that is necessary in the middle, without any guides but the ones at the bottom and top of the door.

The opposite door I fasten by a bolt on a different principle from any I have seen. Annexed you have a drawing, (fig. 41,) but you will perceive that some other fastening will be required if you wish to open the door from the outside; but with me it is necessary to keep my barn locked; but with those who use a latch, I think if they will try my double bolt fastenings, they would not willingly be deprived of them.

A. (fig. 41,) handle fastened to the middle rail of the door, by a screw-bolt at D.

B. Bolt, one foot long, of half inch iron.

C. eye or staple, through which the bolt passes.

The dotted lines show the position of the handle when the bolt is drawn. Franklin County.

NOTES OF TRAVEL IN THE WEST—No. II.

BY SOLON ROBINSON.

My Dear Readers—The violent snow storm that drove us into quarters last night, like violence of all kinds, soon spent itself, and having given place to a clear cold day, seat yourselves by my side, and we will roll away to the south, and notwithstanding that the wind is "dead ahead," and blowing a fine fresh breeze, we shall beat up against it with ease, though not with so much comfort as you might desire. The first dozen miles, you may observe, after leaving the grove of fine timber on our right, is too level and "wettish" to be desirable. But here we come to the beautiful village of Tremont, (the county seat of Tazewell,) with its handsome court-house and church; but what interests us more, is to see that the sons of New-England, who settled and still flourish here, so far departed from the fashion of this country, that they have given wide streets and large building lots, many of the occupants of which have still farther departed from fashion, as we can plainly see by the multitude of shade and fruit trees that surround and beautify their dwellings. We will not call, though tempting signs hang out, for we are told that notwithstanding the beauty of the place, old King Alcohol, here holds undisputed sway. If this, "an o'er true tale" should be, I hope the Tremontonians will rouse themselves to break the tyrant's rule.

In the valley of a stream called Mackinaw, that winds through broken sandy hills of stunted timber growth, we witness the first marks of that great flood that desolated thousands of western acres. The little cabin is alone standing; all else is swept away. As we rise again upon the 25 mile wide prairie, which our road lies across, we see five miles ahead, a most enormous frame house, which was built, (all but putting together,) in Rhode Island, and now stands a monument of a bad speculation, towering its three or four stories far above the half dozen little tenements below, that rise from the town of Delavan, a name that sounds familiar in the ears of all teetotalers.

This town was projected for a "colony;" whether it was a part of the project that the colonists should live without wood, I am not informed, but certes there is but little in sight, and that little far away to the west, while eastward lies untold miles of prairie, and southward along our road a long 12 miles will bring us to an only house, with just about timber enough to fill an old fashion New-England fire-place, but for eight miles more, there is no one to claim a share of this poor pittance of fuel or interfere with this ocean of prairie. To day we cross several creeks that would be good mill-streams, but unfortunately there is neither fall or good banks. The bridges are dilapidated by the high water and natural quick decay of timber in a damp climate, and the roads such as nature made them, with but little labor from this non-road-working community. The night we'll spend at what is somewhat rare, a comfortable country inn, at a small specimen of a village called Middletown, so called perhaps because like many others, it is in the middle of a middling sized prairie, 20 miles north of Springfield, the capitol of the Sucker State. From whatever cause this name for the State originated, I doubt not that many who have been "suck'd in" by the private speculations of individuals, as well as by the wild projects of internal improvement that have suck'd in so many millions of dollars, will think the name an appropriate one.

Indications of a change of soil are visible to day. The timber is such as is commonly found on the alluvial bottom lands of the west. Maple, elm, black-walnut, ash and buckeye, interspersed with oak, the prevailing timber further north. And a still greater indication shows by the absence of barns and other "yankee fixings," that show the yankee thrift of character, that a population of corn-growing, hog-feeding, corn-bread and bacon-eating southerners are in the majority in this latitude. Our eastern built carriage, with two wheels in the rut upon one side, while the other two are jolting upon a rough ridge, tells us that we are in a country of "wide track wagons," driven with the "single line" as we see, by a teamster seated upon one of the horses. And why should it be different? Did not their father's so drive before them!!

In the bluff of the Sangamon river, (5 miles from Springfield,) which is here a good mill stream, and so used, where it has been dug out to form a road to a fine new bridge, we see the rock in every state of formation, between soft clay and hard limestone. From the river to near the town, the road lies over a tract of very poor sandy hills, full of gulleys and covered with brush, that probably never will again be worth as much money as it was valued at a few years ago, when Springfield was "going to be" a London or Pekin, in the eyes of men, that in counting dollars, discarded all figures below millions.

Now, on this 12th day of January, 1845, at Springfield, the capital of the State of Illinois, it is a mild sunny day, more like May than midwinter, and a drouth prevailing like midsummer. In fact, it was so dry last fall, that not half the seed sown grew, and many of the wheat fields look as bare as naked fallow. Whether it will grow in spring, is yet to be proven. My opinion is, that it would be good policy to sow it now with a seeding of spring wheat. Many of the corn-fields that I have passed, bear ready evidence of the prevailing rains of the spring and early part of summer. In some of the fields, on flat prairie, the crop was not worth gathering, while in others of drier soil or more rolling land, the crop was a good one for this country of untold richness of soil, say 30 bushels to the acre; and even that in many instances we see still in the field, for such is western farming.

Now curiosity may perhaps inquire for a description of this capitol. If I give one, it must be of briefer space than the scattering town of 3 or 4.000 inhabitants, who mostly occupy poor buildings, upon small, dirty, treeless, grassless, gardenless lots, upon long unpaved level streets, which are never very muddy, unless more than knee deep; which it is not improbable they should be, as the town is upon a wide plain of soft loamy soil, with no outlet for accumulating water, unless sent off "by the rail-road," which is so thoroughly out of repair at this time, that that would prove a poor sewer, except of the people's pockets.

This rail-road, from hence to Meradosia (65 miles) on the Illinois river, is another of the links of that endless chain that was to bind the State in love together, but has bound them in debt forever. It is already so dilapidated that mules have been substituted for locomotives, and as it fails to pay expenses, it must shortly go out of use for want of repair.

Another monument of by-gone Illinois riches, is the unfinished ill constructed State-house, built of cut stone, of a hard sandy limestone quality, at an expense of a quarter of a million of dollars. It is 90 by 120 feet, of two extremely high stories above the basement, (which is useless on account of dampness;) and contains a hall for the 120 members that represent the 99 counties of the State, a Senate of 41 members, and a Supreme Court of 9 judges, which by some is thought to be supremely ridiculous; a very large library room with very few books, except Illinois laws, and office rooms for Secretary and Treasurer of an empty treasury, but is almost totally lacking in what is most wanted, rooms for committees. The masses of stone and half finished columns that lie around, the unhung doors and unplastered rooms, show that the work was suddenly checked at a point that shows the whole work was done upon "borrowed capital."

Of the members of the house I shall say nothing, except to beg you as you look upon and listen to them, not to consider them as a body, although large, a fair sample of the moral worth and intelligence of the inhabitants of the State. The appearance of the Senatorial body is highly respectable, and is presided over by one of the best presiding officers I ever saw; Col. Mattison, a Senator from Juliet, whose woolen factory I mentioned, I met with here, and owe to him my warmest thanks for every effort in his power extended cordially to me to further the object of my mission. I also was treated with great respect by many other Senators and representatives, who seemed fully to appreciate the benefits that would accrue to the agricultural community, if they could be induced to read good agricultural papers, and to talk, think and act upon the business of their every day life. I spent three days amid this congregated wisdom of Illinois, from which I hope some good may arise; and should have held a public meeting to talk to the few farmers in the Legislature, but I found that self-interest, party tactics, and Mormonism, so completely absorbed every other interest, that such plain common sense matter as improvement in agricultural pursuits, had no possible chance in such an excited community. Our friend Wright of the Prairie Farmer, was also at Springfield, engaged in a noble effort to get an improvement in the present very defective common school law of Illinois. An uphill business—reminds me something about casting pearls before a certain kind of animals.

There are a few good buildings in the "city," one of which is the defunct State bank, built of the same material as the State house, from a quarry about 8 miles distant—also a stone church. There is a large plow manufactory here, which makes about 2,000 a year, with wrought iron mould-boards, which are not equal however to those made wholly of steel at Chicago. There are two furnaces for small castings, that use iron from Tennessee, and coal to melt it with from Philadelphia; the coal of Illinois, which is abundant within a few miles, not being fit for that purpose.

This is an old and rich country, with good soil and timber, yet there is a great deal of uncultivated land. There are some orchards, but as the country has not been settled more than 20 or 25 years, people must be excused for not having fruit, as it takes a great many years to get that, when there are no trees set out.

As an evidence of the rapid growth of timber, I was told of one 80 acre lot that was cut off nine years ago, and will now afford fifteen cords to the acre, mostly oak. This kind of wood is worth about $1,25 a cord in Springfield. Wheat here, as well as all along the road from Ottawa, is worth about 50 cts., corn 20 cts., oats 15 cts. And every where through this part of the State, there is one universal cry of no money, and very poor crops for two years past, which I can readily believe, and will also add that they will be so for two years to come; for no system of farming like that almost universally followed here, will ever afford the farmer good crops. Although he may raise a great many bushels of corn, and keep a great many poor hogs, horses and cattle to eat it all up in the winter, which they must do for lack of any other kind of feed, he will still cry "no money;" and still go on in the same way, for he will not inform himself of a better system. His rotation of crops is corn, weeds, hogs, mud and corn. His reading, if indeed he happen to be one who reads at all, consists of a very brief insight of one book, and one well con'd paper of the one party in whom he places all faith. In such a community, better informed men are out of place, and all their innovations looked upon with jealousy, and their better success from better management, with envy.

On the morning of Jan. 16th, I intended to leave Springfield, but was detained by a thunder shower till evening, when I drove out on the St. Louis road over wet, uncultivated prairie, 5 miles to "Lick creek timber," an excellent body of good land, good farms and fine timber.

Notwithstanding this is an old county, that is old for this young country, there is an abundance of uncultivated land, and that too within gun shot of the capital. On most of the creeks and ravines, coal is found in abundance. The streams through this part of the State are sunk in deep hollows, and run between high, steep, muddy banks.

At a poor deserted looking village called Auburn, I met with a rare sight—an actual live nursery of well assorted fruit trees, cultivated by the Rev. Wm C. Greenleaf, a very worthy Presbyterian minister, whose talents not being appreciated sufficiently to support his declining years, has turned his well cultivated mind to the cultivation of trees, and for which he finds more persons willing to pay, than he does for preaching, which they prefer to have of a cheaper quality. Mr. G. is trying a hedge of native thorn; and will give the result when ascertained. Like all well educated gentlemen of his profession, he takes an active interest in agricultural improvement, and uses his influence to extend the circulation of agricultural papers. By his advice, I called upon one of his neighbors, upon a farm upon which he keeps 100 head of cattle, and a "right smart chance" of hogs, but they are dying with the kidney worm, and he made a "bad crap; it was so powerful wet in the spring that the crap got right smartly in the grass! and then again it got dreadful dry," and so with all these misfortunes, he felt too poor to subscribe for a paper. I hinted that if he had taken one, he would have found a receipt to cure the kidney worm, and thus have saved fifty dollars worth of hogs. But "he reckoned these ere papers told a heap of lies;" and so to save the poor man's conscience as well as hogs, I told him to give the latter sulphur, which if I had given him the medicine as well as advice, perhaps he would have done.

After leaving this fair specimen of a large majority of the settlers of this country, I entered just at sundown, upon a 20 mile prairie, intending to drive five miles to the first and only house, and spend the night; but as I approached, one unacquainted with such scenes, might have fancied that instead of a country tavern, he was nearing an army encampment; as it required no great stretch of fancy to convert a score of white wagon covers into tents, and the noise of a dozen families of emigrants, into that of a small detachment of "la grand armie." Indeed, such scenes in the west are by no means uncommon. There is one of the roads that enter Chicago, upon which I have seen 300 wagons pass in a day, and that not a rare sight, but one often seen.

Finding in the present case, that if I remained I must content myself with a very small portion of a bed, and my horses with a birth by the side of a rail fence, I soon concluded to "put out" and brave the terrors of a threatening snow storm upon a prairie 15 miles across, as upon the other side lay the town of Carlinsville, the seat of justice in Macoupin county. I am of opinion that if that fellow who is astonishing the "down easters," fiddling the "solitude of the prairie," had been with me this evening, that he would have been able to play the tune in much greater perfection. Perhaps he might add,

"Oh solitude, where are the charms
That emigrants see in this place;
Better stay on their own little farms,
Than own all this horrible waste."

And he might add another stanza to a lone tree standing solitary and alone in the midst of this ocean of land, like a sentinel watching alone over the solitude of the prairie, which is more profound than the solitude of the darkest forest.

No doubt many of my eastern readers would have hesitated long, and rather put up with lodging "three in a bed," sooner than undertake the passage of such a prairie in the night. But we soon get used to it, and as in the present instance, get through it in good order, and by contrast are able to reap double enjoyment by the side of a good fire in a good inn. The town of Carlinsville, like many others in the west that grew up like Jonah's gourd, when men forsook the cultivation of the soil to grow suddenly rich in town lot speculation, now shows in the dilapidated appearance of tenantless houses, that it would have been better for many if they had been content to pursue a steady, though slow, yet certain road to comfortable independence which surely attends the careful cultivation of a good soil.

During this day's drive, after leaving Carlinsville, I witnessed the rapid increase of timber that is every where taking place in the prairie country, where protected from fire. Though during the past fall, in consequence of the great drouth that followed the great flood, immense damage, not only to the young timber, but in the destruction of fences, has been done throughout the whole of my journey. And this drouth still continues, so much so that the few mills that are to be found in this part of the State, are almost useless, and settlers complain of "long trips to mill." The roads, even in the beds of streams that are sometimes impassible, (where bridges are not, and that is every where when it is possible to "get along" without them,) are dusty, and the land in fine order for plowing, though I perceive but little of it doing. And would you know why? Why, is it not winter? And who ever heard of plowing in the winter, in a country where we are above such vulgar business as working when we are not obliged to. And another reason is that most of the cultivated land is every year in corn, and much of that is not yet gathered, and besides the stalk fields are the main dependance of half the farmers in the country for wintering the stock. And under such circumstances, notwithstanding the favorable nature of the weather for plowing, if they even had a disposition to do it, they cannot avail themselves of the opportunity. But you will say they might be otherwise employed; getting up wood for instance. Beg pardon, but you don't know "our folks,"—they are waiting for sledding.

But there are many exceptions to this waiting kind of population, one of which I witnessed at Chesterfield in this county of Macoupin. There were not only orchards and barns, but beautiful groves of locust around the comfortable houses, at one of which I found a dairy of 70 cows; and at almost every house a file of the Cultivator or Prairie Farmer, a paper in high credit in this State. And reader, where do you think this intelligent and enterprising population were from: I shall not tell, but if you are a yankee, you can easily "guess." I found one of them busily engaged building a new barn, which he assured me he was incited to by reading my remarks upon the subject of the want of this indispensible farm building in the west. I hope my remarks, and the contrast that I shall exhibit to them between good and bad farmers, that I meet with upon my present tour, will also excite many others to make improvements.

And here is one example by way of contrast—I spent the night in the cabin of one who had become familiar with my name in the Cultivator, and felt great pleasure in extending a warm welcome to the best he had, to one he had long looked upon as an old acquaintance and friend. He is a physician, whose practice required him to keep two horses, and where do you think he kept them during the inclemency of a wintry storm? In the stable, do you say. Well, it was in a large one, then, which nature alone had any hand in building. For no other had he, and therefore in the morning, I had no scruples of conscience against bringing my horses out of the corner of the fence where they had spent the night, and hitching on to the carriage for a 14 mile drive over a bleak prairie, facing a south-east snow storm, to a little town in the same county called Woodburn, where I spent the balance of the Sabbath in very comfortable quarters for both man and beast. Now, I shall not mention the name of this really good man, though to us he has an odd way of showing his goodness to the good creatures created for his use, but that is all owing to his "brought'n up" in a section of the United States that "I reckon" you will not wish me to tell you lies south of that celebrated line of Mason and Dixon.

I found my host, (Dr. Grimsted,) a very intelligent Englishman, who, together with many of his countrymen of the same stamp, have settled in and about this place, which is located upon good prairie, scarce of timber, inconvenient to mills, and possesses rather too great a share of that kind of "go-day, come-day" population, which fill the southern part of Illinois with a class of men that are content to live not only without stables, but without many of the other comforts that constantly surround the cabin of the eastern emigrant; the contrast between which and their own, will do more to urge them forward to do likewise, than all the agricultural papers in the world; for them they never read.

Three miles from Woodburn, is the village or rather settlement of "Bunker hill;" where I found a monument as noble and enduring as that which overlooks the city of Boston. It is a monument of industry, enterprise and yankee perseverence that has within a few short years converted a wide tract of rich rolling prairie, although not very convenient to timber or mills, into one of the most flourishing communities and highly improved farms that I have seen in the State. The location is undoubtedly a healthy one, well water convenient and good, but stock water upon the surface, I judge not so. There is more grass, more fruit trees, more barns, more good houses, more scholars at school, and more readers of agricultural papers in this eight year old settlement, than there is in some of the oldest settlements in the State, where the population is double.

I took dinner with Moses True, who is a worthy follower of his great namesake, in regard to perseverance, and whom I wish I could induce some thousands of his fellow-citizens to take as a pattern of the TRUE way to acquire a comfortable independence in the cultivation of the soil. He showed me a flock of 200 wedder sheep fattening for the St. Louis market, 40 miles distant. He intends fattening about this number every year, as he finds it one of the most profitable of his farming operations. His flock consists of about 600 at this time. I have also noticed several other flocks to-day, and also a disease called the sore mouth, which is affecting several flocks. If you will publish a cure if known, it will oblige many in this part of the country. In the course of a two hours drive after leaving this place, where every thing looked as though created but yesterday, one might suppose that he had indulged in an unconscious nap, and awaked in "the old settlemeets," so great is the change. For here we are amid old buildings, old farms and orchards of old trees, one of which, containing 1200 bearing trees, (owned by Gershom Flagg, Esq., brother of your Comptroller of State,) upon a large and excellent farm in Madison county, 30 miles from St. Louis, where he has resided 27 years, 25 of which in the same log cabins, which are his castles still, and in which I met a kind of welcome not to be measured by outside appearances. He has about 500 acres in cultivation, and is still adding more; and keeps about 100 head of cattle, with horses and hogs to match. His orchard of excellent grafted fruit brings him in some $2,000 a year, most of the fruit of which he sends to New-Orleans. He keeps 10 or 15 yokes of steers at work, which, as soon as he gets well broke, are offered for sale, and bring remunerating prices. He is reputed so, and is undoubtedly rich, and I will also add, proud. But it is proud of living so long in a house that has been of so little expense to him. All of his out-buildings, and they are very extensive and convenient, are of the same primitive description. Indeed, he says that he has never used a brick or shingle upon the place, but if I may judge from appearances, he is now preparing to do so shortly. He is not waiting for sledding. Every thing around him is on the go-ahead principle, except the house, and that is going to decay. And when we look abroad over the towns, cities and farms extending hundreds of miles away to the north, and think that this very house when built, was the "frontier settlement," the very outpost of civilization, it is easy to imagine that it is time for it to pass away. At the time Mr. Flagg settled here, he was looked upon by his neighbors in the "thick woods," as little better than a crazy man to undertake to cultivate the prairie, when it was evident it would not produce crops, otherwise it would have produced timber.

Over a rough uncultivated tract, mostly timbered, I went to the somewhat famous town of Alton, or rather towns, for there are three of them, Upper, Middle and Lower; and all covering as rough and uneven a surface, extending up mountain sides, and back a mile or more over other mountain sides, from the river, that part being Upper Alton. Here is the college. several good churches and fine dwellings, but no mercantile business. Middle town is a collection of good dwellings, mostly occupied by men doing business in the lower town. Here I noticed a dwelling surrounded with a garden in high cultivation, a plain indication of the owner's mind, who I found on acquaintance, though engaged in other pursuits, highly interested in agricultural improvement, and whose name. Moses G. Atwood, will call to the mind of Mr. Tucker, reminiscences of the days when they were both sticking type away down in New-Hampshire.

At the lower town is the Illinois penitentiary, several fine churches, one busy business street—there is no room for a second one—and a tavern, the Franklin House, that is worthy of patronage From

Alton to St. Louis is 25 miles, down the far famed American bottom—an immense tract of land that was covered, and in some places greatly injured, by the great flood. But it never was under that kind of a state of cultivation which would satisfy any man who had an aspiration above a "hog and hominy" kind of existence, and was willing to have the "shakes" half the year, for permission even to enjoy that much. I believe I met with a fair sample of half of the inhabitants, in an individual who had lived upon the same farm 40 years, and has not an acre of grass or fruit tree in the world, but can brag of raising more and bigger corn than all the rest of creation, "Old Kaintuck" included.

I asked him why he did not raise grass? "Well, he did sometimes think on't—and he tried it about 30 years ago, but it did'nt do well." And why don't you set an orchard? "Well, I reckon may be I will some day—did set out a few trees once, and they grew powerfully, but the cattle soon destroyed 'em." And no wonder, for they were set in "the big field," the eternal corn field. Fences are much swept away, and probably the barns with them, for they are not to be seen now, although the little old miserable dwellings, like the owners, hang on. The land in many places is much grown over with bushes, mostly crab-apple, which abound by the million. The bottom is nine miles wide, and is bounded on the east by a very high clay bluff, that bears evident marks high up its face, that here once run a mighty current. There are also many mounds upon the bottom that show the same appearance, and that the stream gradually wore down this immense mass of clay to the present level.

During the flood, the ferry was nine miles wide; now less than a ninth of that, which I crossed upon the 22d of January, 1845, on a steam ferry boat, and upon a beautiful sunny day as we need wish for in May. The two boats at this ferry are almost constantly crowded with produce and market wagons from 60 or 70 miles back in Illinois, coming to St. Louis. The old part of this city was built upon an abrupt rocky bank, and in addition to its outward wall, many of the old Spanish houses were separately walled in like a strong fortification. Some vestiges of these, and the old Spanish houses, still remain, but are fast giving way to the spirit of improvement, every where visible. But the town suffers one monstrous inconvenience in the narrowness of the streets. Some of the main business streets being barely wide enough to allow two wagons to pass. It is a place of immense business, constantly on the increase. The lead and fur traders alone employing great capital, and the vast agricultural country above, that draws its supplies through this place, create a vast trade.

The land around the city is not under good improvement; which is probably owing to the want of good title: much of it being an old Spanish grant for a public common. All the land between the city and Jefferson Barracks, and even below, is in the same condition, being claimed as a common of the town of Carondalet, a little miserable collection of old Spanish or older French houses, a few miles below St. Louis, and is one of the oldest French towns in the west. This common land remains unsettled, and the timber having been cut off, is now grown up to bushes; and in the vicinity of such a city has a very unsightly appearance. Jefferson Barracks, by the expenditure of a few wagon loads of Uncle Sam's money, has been made a beautiful spot amid this wilderness of Spanish spoliation and French frivolity, both of which classes had rather live on frogs and tobacco, and spend their time in drinking and dancing, than in growing rich by the cultivation of the earth.

The old Spanish and French citizens in St. Louis, for a long time successfully resisted the spirit of improvement that pulls down to build up; and the old grants of land to this class of citizens, some of which are still unsettled, have been a great detriment to the improvement of this part of the State of Missouri.

From St. Louis to the Merrimac river, 18 miles, the road lies over a succession of clayey hills, and for 14 miles after leaving the city, scarcely any improvements, and them but poor. Soon after crossing this stream, we begin to enter the great mining district of Missouri, and find ourselves climbing rocky mountain sides, picking our way along some mountain stream that winds between high precipices of perpendicular rocks. Oh what a change. What a contrast from the boundless and comparatively level prairie, where the eye found no limit but the horizon, to this pent up prison of rocky grandeur.

The prairie land behind me lies,
That boundless realm of grass and hay.
The mountain rocks before me rise,
With nought to cheer my toilsome way.

Yes, I have something to cheer me on my way; and that is, that what I see and take note of, may give pleasure to those, who in imagination, accompany on his tour, their old friend,

SOLON ROBINSON.

SWAMP WILLOW—BASKET WILLOW.

Salix discolor—Salix viminalis.)

"Some trees their birth to bounteous nature owe;
For some without the pains of planting grow.
With osiers thus the banks of brooks abound,
Sprung from the wat'ry genius of the ground;
From the same principles, gray willows come,
Herculean poplars and the tender broom."
[Dryden's Virgil, Georgic 2d.]

Permit me, Mr. Editor, to resume the subject of the Willow, commenced in the April number of the Cultivator (for 1844, page 125.) My attention was called to it by the suggestion of Mr. William Partridge of New-York, one of your correspondents.

In my former communication, it was shown that the native and foreign willows were cultivated and manufactured in this country to a considerable extent and that the wild and uncultivated article was also collected and applied to useful purposes.

Many persons are employed in the domestic fabrication of willow-baskets and other willow-ware, while a few only are engaged in cultivating it. It is a business that may be increased to an indefinite extent, and give employment to many an industrious person. When the art of making baskets from willow, is once acquired, it requires but a small capital to commence the trade. With a few tools, a few bundles of willow, and a small space to work in, an individual may easily undertake to work on his own account. The most expensive apparatus would probably be a tight box to soak the willow in, that it may be easily bent and twisted in the manipulation of the art, and another box with a tight lid or cover to bleach the manufactured articles. The bleaching is effected by subjecting them to the fumes of burning sulphur, a small portion of which is put in an earthen pot and placed in the bottom of the box, and the lid closed to prevent the escape of the sulphurous acid which is formed by the slow combustion of the sulphur, and which whitens the willow.

In the conversion of willow into articles of utility, we have an art, a trade, or domestic manufacture, which deserves encouragement, because it may be carried on in the small way, and because we have abundance of the raw material growing wild, which may be collected at little expense, or may be propagated by cuttings, in waste swampy lands, without interfering with any other trade or employment. That the art of basket-making is not difficult to acquire, we have the evidence presented at the late Fair of the State Agricultural Society at Poughkeepsie, (Sept. 1844,) where a number of articles of basket-work, made of American willow by the pupils of the New-York Institution for the Blind, were exhibited. Had there been any other articles of the kind offered for a premium, those made by the Blind would have advantageously compared with them in beauty of finish and workmanship.

They were entered in the name of the "New-York Institution for the Blind," by Mr. George Horn, teacher of basket-making, as the work of the following boys, pupils of the Institution:

1 Fishing basket,..................	made by J. Collins.
I Chair,........................	" Chas. O'Connor.
1 Nest of knife baskets,......... 1 Nest of market baskets,.......	" James Dowd.
3 Clothes baskets,................	" Alfred Holmes.
2 Toy wagons,.................. 1 Foul clothes basket,...........	" Wm. Dunlap.
1 Bandbox basket,................	" Thomas Murphy.

These were all declared by Mr. Horn, to have been made entirely by blind boys, and of American Willow. We are informed by one of the Committee on Discretionary premiums, that the articles arrived towards the last of the Fair, and when the Committee were about closing their report, and that as there was no competition, one dollar was awarded to each of the above named pupils as an encouragement to them, to persevere in an employment which promises to be so useful to them, and is so creditable to the Institution where they are taught.

Seeing these articles at the Fair, led us to make some further inquiries about willow and the willow-basket business as carried on at the Institution for the Blind in the city of New-York. We were informed that one of the trustees or managers of that charity, was many years since impressed with the conviction that American willow might be advantageously employed in making baskets and other willow-ware. In August, 1834, he was on a visit to Mr. John R. Stuyvesant of Hyde Park in Dutchess county, and he observed a quantity of the native willow growing wild in a piece of wet ground on the farm of that gentleman. He amused himself by cutting and peeling the bark of the long and slim sprouts, until he had collected two bundles, and sent them as a present to the Blind Institution for trial, through Mr. Stuveysant, who was at that time one of the Board of Managers. Two large baskets were made of the said willow and sent to Poughkeepsie to show that we had the raw material for a new and useful employment. But the teacher of basket-work at that time in the Institution, (Wm. Murray, himself blind,) stated that the willow was good, as to length, smoothness, and uniformity in its taper, but brittle, on account of being cut in the wrong time of the year. It should be cut, he said, in March or April. This agrees with the fact as stated in our former communication, and as practiced on Staten Island by Mr. Reed, Mr. Leveridge and others who cultivate the native and imported varieties.

When one undertakes to investigate a subject, one fact leads to another. So when we were made acquainted with the above, we were presented with a series of the annual reports of the New-York Institution for the Blind, from which, and one of the managers, we have drawn the following information in relation to the manufacture of willow.

In the early stage of the Institution, under the superintendence of Dr. John D. Russ, the first attempt in working with willow, was in covering bottles and demijohns without assistance or previous instruction. The ingenuity and contrivance of the superintendent was partially successful, but slow in its operation A basket maker in the suburbs of the city was then consulted, and he agreed to give the blind inmates of the Institution, instruction in the art, a portion of a day three times a week. He came at the appointed time, but declined the undertaking, alledging that he would be mobbed by the trade if he should comply with the proposition.

Mr. Windle of Maiden-Lane in New-York, who deals largely in wooden-ware, willow-baskets and house furnishing articles, informed Dr. Russ, that his only chance to obtain the requisite knowledge, was by engaging some foreign artist soon after his arrival, and before he had become connected with others of the trade.

Such a person was subsequently engaged, together with his wife They were adepts in making fine work of split willow, which would come in competition with the fine baskets imported from France. Although they were engaged at high wages, they remained but a short time, being induced to quit their employment and instruction of the blind, for a promise of still higher wages in another part of the country. They afterwards returned to New-York, and expressed regret at having relinquished their first engagement, as they were not fairly dealt with by those who enticed them away; but the Institution was otherwise supplied in the art of basket-making, and they could not be re-engaged. This information is not in any of the published reports, and is preliminary to understanding some of the following extracts, from which we shall see the progress of the willow basket manufactory, at the New-York Blind Insutution.

Their first annual report to the Legislature for the year 1836, informs us (p. 5,) that

" The managers finding much difficulty in establishing mechanical employments, in the early part of the year wrote to Edinburgh, and engaged a competent instructor, who arrived the latter part of October 1833, and enabled them to undertake the manufacture of mats, mattresses and willow baskets."

In December following, there was an exhibition and exercises by the blind at the City Hotel in Broadway, at which was made the following statement:

" In the mechanical department, the managers after trials and difficulties of various kinds, have the pleasure to announce that they are now well supplied with a conductor in the efficient services of Wm. Murray, a young man who is himself blind, and who knows how to bear with patience the awkwardness of beginners in acquiring those trades to which he has been brought up in the school for the Blind in Edinburgh, and a knowledge of which he can impart to others in his own condition. This acquisition is the result of a correspondence with the directors of that Institution in Scotland. Murray arrived a few weeks since, and he has already given practical demonstration of his ability in making baskets, mats and mattresses, specimens of which may here (at the City Hotel, New-York, Dec. 1833,) be seen, made by him, and the pupils under his direction."—(1st Annual Report, p. 7.)

In tracing the progress of the mechanical department of the Institution for the Blind, we learn that the articles manufactured and sold there in 1836, amounted to $1,295.58, of which $444.56 were for willow-baskets, (Report, p. 15,) and that there was on hand at the end of the year a considerable amount of basket-work finished, together with 120 bundles of foreign willow, which cost one dollar per bundle.

The business of basket-making having become firmly established at the Institution, the committee on manufactures reported at the close of the year 1838, that there had been made during the year, 1722 baskets, and numerous chairs, cradles, band-boxes, &c., and that they had on hand 675 bundles of willow as a stock of raw materials for the ensuing year. The committee say, that

" In the manufacturing of these articles, the committee have been guided solely by the good of the pupils and the Institution, as they cost less to get up, and when done, find a ready sale. The pupils are very anxious to become proficient in this manufacture, as they know when the time arrives for them to leave the Institution, they can, if proficient, start the willow-basket business with only a few bundles of that article, and can make for themselves a good and comfortable living. The articles manufactured in this department will compete with those made by workmen not deprived of sight."—(3d Report p. 20.)

In the sixth annual report it is stated (p. 18) that, " Two male pupils lately (that is in the latter part of 1841) left the Institution and removed to New-Orleans, and two others to Chenango county in this State, with the intention of manufacturing willow-work; they understand the business thoroughly and will be enabled to earn their own living."

In our former communication on this subject, it was shown that large quantities of willow raised in France and Holland were imported into this country, while we have it growing wild in abundance, that it may be, and has been cultivated by a few, together with several varieties of foreign growth. The manufacture of willow was also stated to be of two kinds, one made of fine split willow, and one made of the willow twigs without splitting—that the fabrication of fine willow-ware was in the hands of foreign artists and was wholly imported; while our own artizans could produce as good, but from cheap labor in Europe, and defrauding the revenue as is believed on importing the articles, our countrymen could not compete with them, and that accordingly they had the control of the market in the sale of fine and fancy willow-ware. But on the other hand, Americans have the domestic market to themselves, for large and coarse willow fabrics, because on account of lightness and bulk, they cannot be imported.

In this essay it will be seen that the blind even, can be taught to work correctly and profitably at this business, that it is a trade of extensive usefulness and great magnitude, that the raw material is abundant and may be improved by cultivation, and foreign varieties added to our native stock, and while we are cultivating willow, those so engaged are benefitting themselves and improving the country, because swampy lands and peat bogs when drained, are the places where willows grow most luxuriantly.

Now I would ask, ought our own countrymen to be excluded from their own markets in the manufacture of fine split willow? For one, I should be for imposing such duties as to give them protection against the introduction of fine willow-ware. Independent of political considerations they ought to have it, because the art is truly a manufacture, every thing is done by hand, and cannot be done by machinery, and the business must be pursued by individuals, and cannot be monopolised by large companies. By encouraging the manufacture of willows, we invite the farmer to a new article of culture, and the conversion of swamps into willow groves, which will give profits equal if not superior to uplands, and at the same time improve and render healthful such swamps and low lands, which before produced agues and fevers, and their train of evils.

In our former communication, we omitted to mention that great numbers of square willow baskets with lids, are made in New-Jersey and filled with bottles of fine Newark cider, marked and sold in New-York as foreign champaign.

If any person should be desirous of commencing a plantation of willows, it may here be repeated that March or April would be the time to transplant them, and that Mr. John Reed, who lives in the township of Southfield on Staten Island, about five miles south-west of the Quarantine establishment, can furnish cuttings of the best foreign varieties, or those of indigenous growth improved by cultivation. RICHMOND.

Oakland Farm, Staten Island, Nov 4th, 1844.

FLAX CULTURE FOR THE SEED,

And for seed and lint—its effect on the soil as preparatory for a wheat crop—Flax Mill—Flax pulling Machine, &c.

EDITOR CULTIVATOR—The culture of flax for the seed only, has been found to be a very profitable branch of rural economy in Seneca County. Flax culture on our clay loams, has the effect to keep the soil loose and porous, so that after the flax is gathered, the stubble needs only half the working necessary to fit an ordinary fallow for wheat. It is the opinion of many sensible farmers, who do not on that account, grow flax, that a flax crop immediately followed by wheat, is too exhausting to the soil for economical husbandry; *per contra*, it is stoutly maintained by others who have successfully grown wheat after flax, that if the soil has not been previously too much worn, wheat will succeed better after flax, than on the summer fallow. It is true that the gluten of the stem and seed of flax, presupposes a great assimilation of azotized matter; but the action of the roots of the flax plant on a tenacious soil, seems designed by nature to fit that soil for the reception of ammonia, for which we are told allumina has a great affinity; thus nature has given to that plant which requires much nitrogen, the mechanical structure of root, to fit the soil to absorb the constituents of nitrogen and carbon from the atmosphere. The quantum of inorganic matter taken by flax from the soil, (not having seen the analysis,) I am unable to determine; but it is well known that of all the cereal grains, wheat contains by far the greatest portion of these substances, its straw alone yielding nearly four times as much ashes as the straw of oats, and twice as much as that of barley. Hence, may we not infer that it is to the previous exhaustion in the soil of its wheat forming pabulum by previous wheat crops, and not to the alternation of an occasional flax crop, that the wheat product is deteriorated.

About four years ago, a mill for breaking and dressing flax was erected in this village, (Waterloo.) The enterprising proprietor, Mr. Gardner Wood, has induced many farmers to pull their flax, and to dew rot and save the lint; instead of pursuing the old course of cutting up the flax with the scythe, and appropriating the seed only. To encourage a more general pulling of the flax in order to save the lint, Mr. Wood has procured from the patentee in New-Jersey, a flax pulling machine. It is of wood and iron on low wheels, about the bulk of a small wagon, cost $90, with the right to use it. With the help of this machine, four men have pulled and bunched sixteen acres of flax in four days; but as the machine requires some mechanical tact, and can only be used on a smooth surface, most of the flax intended for dressing, is still pulled by hand.

The success of the Seneca county farmers in making a flax crop a succedaneum for the sun stricken fallow, has induced many farmers in the neighboring counties to adopt its culture. In the town of Hannibal, Oswego Co. a flax dressing mill has just been erected, which will dress this season about 20,000 lbs. of clean flax. Mr. C. Gifford, of the same town, has grown the past season on five acres of land, 58½ bushels of seed, and 1,750 lbs. of dressed flax; the flax netted him 5 cts. a lb., the seed 9 shillings a bushel. A. Taber, of Ira, Cayuga County, has harvested the past season, 18½ bushels of seed to the acre on nine acres; the lint of the same yielded about 2,500 lbs. of clean flax, worth at tide water, nine cents a lb. The land on which the above crops were grown, was Indian corn stubble, plowed once in the spring, harrowed and sowed late in April, with three pecks of seed to the acre, and harvested as soon as the balls began to change color, which, last season, was about the 20th of July, two weeks earlier than in ordinary seasons. The field of Mr. Taber had never received any animal manures; it was on one of those all fertile alluvial ridges of finely divided matter, so common to the gravelly or rather pebbly loams of the north part of Cayuga, Seneca, and the south division of Wayne county. S. W.

Waterloo, Seneca Co. N. Y., Feb. 21, 1845.

MERINO BUCK "DON HARDY."—(Fig. 39.)

DESULTORY SKETCHES OF SHEEP HUSBANDRY IN MAINE.—No. I.

Mr. Editor—Little was done in regard to the rearing of sheep in Maine, except a few of the common breeds, kept by some farmers for mutton, and to supply what wool was needed for household manufacture, until the war between England and the United States, which took place in 1812.

It was, however, early discovered that the climate, though rigorous in the winter, was nevertheless favorable to the breeding and multiplying this useful animal. The war of 1812 brought about a radical change in this branch of farm industry among us; and I have sometimes thought that setting aside the misery and aggravated wretchedness which war always produces, if no other benefit was derived from the struggle, the impulse given to wool-growing, and the more general introduction of Merino sheep throughout the country, together with the improvement of manufactures, was an ample equivalent for all the treasures expended. The total prohibition of the importation of English manufactures which it effected, brought about in the short space of three years, more changes in favor of our then infant manufactures, and discovered to ourselves more resources, both natural and mental, than could have been accomplished by any other means. It is true that a speculating mania in Merino sheep, which sprung up about that time proved somewhat disastrous to many who were lured into it more by the hope of realising a fortune by the rise of prices than from any desire of the multiplying of flocks. But this was only one of the evils which often attends the introduction of valuable improvements, when the true objects are perverted. Those who purchased at high prices, with a view of going into the business as a permanent pursuit, ultimately realized a profit from the investment, and many are still reaping the benefit of their purchases. A friend of ours gave forty dollars for a buck lamb that had just been dropped, brought it home and reared it as a cosset. It made a noble sire of a noble flock. A farmer, who now has an excellent flock of fine wooled sheep, told us that he began by giving *one hundred dollars* for an old sheep that had hardly a tooth in her head, but she lived, by extra care, long enough to lay the foundation of an excellent flock, which has been a source of profit to him for many years.

As early as 1813, a few farmers in Winthrop, among whom were Messrs. S. & E. Wood, Mr. Pullen and Dr. Snell, met together to discuss the question of the introduction of Merino sheep into Maine. There were but two questions to settle.

1st. Will the climate suit them ?

2d. Will it be a profitable investment ?

After a careful deliberation, they concluded to try the experiment, and accordingly made, what at that day was considered a large purchase from the flock of Consul Jarvis, who had then recently settled in Weathersfield, Vt. The first purchase was made in 1813, and consisted of forty lambs, for which they paid *twelve dollars and a half* per head. The next purchase was made in 1814, and consisted of forty lambs, for which they paid *twenty-five dollars* per head, and the next purchase was made in 1815, and consisted likewise of forty lambs, for which they paid *fifty dollars* per head, showing a pretty steady increase of prices. Wool at this time, of the quality which these sheep afforded, brought *two dollars* per lb. The increase of the flocks, and the peace of 1815, put an end to the high prices; and many, who, as I before said, had entered into the business merely for the purposes of speculation, gave up the pursuit, and after cursing the harmless Merino as the cause of their misfortunes, turned their attention to other business.

The enterprise and example of Mr. Jarvis, was not lost upon those whom we have mentioned. His and their experiments, demonstrated the fact, that the climate of north New-England was suitable for the cultivation of fine wooled sheep.

The cold, but dry and bracing air of our winters, is found much more congenial to the Merino, than the more open and changeable winters further south; and it is proved by actual experience that they do vastly better in dry, cold, than in a wet or rainy climate.

This was peculiarly illustrated here during the last winter, which, for a part of its term, was unparalleled for the severity of its cold—the thermometer sometimes ranging as low as 37 deg. below zero. It was comparatively a dry winter, the storms being principally snow-storms, and there fell but little rain. In the spring, the snow went off gradually by the heat of the sun. Notwithstanding the severity of the winter, sheep, and especially the Merino, seldom have done better. We noticed very particularly the several flocks which we passed in our drives about the country in the spring, and were forcibly struck with their general health and good condition. The winters of 1829 30-31, were what might, with propriety, be called open winters. Much rain fell during those seasons, and the mortality among the sheep is too well remembered by many of our farmers. Several of our acquaintances, discouraged by their losses, gave up the wool-growing business entirely.

Allow me to say here, by way of digression, that I think our brethren of Illinois, who are just entering so zealously into the wool-growing enterprise, will find their open rainy winters the greatest enemy to the flocks which they have lately introduced, and I would respectfully caution them to be sure and have shelters for them to flee to during a "stress of weather."

Sheep should certainly be sheltered during cold rainstorms, as these are found to be much more deleterious to them than snow-storms. The former drenches their wool and chills them. They become completely "water-logged," as a sailor would say, and it takes them a long time to get dry again, but a snow-storm does not so effect them. Drifting snows may bury them up and smother them, but they do not chill them so thoroughly, nor bring on so many diseases of different kinds as cold rains do.

The summers in Maine are generally clear and fine, and the situation and face of the country are such that the heat of our longest days is tempered by cooling and refreshing breezes, which invigorate instead of relaxing. No better pasturage can be found in the known world for sheep, not even in old Spain itself, than are found in the highlands of the interior of Maine. The ranges of hills and mountain tracks which traverse the State, afford cool and airy walks peculiarly adapted to the nature of this animal, and they seem to delight in climbing over their tops and roaming along their sides in pursuit of the herbage and shrubbery of which they are naturally so fond. Hence, but very little care or attention is bestowed upon our sheep in the summer. The principal object being to get a pasture for them of the kind best suited to their natures, and occasionally giving them a little salt.

As we have before observed, the peace which took place in 1815, put an end to the great profits which were realized by Merinoes and many who had large flocks, and others who were commencing, sold them to the butchers, and relinquished the business. A few however, knowing the intrinsic value of the animal, have persevered in the breeding of them, and although perhaps no single branch of husbandry has been subject to so many fluctuations for the last thirty years, yet we believe that, by taking an average of costs and profit during that period, they have been full as profitable (if not more so,) as any other species of farm stock.

The breeds which are now found in Maine, are the Merino, including the Saxon variety, the South Down, the Dishley and the Native. While making this enumeration, truth compels me to say that there are but few flocks which can be considered really of pure blood. We will however speak of them in the order we have named them.

1. *Merino.* The Merinoes first introduced were principally of the Paular variety, though some of the other varieties were occasionally found. They were much better in form, and of course, constitution, than many that are now found here. The causes of this deterioration are—1st. A want of attention in breeding. Every thing and any thing in the form of a Merino were kept for this purpose, and a long course of *in and in* breeding, reduced the once good shape to a thin breasted, flat ribbed, hump-backed race. 2d. An unfortunate cross with some inferior Saxony blood, introduced about the years 1825–6 helped to deteriorate many flocks. With one or two exceptions, the Saxony bucks introduced among our Merinoes, were ill-shaped animals, and instead of benefiting the Merinoes, they very much injured them. It is true they made the staple a little more fine and soft, but they proved to be poor nurses and destitute of that robust constitution which insures a profitable flock. A few farmers, instead of adopting the haphazard course, have pursued a regular system and avoided the evils arising from what may be called an incestuous intercourse. They have taken the utmost care in selecting and preserving the best of their sheep, and instead of condemning the whole Merino race as weak and worthless, unsuited to our climate, have improved them very much, and are in possession of as good flocks as can be found in America. Among those of our acquaintance who have pursued this rational course, I would mention Elijah Barrell, Esq. of Greene, Elijah Wood, Esq. Truxton Wood, Oaks Howard and Nathan Foster of Winthrop, Amasa Tinkham, Esq. of Monmouth, Capt. Geo. Williamson of Pittston, Jesse Wadsworth, of E. Livermore, Moses Taber of Vassalboro. Mr. Rial Gleason of Farmington, has a large flock, principally of Saxon blood. Hon. Judge Hayes of S. Berwick, has Saxonies of his own importation. Many others have large and valuable flocks, but the foregoing I am more or less acquainted with.

Messrs. Wood, Foster, Taber and Williamson, have recently made purchases in Vermont of lambs descended from Mr. Jewett's ram Fortune, which, though mocked at by some as not being an exactly *simon pure* Paular, will nevertheless bear the ordeal of the curious and critical in *stock heraldry.* He is certainly a remarkable animal himself, and transmits his good points and qualities singularly well to his posterity.

The average weight of the Merino fleece in Maine, is *three pounds;* but there are flocks that come up to four pounds and more. They are however, not very plenty.

Among the flocks of the few who have paid proper attention to the improvement of Merinoes, are to be found some fine specimens. The cut at the head of this article is a portrait of "Don Hardy," a full blood Merino buck, six years old, bred by Moses Taber of Vassalboro. He is an excellent animal and combines as many good points as any other buck. He weighed on the first of June last with his fleece on, 140 pounds. He was sheared soon after, and yielded ten pounds of well washed wool. The staple is long and of excellent quality. His height at the time he was weighed, was two feet three inches. Girth (wool being on,) four feet.

The cut represents him straighter under the belly than he actually is, and his muzzle or nose is rather too large.

We have seen in Mr. Williamson's flock, in Pittston, a variety of Merino, that were polled or hornless, and had uncommonly small ears, supposed by some to be of Saxon origin, the fleece of very fine staple, not so gummy as the common variety, and the form excellent. I will obtain a more particular history of this variety, and tell you more about it in my next. Respectfully yours,

Winthrop, Feb. 1845. E. HOLMES.

A PRODUCTIVE FARM.

MR. TUCKER—I am doing a little in the way of farming, my time being occupied almost entirely in my professional duties. I cultivate 25 acres of land, keep two horses and 4 cows; raise all my beef and pork, with plenty of poultry and eggs; keep the variety of fowls called the Italian or perpetual layers; they certainly exceed any thing I ever had for eggs. If I was furnished with a cellar, which in my location cannot be had, I believe they would lay as well in winter as summer. I feed with all kinds of grain, with animal food and lime. The past year I raised 500 bushels ears of corn, with a sufficient supply of broom corn for family use—70 bu. oats—40 bu. wheat—150 bu. potatoes—75 bu. sugar beet and turneps—5 bu. winter beans—4 bu. clover seed—plenty of provender for my stock, and 3 or 4 tons of hay for sale; pumpkins, squashes, &c. in abundance. My practice is to have a good supply of milk and butter all the year, winter and summer, by the use of the sugar beet in winter; an abundant supply of apples of the best quality; a large garden and vegetable patch, supplying abundance of grapes, strawberries, raspberries, currants, and garden vegetables, with cherries, quinces, peaches, &c.

I find it quite important to attend carefully to the manufacturing of manure. The best manner I have found is to keep my yards and pens well supplied with muck, scraping of ditches, sods and the like, to catch and retain all the leach and urine.

Much has been said on the manufacture of poudrette. My practice is to have a good sink under my privy, with a heap of muck or something of the kind laying near; into this sink I cause to be cast all the soap suds, &c. from the house, and occasionally throw in some of the dirt. Once a year clean it out, with no inconvenience whatever. In this way I have 8 or ten cart loads of the best material for top dressing for any crop. My coarse manure from the horse stable, I throw into the pig pen, thus increasing its value nearly one-half. I stable my cows carefully during the winter.

You will perceive my doing is in a small way, but I go on the principle of doing well what I undertake. I have always practiced deep plowing, with decided benefit. Many years before I saw an agricultural paper, I employed one of my neighbors to plow the first acre I ever owned, and miserably poor it was. I urged him to put in the plow. Said he, "you will ruin your land." My answer was, it is now good for nothing on the top—if it is any better below, I will have it up. The consequence is, that now, with the little care I have taken, I have a lot with deep soil, that will grow any crop I put on it. I have done much at blind ditches filled with stones, thus reclaiming many spots that were before useless. I have never used the sub-soil plow, but have a high opinion of it; I intend to try it this season if I can. Mine is a hard retentive clay subsoil, which doubtless would be much benefited by being broken up.

C. Osborne.

Westfield, Essex co., N. J., Feb. 5, 1845.

ROTATION OF CROPS.

Mr. Editor—It is indeed a matter of astonishment, that at this day after so great improvements have been made in agriculture, and so much light thrown upon the subject by scientific men of almost every country, any should be found, who will not give assent to the doctrine of rotation; or who will not admit that a judicious system of alternation of crops should be adopted by every one who would cultivate the earth with success. Yet it is no less true than strange, that there are thousands who still cling to the old way of cropping their fields continually with the same kind of grain or plant, until they hardly make a return of the seed they have received. To such men, farming will prove to be a sinking business. These too, are the very men whom we always hear finding fault with their crops and almost charging the Wise Dispenser of all things, as being less favorable with them than with some of their more wise and prudent neighbors. They do not once think, that they have violated the laws of nature, and placed every obstacle in the way of her performing her kind offices. The truth is, they have tired out the land. It has become exhausted of the specific food which the plant requires, and utterly refuses to produce. Such farmers may sow, but they cannot reap; and if they persist in this ruinous course, they must sooner or later feel the evils of an empty purse. No man ought to expect a return for his labor, unless he give back to the soil, in some form, a part at least, of what he takes from it. It is to obviate in a great measure the evils consequent upon the practice of taking all, and returning nothing to the land, that is proposed to be effected by the rotation system. We do not say, that none of those who follow the old and hackneyed path, have raised large crops, or been in a degree successful in the business of farming; on the contrary, we know that by heavy manuring and high cultivation, land may be made to produce one kind of grain, perhaps abundantly, for a number of years in succession. But we do say, that the soil cannot without great expense of labor and manure, produce two or three crops of a kind without a perceptible falling off in the product. Neither is it contended that manure can be dispensed with in the rotation system. But one manifest advantage which this system has over the other modes of cultivation is, it enables the farmer so to economise in the management and use of his manure, as that he may receive a two fold benefit from it. For instance, his manure may be applied in an unfermented state to roots and other hoed crops, and they receive their supply of nourishment from it, and at the same time it remains unimpaired for the use of the small grains that succeed. We will now proceed to state a few general principles on which this system is founded. And they are principles that are established by scientific investigations and experiments, and should be familiar to every one engaged in this most laudable pursuit.

And 1st. Soils, however fertile, or highly cultivated, will lose their productiveness, if continually cropped with the same kind of plant.

2d. The degree in which a plant impoverishes the soil, depends much on the amount of food it returns to it, in the decomposition of its stalks and roots that remain.

3d. One plant draws its nourishment from a depth in the ground, another from the surface.

4th. Some plants receive nearly all of their food from the earth, while others are fed almost wholly from the atmosphere.

5th. The cultivation of the small grains, renders the land foul; the hoed crops tend to free it from weeds.

6th. Those plants that are permitted to ripen their seeds, are great exhausters of the soil; while those that do not mature their seeds, exhaust it comparatively little. If these principles are founded in truth, they will serve us as a guide in arranging our different crops of grain, roots and grasses into a regular system of rotation. In making choice of crops to alternate with, care should be had to select those that are best adapted to the soil. In this, the judgment of the farmer will enable him to decide, as he is best acquainted with the nature of the land that he cultivates. It will also be an easy matter for him to determine which kind of plants should, and which should not succeed each other.

In conclusion, we would say that a system, whose operations conform so completely to nature's laws, and the effects of which are so well calculated to improve the soil, and the condition of the farmer, commends itself to the consideration of all. And it is to be hoped that this subject will receive that attention which its importance demands.

A Subscriber.

Livonia, N. Y., Feb. 1845.

SHEEP'S TAILS.

Mr. Editor—In consequence of what was published in the 8th volume of the Cultivator, from Messrs. Morrell and Bliss, on the subject of sheep's tails, I determined to let my sheep wear theirs, till I satisfied myself whether Mr. Morrell's objections were real, or only imaginary. I had lived to see the fashion of maiming horses, hogs and dogs, in that way, become almost obselete, and was not sure but docking sheep, might be dispensed with also; although I had many doubts on the subject. I remembered having read that naturalists insist that the works of the Creator are always perfect and peculiarly adapted to the purposes they are intended to subserve; still I could hardly believe, but that a long tailed sheep would always be dirty, and was sure they would look singular; but now after three years trial, I am fully satisfied that all the objections to long tails, are without foundation; and that the tail is not only useful, as it protects the tender parts it was designed to cover, from extreme cold or heat, but also ornamental, the animal not wanting a member, designed by nature for its comfort. I must say that although Mr. Bliss was called eccentric, for supposing a sheep should wear its tail, I think that without one, if it does not look absolutely vulgar, it does very ungenteel. I have now about three hundred long tailed ewes; and shall have all my flock so after my old stock is gone. If the tails are shorn before the sheep are turned to grass, there will be no more dirty ones, than if they had no tails; and the wool of course will pay more than four fold for shearing. Will not many try this humane experiment to satisfy themselves; at any rate, none should condemn it without a fair trial.

Daniel S. Curtis

Canaan Centre, Feb. 10, 1845.

ASHES—CORN AND POTATOES IN ALTERNATE ROWS.

Editor Cultivator—I have the past season made some experiments with ashes and plaster on corn, but they were not conducted with sufficient accuracy, though they enable me to guess, to *my own* satisfaction, that the best way is to mix one part plaster to five of leached and unleached ashes, and apply a handful after the corn is above ground. On dry ground it produced the greatest effect.

I have planted corn and potatoes in alternate rows, and have *guessed* that I obtained almost as much corn as if every row was corn, and half as many potatoes. I wish some of your correspondents would try it. I have tried it in hills and drills. They will bear to be nearer together than if every row was corn. Yours, &c.

Henry Hull.

Claverack, Columbia co., N. Y., 1st mo. 8th, 1845.

PLOWING.

The season for commencing active operations in the field having arrived, it may not be out of place to submit a few remarks on the subject of plowing, as this is perhaps the most important operation in field culture, and one which should be performed with most care and attention. No amount of extra labor in the after culture can compensate for a defect in the plowing of the ground; and he is most certainly an improvident and unwise farmer who will allow his grounds to be imperfectly broken up in the preparation for a crop. We are aware that in submitting our views upon this subject, we shall be met by the remark so often made, that every body knows how to plow, and that no *directions* are needed upon this point. While it is freely admitted that every man can learn to plow well, it is by no means clear that all *do* thus perform this branch of their farm labor. Should we make this admission, we fear that in our rambles the great number of poorly plowed fields which may be found in nearly every neighborhood, would be constantly reproaching us with injustice, while we should get no thanks from the plowmen whose work we had so unjustly recommended. There has evidently been great improvement in this branch of farming in the last five years, more indeed than in ten or even twenty previous ones, but truth requires us to say that not one half of the land in this country is well plowed even in this age of improvement, and when public attention is directed to new methods in cultivating the soil as well as to improvements in the mechanic arts. Were we to look for the cause of improvement in plowing, we should undoubtedly be led in our investigations to the plowing matches which have in the last five years been held under the direction of different agricultural associations as the apparent cause of much of the improvement which is to be seen at the present day. The origin, the first cause of these improvements, may doubtless be traced to discussions and reflections which appeared many years ago in some of the agricultural journals. To no man are we more indebted for the impetus which has been given to this branch of agriculture than to Judge Buel. In this, as in all things pertaining to the interests of the farmer, he urged the necessity of advances towards perfection, and the skill which is now so often shown in the operations of the plowman, shows that the subject has gained much from investigation.

We would not be unmindful of the great aid which agriculture has received at the hands of mechanical genius, and in no branch of farm labor has science contributed in a greater degree to relieve both man and team from fatigue and toil. Had nothing more been done through the instrumentality of our agricultural societies than the improvements in the plow, their high aim would have been in no small degree accomplished, and farmers would be well repaid for all the time and money expended in their support. To the men who have contributed in so great a degree to improve farm implements our warmest thanks are justly due, and it is really gratifying to know that some of these men are receiving a patronage proportionate to their efforts at improvements.

In an article upon this subject, which was published in many of the agricultural papers some three years ago, we remarked that "any man of ordinary strength and good common sense can learn to plow well," and we are happy to see that a great number who at that time did not perform their work in a proper manner, are now among our best plowmen. We have seen no reason to change the opinion then expressed, although it would hardly do to reverse the proposition, and say that the man who does not thus perform his work is destitute of common sense. It may, however, with truth be said that he is blind to his own interests, and very little hope can be entertained that he will ever contribute his share to the common stock of agricultural knowledge.

We now beg leave to invite all our readers to accompany us to the field where we can witness the practical operations of the plowman, and where, unlike the mere theoretical speculations in the office or by the fire-side, we can learn from actual demonstration the difference between good and bad plowing. Here is a field partly plowed over, but it is not done exactly according to our notion, and we will try our hand at the work. Those furrows are too crooked, the soil is not all properly turned, and then you see one end of the land is finished while the other is a rod wide. The team must turn several times in the middle of the land before the work will be completed. Perhaps we shall not do the work better, but we'll try, and keep trying until we succeed. First let us have the plow in good order, the guage-wheel properly adjusted, the mold-board bright and smooth, then give us the reins and set a stake yonder at the further end of the land and see if we don't make a straight furrow. There! fifty rods long and as straight as a line; no crooked places to spoil the work of the whole land. Now, we will turn another furrow, not on the first, but so the edges will just meet and continue to "back furrow," until our land is about half done, then go round the land, keeping every furrow perfectly straight, and straightening all the crooked places, so that one furrow will finish the whole length without turning. How much better this land looks than the one poorly done, and then how much more prospect of a good crop. Every inch of ground is broke, and every sod is turned, and the whole land presents a neat and workmanlike appearance. But we had forgotton to strike a furrow across each end of the field, about a rod from the fence, so that we may have ample room for the team to turn, while the ends of the furrows are even and uniform. The plow must not be suffered to cross this line until turned out of the ground.

Some of our readers may think it easier to give directions than to do the work. To such we can only say, call on us any day in plowing time, and we will endeavor to satisfy you that we know something of the use of the plow, and that we have spent more time between the plow-handles than in writing for publication.

Much might be said of the propriety of deep or shallow plowing, but as there is not room in this article we will only remark that in our judgment deep plowing on almost all soils is beneficial, especially after that portion of the subsoil turned to the surface has been some time exposed to the action of the frost and to the meliorating influences of the light, heat, &c. We do not consider it certain that the first crop is always benefited by deep plowing, but that the soil is permanently improved by such process there cannot, we think, be the slightest doubt. The subsoil plow is, however, the article best calculated to improve all our heavy and retentive soils, and it is hoped the time is not far distant when it will be in common use among farmers as much perhaps as the common plow. It may not, and probably will not, be found necessary to resort to deep stirring of the soil every year, but as often once in every course of crops, or every three or four years, great benefits would be derived from this operation.

Neither do we propose to discuss now to any extent the merits of a flat or lapped furrow, although much difference of opinion exists among farmers on this subject. It seems clear that on all wet or tenacious lands the furrow slice should be lapped; and we suppose the opinion also is generally held, that on dry and porous soils flat furrows are preferable. Of the correctness of this last proposition our own convictions are not very clear, and we continue on nearly all soils to lap the furrow slightly, thus exposing full one third more surface and leaving it in condition to be acted upon by the harrow with good effect.

That there has been very manifest improvement in the practice of farmers in plowing their grounds we have the best evidence in the fields every where presented to our view, in which the straight and handsomely turned furrows, the smooth and unbroken soil, and other evidences of skill and workmanship all prove that the spirit of inquiry and of improvement is abroad, and that a complete change in this department of agriculture is now taking place.

We have already alluded to the very great improvements in the manufacture of plows, and would again say that without this advantage, our present state of cultivation would not have been reached. There are many good plows in use in different sections of the country, but the farmers are slow to adopt them in place of old and imperfect implements. For illustration of this fact the writer would state that in the county where he resides there are probably some twelve or fifteen, or even more, different kinds of plows in use, not more than five or six of which are any where near up to the improvements of the age. Of this latter class the difference in principles of construction is so slight that there may, in fact, be said to be no more than three kinds in use which are really in accordance with the improved principles of construction. Could farmers see and know the advantages of using a *good* plow, in place of the poor ones so generally in use, they would at once discard four-fifths of the old patterns, and endeavor to use none but a good article.

The plowing matches at our State Fairs have been well attended, and much good work done, but there seems to be still room for improvement. I think I speak the sentiments of many plowmen in Oneida when I invite those who desire to see specimens of skill, or who may choose to try their hand with our *boys* at the plow, to attend the plowing match at Utica, in September next.

E. Comstock.

Rome, March, 1845.

TRANSMUTATION OF GRAIN.

Mr. Editor—We have fallen on portentous times. Patriotism and *potatoes* are threatened with extermination. What will take their places is hard to tell; and friend Breck, in the leading article of the N. E. Farmer of November 20th, seems to entertain serious apprehensions of the *probability* of our wheat turning, not into *cheat*, but into "*oates*." This, though it would be a dreadful calamity with us western farmers, would not be quite so bad as utter extermination, especially since the "Rev. Lord Arthur Hervey," at the request of his "Lordship, the Marquis of Bristol," has *headed* Madame Nature, and obtained "*a little wheat*" from a "*handful of oats*." This wonderful, fortunate and timely discovery, it is to be hoped, may possibly prevent the entire extinction of the whole race of the precious grain.

It is difficult to treat this subject of the "transmutation of grain," with anything like gravity; but to be as serious as possible, if Mr. Breck will look at his Bible, he will find the very first chapter demolishes the doctrine, and blows it all to atoms.

But he says, "It is a subject upon which *sensible men* differ in opinion." True, it is. But does he consider that there are a great many kinds of *sensible men*, and a great many kinds of *sense* in the world? Some men are very sensible on some subjects, and mere dolts on others. Virgil, whose "wordes" Master Gerarde quotes to substantiate the doctrine of the "transmutation of one species into another in plants," was a very sensible poet. But if *sensible men* now-a-days were to adopt some of his whims respecting agriculture, the influences of the moon, management of bees, &c.; if they should escape an "indictment for heresy" they would certainly have to encounter the "world's dread laugh" as "dreamers." The plain deduction from Virgil's testimony is, that there were agricultural slovens in Italy then, as there are in other parts of the world now.

Were I a poet, and wished to immortalize the slovenly practices of many of our would-be farmers in imperishable verse, I would say,

On land where they some choice good wheat do sow,
Not much but tares and worthless cheat do grow.

And I would account for the fact, in humble prose, without calling to my aid the ridiculous doctrine of the "transmutation of grain."

But Professor Lindley "virtually admits the doctrine *may* be true, by recommending that experiments be tried to settle the question whether, *by any means, wheat, oats, barley and rye can be made to change into each other*." Well, this is sufficiently ludicrous, and let us no longer wonder that *book farming* is laughed at, when such agricultural journals as the "London Gardener's Chronicle," and such men as Professor Lindley, the "learned botanist," seriously recommend that a "good many persons would try the experiment, in different parts of the country."

Now, I am nothing but a plain farmer, who never saw the inside of a college, or of a professor's laboratory, in my life, but if I were a learned professor, and had never been outside of a college or laboratory, and felt disposed to "astonish the natives" by announcing the discovery of some wonderful *vagaries*, and strange freaks of nature, in the "transmutation of grain," I would procure an ear of rye, and another of wheat, for example, and putting on a very wise and knowing look, I would triumphantly exhibit them to obstinate doubters, as exemplifications of the truth and reality of the doctrine of transmutation, and of what the "worthy Master Gerarde" saw with his *owne* eyes, in the *yeare* 1632, excepting that, as the world grows older the variation from nature is a little more remarkable and striking, for in the case of the rye, instead of "three or four *perfect oates* in the middle thereof," I find, what is still more extraordinary and astonishing, three or four perfect *vegetable oyster seeds!* And in the offspring of a perfect kernel of wheat I find, *O mirabile dictu!* a number of miniature *apples of Sodom*, filled with soot and ashes!

I said there are a great many kinds of sensible men in the world. Whether Master Gerarde, Lord Bristol, Rev. Lord Hervey, Professor Lindley, or friend Breck, are illustrations or not, I can refer to some, both dead and living, who are. The Rev. Mr. T., of A., Ct. was a good preacher, an erudite scholar, a *sensible* man, distinguished for urbanity and gentlemanly deportment. He married an excellent and wealthy lady. With her fortune he purchased a farm, built a handsome house on the Hartford and Norwich turnpike. He built also a good barn, *directly over a ravine*, which served as a sewer to let off the filth of his barn-yard, through a culvert across the road, and into Hop river, a few yards below. This was a specimen of one kind of *sensible* men.

When I lived in Connecticut, in addition to farming I carried on the cloth-dressing business. Mixed colors were becoming fashionable. Mr. K., since promoted to the bench, as associate judge, in the county of T——l, in many respects a shrewd *sensible* man, brought a piece of cloth to my shop to be dressed, and wished it to be dyed a *mixed color!*

These, and hundreds of other examples which might be adduced, though they might be thought somewhat irrelevant to my subject, yet substantiate my position that *sensible men* sometimes blunder into the most ridiculous absurdities, as, I think, they always do when they blunder from nature's well defined paths, into the wild, theoretical, ideal road of *transmutation*.

And now let us think ourselves fortunate, since the experiments already made at the request of my Lord Bristol, and those likely to be made at the suggestion of Professor Lindley, the "learned botanist," are so well calculated to dissipate our fears and encourage our hopes, that, although nature may be fickle and inconstant, and change our *wheat* into *oates*, yet by the ingenuity of the shrewd Germans a plan has been hit upon by which her wild freaks may be counteracted, and the *oats changed back into wheat again!!*

J. Townsend.

Zanesville, Ohio, December, 1844.

Scratches in Horses.—Custom, the want of sufficient farm buildings, and it might be added, bad stable management, have caused us to accumulate our manure in the stables, cleaning them only when carrying out to the fields in the spring. In order to increase the value of the manure, I directed plaster of Paris to be sprinkled frequently upon it. "Does plaster hurt the horses' heels?" I inquired of the stable boy, on visiting the farm. "No, sir, it makes 'em better." "How so?" "They does'nt stomp now, sir." "What made them stomp before?" "I used to have to grease their heels two or three times every winter, for the heels was always raw; but I found they did'nt stomp so much, so I looked at their heels and found they war'nt raw now, like they used to be, sir." I hope soon to have a covering for the proper preservation of manure, but meanwhile must continue to use plaster.

S.

It is stated that out of 9,000 blind persons in the United States, only 400 are enjoying the benefit of instruction.

HEREFORDS—SHORT HORNS—ELEGANT COTTAGE RESIDENCE.

Mr. Editor—A day or two after the annual meeting of the State Agricultural Society in Albany, in January, I accepted the polite invitation of the proprietors to go and view the beautiful herd of Hereford cattle belonging to Messrs. Corning and Sotham, at "Hereford Hall," about two miles out of Albany. I have visited this extraordinary herd several times before, and each successive visit has been attended with renewed interest. There are, including old and young, about *seventy* head of cattle; and it is no disparagement to the most prominent and valuable herds in the State, (and I have seen many of the most distinguished of them,) to say that I have seen nothing that can surpass this noble stock of Herefords, in appearance at least. Their rich and beautiful color—in most cases a deep mahogany red—their pure white faces, and remarkably bright and expressive eyes—the mild expression of their countenances—their handsomely curving horns—their elastic and sprightly step and majestic bearing, must at once strike the beholder with pleasing interest and enthusiastic admiration; and the perfect symmetry of their form, embracing almost every point of a faultless animal—the deep, full bosom, the round, compact, barrel body, the broad hip and full loins, the short and sinewy arm, neatly tapering below the knee, the brisket boldly prominent, and dewlap well cut up under the throat, the graceful neck, even with the line of the back, and in some instances finely arching, with upright and delicately turned horns—and, in almost every respect, they furnish a perfect beau ideal of *animal* beauty, such as it must do any man good to look at. There is "Matchless" and "Aston Beauty," and "Gay"—all truly "Gay" and "Matchless" "Beauties" in their line. I ought, of course, to think well of "Gay," for she is the mother of my favorite Hereford bull, "Don Quixotte," which I brought from Albany, with my little herd of improved animals, last fall. She is certainly a noble animal, possessing the purest of the "royal blood" of the "royal family" of Herefords, and cost, in England, as I am informed, some two or three years since, 200 guineas, (or $1,000,) which, added to the expense of her importation, makes her stand *high*, at least in the estimation of her spirited importers, and is a pretty good evidence of her real worth. "Major," the grandsire of "Don Quixotte," (and of which animal Mr. T. C. Peters, writing from London, said—"There is no better in England; and it is no disparagement to our best breeders to say that he has not his superior in the Union") was purchased in England in 1841, by Messrs. Corning and Sotham, for 400 guineas, (or $2,000,) but died on the passage to this country. They were fortunate, however, in securing one of his progeny—"*Trojan*," a splendid and most perfect animal, which they now have in all his "prime and glory"—and I congratulate myself as equally fortunate in being able to possess myself of one of "Trojan's" "most promising sons." "Sir George" is also a fine bull, and his progeny will run "neck-and-neck" with that of "Trojan" in point of excellence. But I must not forget to notice "Eliza," a half Hereford and half short horn cow. which Messrs. C. and S. are feeding for the butcher; she is already one of the finest specimens of a beef creature that I have ever seen walk on "all-fours"—not excepting Rust's celebrated fat ox. It would make an Englishman's mouth water to look at her.

But I must leave the further description of this noble herd of cattle to hands more competent to do it justice, with the single remark, that the Hon. Erastus Corning, to whose liberality and enterprise (aided by the personal exertions and practical experience of Mr. Sotham, a thorough-bred English herdsman,) this country is so much indebted for the importation of this valuable stock, is deserving the lasting gratitude, not only, but the still more tangible reward of the friends of agricultural improvement throughout the country; and I doubt not they will ere long be awarded.

On my way home from Albany I stopped over a day at Auburn, and, in company with my friend W., I visited our agricultural friend, J. M. Sherwood, Esq., at his beautiful cottage residence, in the suburbs of that lovely village; and before proceeding to a notice of his fine stock of Shorthorns, I must speak of his charming cottage, which was finished the last autumn. It is in the rural gothic order—a style which, above all others, I most admire for a rural residence. I may, perhaps, have regarded this with the more interest from the fact that I had commenced building on my farm, just before I left home, my "Rural home cottage," which is very similar in style, though somewhat of an improvement, as I think, upon his, in some of its outlines as well as details, and yet less expensive in the main. There is something in this style of architecture so appropriate in form and so picturesque in expression, when blended with rural scenery, that its effects must always be exceedingly pleasing to the eye of every person of taste. The jutting gables, with their ornamented tracery and pointed finials—the expressive dormer windows, breaking out of the roof, with their gothic-arch finish—the tall cluster chimney-tops, neatly ornamented—the pleasant veranda, and the pretty bay-window—all blend most harmoniously with the varied forms of the various kinds of trees and shrubbery that are indispensable in completing the beauty and comforts of a rural residence. And when these latter appendages shall have more fully developed themselves about the cottage and grounds of Col. Sherwood, his residence will present almost a perfect beau ideal of rural beauty and domestic comfort.

But what shall I say of the Colonel's noble herd of Durhams? They have so often been extolled, and have carried off so many prizes at our State shows, that any thing I can say about them may seem superfluous, and yet I cannot well avoid giving them a passing notice. The noble "Archer" stands at the head of the herd—still unrivalled in beauty of form and majestic bearing by any of his progeny; he carried off the first prize at the State fair at Syracuse, and I have always looked upon him as almost a perfect model of symmetry and beauty; and when I have alternately compared him with Mr. Vail's "Wellington" and "Meteor," and Mr. Prentice's "Fairfax"—so equally are they balanced in all the perfections that constitute a faultless animal, that I could only make up my mind that the one I looked at *last* appeared the *best*. The Colonel has also some most beautiful cows—there is "Stella," and "Daisy," and "Pansey," each vieing with the other in claiming the distinction of "reigning belle" of the herd. There are a large number of other fine animals—some very superior calves and young stock among the rest. Col. S. has likewise some handsome Southdown sheep, and some very fine Merinos, from the flock of Mr. Blakeslee, of Connecticut; they are handsomely formed animals, and their wool is of a very superior quality and fineness. All of the fences, buildings, fixtures &c., about the Colonel's premises show him to be a systemrtic and thorough farmer. Would that we had many more such in the State.

T. H. H.

"*Rural Home Farm*," *Rochester*, *Feb.* 20, 1845.

CULTURE OF WATER MELONS.

Mr. Tucker—Last season I raised a fine lot of water mellons, having (with others about here) failed for many years. Having removed the soil sufficiently to receive about half a bushel of horse stable manure and leached ashes, which were thrown in for the hill and levelled; about the same quantity of road side gravel, lodged at the foot of the hill by water, was also thrown in, and some of the soil thrown back, in which the seeds were planted; then over the hill a small quantity of broken charcoal was scattered. The plants were occasionally watered with wash water, or from the sink. The melons were fine and many of them weighed ten or twelve pounds.

J. A. Rhodes.

Bridgewater, *March* 10, 1845.

"By rubbing an unripe apple upon a grater, and washing the portion which is rasped off, in cold water, starch will also be collected, which starch, had the apple been suffered to remain dead ripe, would have been converted into sugar, forming the sweet juice of the fruit."

FARM FOR SALE—A BARGAIN.

A SPLENDID FARM FOR SALE AT AUCTION, with all the stock, farming utensils, furniture, &c. &c. The beautiful and valuable farm of Violet Bank, (situated in Delaware County, N. Y., seven miles from Delhi and four miles from Andes—one mile from the Presbyterian Church of Cabin Hill, and half a mile from the school,) with all the stock, consisting of horses, cows, sheep, pigs and young cattle, harnesses, a superior iron axle wagon but little worn, together with a full set of farming utensils, household furniture, beds, bedding, bedsteads, chairs, tables, parlor and cooking stoves, and a variety of other articles.

The buildings on this farm are almost all new, and consist of a frame dwelling house, plastered and hard finished, wagon house and horse stable also near, large barn, cow stable and wood-house; This farm is well watered, and measures 130 acres, two-thirds of which is under cultivation, and one-third well timbered, and would prove a desirable location for an industrious and enterprising farmer.

The farm, with the buildings, will be sold at auction, WITHOUT RESERVE, at Mr. Edgarton's Tavern in Delhi, on Wednesday, the 9th day of April next, at 1 o'clock, P. M.

The stock, furniture, &c. &c. will be sold on the premises on Thursday, the 10th of April, (the following day,) where the whole can be examined any day before the sale. For terms, which will be liberal, apply to Mr. D. CASE, Delhi, or to Mr. John IMRIE, Cahin Hill.

April 1, 1845—1t.

LINNÆAN BOTANIC GARDEN AND NURSERY.

LATE PRINCE'S,

Flushing, L. I., near New-York.

THE new proprietors of this ancient and celebrated Nursery, late of WILLIAM PRINCE, deceased, and exclusively designated by the above title for nearly fifty years, offer for sale, at reduced prices, a more extensive variety of FRUIT and ORNAMENTAL TREES, SHRUBS, VINES, PLANTS, &c., than can be found in any other Nursery in the United States, and the genuineness of which may be depended upon; and they will unremittingly endeavor to merit the confidence and patronage of the public, by integrity and liberality in dealing, and moderation in charges.

DESCRIPTIVE CATALOGUES, with directions for planting and culture, furnished gratis on application to the New Proprietors, by mail, post paid, and orders promptly executed.

WINTER & CO.
Flushing, L. I., April 1, 1845—1t. Proprietors.

AYRSHIRES.

FOR SALE, an imported Ayrshire bull and two imported Ayrshire cows, also three young Ayrshire bulls—they were selected in Scotland, and their superiors are not in this country. Apply, post-paid, to MARK H. NEWMAN,
April 1, 1845—1t. 109 Broadway, New-York.

PERUVIAN GUANO.

THE subscriber will keep constantly on hand for sale, in large or small quantities, the best quality of genuine Peruvian Guano.

Price in single bags, weighing from 125 to 175 lbs., 2½ cts. per lb.
for half a ton to one ton,.................. 2¼ " "
over one ton to five tons,.................. 2 1-8 " "

A. B. ALLEN,
March 20, 1845—2t. 205, Broadway, New-York.

WANTS A SITUATION.

A MAN with a family wants a situation as farmer or gardener. He was brought up to farming in Galloway, Scotland, and considers himself well acquainted with the different branches of agriculture practiced both in that country and this. He has been several years in this country, and can give satisfactory references in this vicinity. His wife is well acquainted with dairying. Address W. McRoberts, care of D. LATHROP, Washington-street, Albany.

March 20, 1845—1t *

HORSE POWERS AND THRESHING MACHINES.

THE undersigned takes this opportunity to give notice that an important improvement has just been added to the celebrated "Warren's Portable Horse Power Machines," which secures to these valuable inventions a continued superiority in all respects.

The particular attention of Southern and Western merchants, as well as Planters and Farmers, is specially invited. Such testimonials as follows, are in hand received recently in ordinary correspondence, viz:—"The machine has given entire satisfaction, and is considered by all who have seen it, the best they have ever met with for threshing fast and clean, preserving the straw whole. and from the simplicity of its construction, being little liable to get out of order."

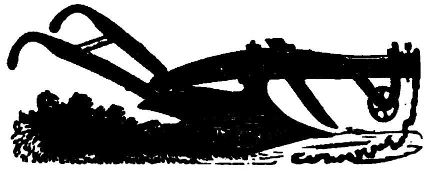
Old prices still continued, viz:—two horsepower and thresher together, only $75—four horse, $110—one horse, $60—threshers alone, $20, $25 and $30—Leather bands, $4 and $5.

Liberal deductions made to those who purchase in quantities, for sale. Terms—cash, produce, or approved paper, on delivery in this city.

H. BARTLETT,
Successors to L. Bostwick & Co.
146 Front-street, New-York.

N. B.—Orders for Platt's celebrated Portable Mill, for hand, horse or other power, can be supplied at the exclusive agency in this city. The undersigned offers his agency also to procure for agriculturists and others, the most approved machines and implements, manures, seeds, &c. at moderate commission. H. BARTLETT.

April 1, 1845—1t.



QUINCY HALL
AGRICULTURAL WARE-HOUSE AND SEED STORE, BOSTON,

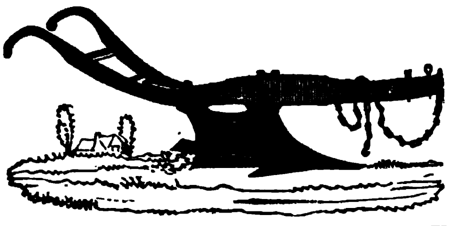
BY RUGGLES, NOURSE & MASON,

MANUFACTURERS of the distinguished WORCESTER PLOWS, among which, are a variety of patterns and sizes, adapted to all kinds and conditions of soil and modes of culture throughout the several States, and including the several sizes of their celebrated EAGLE pattern, and the genuine Scotch SUBSOIL Plows.

They hazard nothing in saying that with large additions to their warehouse and stock, they now offer to the agricultural public and dealers, a much greater assortment of agricultural and horticultural implements, machines, and seeds, than can be found at any house in the Union; all of which are selected from the most approved kinds found in this country and Europe.

All communications and orders from a distance, will receive prompt attention, and goods safely packed.

March 20, 1845—2t*



WORCESTER EAGLE AND SUB-SOIL PLOWS.

THE subscribers have now on hand a full assortment of the above superior Plows, manufactured by RUGGLES, NOURSE & MASON of Worcester, Mass. It is acknowledged by all who have made the experiment, that the "Improved Eagle," is the best Field Plow at present in use.

The advantage of Sub-soil plowing, is now very generally admitted, and the plows made for this purpose by Ruggles, Nourse & Mason, are constructed upon the most approved principles.

Side Hill Plows, Cultivators, Straw and Root Cutters, and a general assortment of farming implements, for sale at the Hardware store of PRUYN, WILSON & VOSBURGH,
Albany, April 1, 1845—2t. 39 State-street.

PREMIUM EAGLE, SUBSOIL, AND OTHER PLOWS.

THE subscriber having been appointed sole Agent in this city, for the sale of the celebrated Premium Plows, made by Ruggles, Nourse & Mason, of Worcester, Massachusetts, now offers them for sale at the manufacturer's home prices. They are calculated alike for the Northern Farmer and Southern Planter, and embrace all varieties. Price from $3,50 to $11,50.

The great number of premiums which these plows have obtained at the most important plowing matches, and the universal satisfaction they have given wherever introduced, renders it unnecessary to particularise their merits. They are made of the best materials, are highly finished, and combine light weight and easy draft, with great strength and durability. Though the first price is higher than the common kinds, they do their work in so superior a manner, and with a draft so much easier for the team, that they are universally preferred where known. It has been repeatedly proved that a single pair of oxen, horses, or good mules attached to the Eagle plow, No. 1, in any reasonably friable soil, will easily turn a furrow of 6 inches deep by 12 inches wide. In addition to the above good qualities, being made of the best materials and highly finished, these plows last much longer than the common kind; they are consequently much the cheapest in the end.

SUPERIOR HAND AND HORSE CULTIVATORS. These are made at the same manufactory. Price from $3 to $6,50.

A NEW IMPROVED DRILLING MACHINE. This is calculated for sowing all kinds of seeds. Price, $10. A. B. ALLEN,
March 20, 1845—2t. 205 Broadway, New-York.

PLOWS.

AT the Syracuse Agricultural Warehouse and Seed Store, can be obtained Delano's celebrated Diamond Plow made by Mr Howard Delano, of Mottville, for the sale of which, we are sole agents for this town. Price, $6 for plain plow, and $10 for the wheel, coulter and clevey. Also, a full assortment of the well known Massachusetts Plow, made by Ruggles, Nourse & Mason of Worcester. 300 bushels seed barley, 300 do. pure Marrowfat Peas, 100 do. Clover seed, 150 do. Timothy, and a general assortment of all the varieties of seed sown by the tillers of the soil; Cultivators, corn plows, Wheel-barrows, Churns, Cheese Tubs, Cheese Cloth, Hoops and Presses, Hoes, Manure, Hay and Barley Forks, Shovels and Spades; and a very great variety of articles appertaining to the interest of the husbandman. Orders promptly executed.

Syracuse, April, 1845. FOSTER & NORTH.

VALUABLE WORKS, BY A. J. DOWNING, Esq.

ON LANDSCAPE GARDENING.—A Treatise on Landscape Gardening: adapted to North America, with a view to the improvement of Country Residences. Comprising historical notices, and general principles of the art; directions for laying out grounds, and arranging plantations; description and cultivation of hardy trees; decorative accompaniments to the house and grounds; formation of pieces of artificial water, flower-gardens, etc.; with remarks on Rural Architecture. New edition, with large additions and improvements, and many new and beautiful illustrations By A. J. Downing. 1 large vol. 8 vo. $3,50.

"This volume, the first American Treatise on this subject, will at once take the rank of THE standard work."—[Silliman's Journal.]

"Downing's Landscape Gardening is a masterly work of its kind—more especially considering that the art is yet in its infancy in America."—[Loudon's Gardener's Magazine.]

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N. B. Scions of the "Northern Spy" apple, and other choice varieties, will be furnished in small quantities.

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EXTENSIVE SALE OF IMPROVED SHORT HORNED CATTLE.

HAVING become over-stocked, I find myself under the necessity, for the first time, of publicly offering my cattle for sale; and that the opportunity to purchase fine animals may be made the more inviting, I propose to put in my ENTIRE HERD—such a herd of Improved Short Horns as has never before, perhaps, been offered by any individual in this country. The sale will embrace about fifty animals, Bulls, Cows and Heifers; all, either imported, or the immediate descendants of those which were so, and of perfect pedigree. Those imported, were from several of the best stocks in England, selected either by myself or my friends.

It is sometimes the practice at sales of this kind, where the interest involved is considerable, for the proprietor to protect himself by buy bidders, or some other kind of management, or for the owner to stop the sale if offers do not come up to his expectations or the requirements of his interest. Such practices have a tendency to lessen the interest in public sales of this character, especially with those who cannot attend without considerable personal inconvenience. But in this case, assurances are given that no disappointment shall arise to the company from either of the causes mentioned, and a good degree of confidence is felt that there will be no dissatisfaction from the character of the cattle themselves. They shall all be submitted to the company, and sold at such prices as they choose to give, without any covert machinery, effort, or understanding with any persons; reserving to myself only the privilege of bidding openly on three or four animals, which shall first be designated. This reservation is made that I may not get entirely out of the stock of some particular families which I highly esteem, and that could not probably be replaced.

A full catalogue will be prepared and inserted in the May number of the Cultivator.

The sale will take place at Mount Hope, one mile south of the city of Albany, on Wednesday, the 25th day of June next, at 10 o'clock A. M. E. P. PRENTICE.

Mount Hope, near Albany, March 15, 1845.

☞ Gentlemen from a distance, who wish to obtain stock at the above mentioned sale, and may find it inconvenient to attend in person, are informed that the subscriber will make purchases for those by whom he may be authorized. They can state the sum at which bids should be limited, and if convenient, designate the animals they would prefer; or give such general instructions as they may deem proper, under the assurance that they will be strictly adhered to

SANFORD HOWARD.

Cultivator Office, Albany, March 15, 1845.

SALE OF FULL BLOODED NORMAN HORSES.

THE subscriber having relinquished farming, will offer at public vendue, at his farm in Moorestown, Burlington county, New-Jersey, nine miles from Philadelphia, on Tuesday, the 20th of May next, his entire stock of NORMAN HORSES, consisting of two Imported Stallions, "Diligence" and "Buonaparte;" two Imported Mares—three full blooded Stud Colts, one, two and four years old—two full blooded Fillies, three and four years old—two Fillies by "Diligence," from a half blood Canadian Mare, three and four years old, and one Filly four years old, by "Diligence," from a well bred English mare, broke and kind to harness.

The undersigned deems it unnecessary to speak at large of the qualities of these horses, so much having been said of this particular importation, (which is believed to be the only one ever made to the United States,) in all the principal agricultural papers. In a few words, they are the Canada Horse, on a larger scale, combining the form, activity and hardihood of that well known race, with greater size and strength. "Diligence" has been a remarkably successful stallion; he has been exhibited at the Fairs of the Pennsylvania and New-York Agricultural Societies, where he was not entitled to compete for the premiums, but received the highest encomiums from the Committees. At the Fair of the American Institute, in New-York city in October last, he received the Silver Medal of the Institute.

It is expected that a large number of the colts of "Diligence" will be on the ground on the day of sale, some of which, no doubt, may be purchased. EDWARD HARRIS.

Moorestown, Burlington Co., N. J., March 15, 1845—2t.

DURHAM BULL AND HEIFERS FOR SALE.

THE subscriber offers for sale at moderate prices, during the present month, his full blood 4 years old Durham bull, Don Pedro; bred from the stock of Francis Rotch, (a fine animal,) and a number of choice heifers, full blood and grade, one and two years old. Also, a good second hand lumber wagon, cheap. First call, first served. Should the bull not be sold, I would exchange him for another of the same breed, having now had him with my cows for three years, and wishing to change. DOLPHUS SKINNER.

Deerfield, (near Utica,) April 1, 1845—1t*

ADVERTISEMENT.

POUDRETTE of the best quality, prepared by the New-York Poudrette Company, may be had on application to the undersigned, No. 23 Chamber-street, New-York. Poudrette prepared by this company, was used in larger quantities in 1844 than during any previous season, and with very general success, as may be seen by reference to the numerous reports in relation to it now in my possession, a few of which may be found in the Cultivator for April. The price is, as last year, $5 for three barrels, and $15 for ten barrels, or thirty cents a bushel in bulk at the Factory. ☞ Orders by mail, enclosing the cash, will be as promptly and carefully attended to, as if made personally, by D. K. MINOR,

April 1, 1845—2t. 23 Chambers-street, New-York.

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BOMMER'S METHOD AT REDUCED PRICES.

THE cheapness and expedition, by which manure may be manufactured with the Bommer process, and the various substances to which it may be successfully and advantageously applied, render it a valuable acquisition to every farmer that will adopt it. To facilitate its general introduction, it is proposed to sell the method uniformly at five dollars. Any individual shall be promptly furnished with a copy of the method without charge of postage, who shall remit the cash by mail to the general agent. It is intended to employ a competent travelling agent, as soon as practicable, in each county. My general agency includes the States of New-York, New Jersey, Virginia, Delaware, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine and Vermont.

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Wanted immediately, 100 active, intelligent and enterprising men to engage as travelling agents in the above mentioned States. Unquestionable testimonials will be required; and responsible securities will be expected, as guarantees, for the faithful discharge of the duties of the appointment. Persons of suitable qualifications, will find this both a useful and lucrative employment. Applications, if by mail, should be post paid and directed to me, at Westville, New Haven Co. Connecticut. ELI BARNETT, General Agent.

Westville, March 1, 1845.

AMERICAN Farmers Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale a the office of "The Cultivator."

THE ROCHESTER NURSERY—BY S. MOULSON,

CONTAINS a splendid collection of fruit trees, the Northern Spy, St. Lawrence apples, and most of the new varieties worthy of the notice of connoisseurs, together with the most approved kinds of cherries, plums, pears, &c., also hardy shrubs, evergreens, &c., orders respectfully solicited. Trees packed suitable for long distances, when required. Six to twelve months credit given for approved notes on interest. S. MOULSON.

Rochester, March 20, 1846—1t.

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PATENT Centre Draught Self Sharpening Ploughs, from $6 to $13 each—Subsoil Ploughs at $8, $10, and $12 each—Corn Planters $12 to $15—Straw Cutters in variety—Meat Cutters and Stuffers—together with every implement wanted on the farm or garden. Also a full assortment of Vegetable, Flower and Field Seeds, crop of 1844, warranted of the best quality and true to name; among them are several new and superior kinds, as Seymour's Giant Celery, Union Head Lettuce, &c. &c. Fruit Trees, Bulbous Roots, &c. for sale at the Philadelphia Agricultural Ware House and Seed Store No. 194 1-2 Market Street, Phil'a, by D. O. PROUTY.

January 20—2t.

SEED STORE AND AGRICULTURAL WARE-HOUSE.

OUR Spring supply of seeds is now ready, and we shall be happy to receive orders for Field or Garden Seeds, of every description. Black Sea, Italian and Siberian Spring Wheat, Barley, Peas, Clover Seed, Timothy Seed, Seed Corn, Shaker and other Garden seeds, &c. Also, a full assortment of farming tools selected from the best manufacturers in the country. Hoes, Scythes, Forks, &c. cheap by the dozen. E. COMSTOCK.

Rome, Oneida county, March 1, 1845.

ROME PLOW FACTORY.

THE Diamond Plow which received the first premium at the State Fair at Poughkeepsie, as well as at every County Fair where it has been shown, is manufactured by the subscribers in the very best style, and for sale at wholesale or retail. Also, some eight or ten patterns of approved plans, as well as Scrapers, Cultivators, Cradles, Mott's Agricultural Furnaces, &c. Orders from abroad promptly filled, and a liberal discount to dealers.

March 1, 1845. BRAINERD & COMSTOCK

Rome, Oneida county.

ALBANY SEED STORE.

THE proprietor is now receiving from his seed growers, a full and complete assortment of American Garden Seeds, all of which are selected with care, being grown from the best varieties of vegetables to be found in the country; also European seeds, plants and flower seeds from the best establishments in Europe and America.

Fruit trees of all the choicest kinds furnished to order at the lowest market prices, and warranted true as represented. Agricultural and horticultural implements of American and European manufacture. Also, Root-Slicers, Corn-Shellers, Straw-Cutters, &c. Those who wish to purchase or examine are respectfully invited to call.

W. THORBURN, Seedsman & Florist.

March 1, 1846—3 t. corner of Broadway and Maiden Lane.

FOR SALE.

THE splendid two years old Bull "Marius," belonging to Thomas Oliver Esq., of Riversdale, Sing Sing. Marius was imported in 1843 from the far famed stock of Earl Spencer, of Wiseton, Northamptonshire, and was subsequently exhibited at the State fair, held at Po'keepsie, in 1844, at which place he took the first premium of the yearlings in the short-horned class, as also that of the year olds against all classes then exhibited. Subsequently at the Fair of the American Institute last autumn, he was again awarded the first prize for the yearlings of his class. He is a Roan Bull of the most complete symmetry, and although only two years old on the 5th of last Dec., weighs about 20 cwt.

Pedigree—Marius, a Roan Bull—calved December 5th, 1842, got by Roman, dam by Waverly—gr. dam by Satalite—gr. g. dam by Cato—gr. g. g. dam by St. John—gr. g. g. g. dam by Chilton—gr. g. g. g. g. dam by the White Bull—gr. g. g. g. g. gr. dam by Favorite—gr. g. g. g. g. g. gr. dam by Duke. Signed, George Earl Spencer.

Letters, post paid, may be addressed to the subscriber.

Sing-Sing, N. Y. Jan. 28, 1845.—tf. JOHN LUMSDEN.

CONNECTICUT SEED LEAF TOBACCO SEED.

THE true broad and narrow Seed Leaf Tobacco Seed, selected from growth of 1844, for sale at the Seed Store of the Hartford County Agricultural Society, by E W. BULL, Seedsman.

Feb. 1—3t.

AGRICULTURAL CHEMISTRY AND GEOLOGY.

CATECHISM of Agricultural Chemistry and Geology, by James F. W. Johnston, M. A. F. R. S. S., L. & E. with an Introduction by John Pitkin Norton of Farmington, Ct., from the 8th English edition with notes and additions by the author, prepared expressly for this edition.

N. B.—The above work, first published a year ago, has already gone through eight large editions, and is now used in 3,000 schools in Ireland, and nearly all the schools in Scotland. The present edition, improved from the eighth, and adapted to this country, is now ready—price 18¾ cents. A liberal discount allowed to the trade. All orders promptly attended to.

ERASTUS H. PEASE,

Albany, March 1, 1845. Publisher, 82 State-street.

Printed at the Steam Press of C. Van Benthuysen & Co.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. II. ALBANY, MAY, 1845. No. 5.

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☞ This paper is subject to newspaper postage only, being one cent within the State, or within 100 miles of Albany, and 1½ cent for any greater distance.

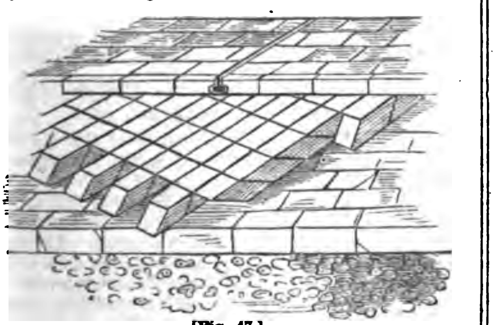
Foreign Correspondence.

MR. HORSFORD'S LETTERS—No. III.

Wood Pavements in London—Journey from London to Giessen—The Vineyards of the Rhine.

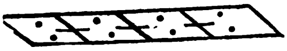
Giessen, Germany, Dec. 1844.

MR. TUCKER—In Oxford street, Cheapside, and several other streets of London, the wood paving is so excellent that I inquired the nature of the materials used, and gave a little time to ascertaining the manner in which the blocks are prepared and laid down. Deal is sawed into six inch square scantling, and then the scantling sawed diagonally into blocks. These are then pinned together in parcels about a yard square, and additional strength given by a system of little staples. The larger parcels are then laid down and also firmly bound together. Alternate rows are inclined in opposite directions, and the blocks are set diagonally across the street. The bed upon which the pavement rests, is rendered exceedingly firm by excavation to the depth of three or four feet, and then filling with stone first and then sand.



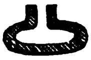
[Fig. 47.]

Fig. 47 shows the pavement, and the foundation. It presents also the blind gutters, a cast iron trough, a cross section of which is given in fig. 49.



[Fig. 48.]

Fig. 48 shows the mode of connection by staples and pins.



[Fig. 49.]

The paving wi[illegible] wood is extending through the great thorou[illegible]fares, and I was told, would probably replace the stone from the Bank to Regent's Park, in a few years. It differs from the pavement in New-York in three particulars which I now remember. The blocks are smaller, of a different shape, and differently disposed. They are inclined, while the blocks of the pavement in Nassau street, and generally all that I had before seen, are vertical. This alternate leaning in one direction and the other, would prevent displacement, while it would permit the rain, not descending to the gutters, an easier passage between them.

The stone pavements are generally better than those of New-York and most American cities, in that the blocks are rectangular, presenting a more uniform and flat surface, than can be made with round stones.

From London bridge, I embarked in Her Majesty's steamer Earl Liverpool, for Ostende, at three o'clock in the morning. A passage of thirteen hours brought me to the Belgian wharf, and I was on the continent. The land is just above the surface of the sea, and it was no easy task to distinguish in the mist of the evening, the outline of the coast from a thousand phases the sky near the horizon sometimes assumes. Ten days in England, had extinguished the capacity of being surprised at any thing novel. Here were the high pointed roofs of which there remain a few humble representations in Broadway, Albany. Soldiery in uniform at every step; the hotels! what a chasm between them and those we had just left. Whole congregations of people going from morning service in church, to pass the day in fishing and their various avocations; females engaged in almost every kind of manual labor, with spades and hoes and baskets, as well as the less severe kinds [illegible] service; all these seemed quite as a matter of course, and it is difficult to recall the impressions produced by them at first sight.

The rail-road arrangements for the safety of baggage, were good; a ticket was pasted on the trunk, and a duplicate given to the owner of the baggage; and as with the "check" plan with us, no farther care was required. The cars do not compare with those recently introduced in America, between Boston and Albany, and between New-York and Philadelphia. At every crossing place of a highway, we found a man in uniform and in wooden shoes, behind whom a cross-bar shut up the road. Long rows of low trees seemed to divide the fields and farms from each other. Windmills for grinding corn, and for pumping surplus water beyond the dykes, were constantly in view. I counted sixteen at one time in the range of vision from one side of the car. Here and there, a great pile of bricks in the form of a mansion, from which avenues, through rows of trees, lead in various directions, seemed the residence of a Belgian nobleman. The cultivation with rude plows and spades, appeared to be pretty thorough, though I could tell little about it, from the rapidity of our movement, and particularly from the lateness of the season, (Nov.)

In approaching Brussels, at the conclusion of a four hour's ride, I saw the first considerable hill on the continent. Ghent, which we passed somewhere about half way from Ostende, is upon a knoll, elevated a few feet above the surrounding plain. Brussels rewarded very richly, the day we were able to give it. The beauty of the park, near which

> "There was a sound of revelry by night,
> And Belgium's capital had gathered there,
> Her beauty and her chivaly; and bright
> The lamps shone o'er fair women and brave men."

is exceeded by nothing I had previously seen. Its statues, bowers, walks, and lofty trees, were perfectly in keeping with the rows of beautiful buildings all round. Nearly all of them are white, being covered with a kind of stucco, which gives to them an expression of great neatness. The Cathedral is a stupendous pile, upon which every body remarks as a matter of course. The Town Hall is equally an object of attraction. The manufactories from which the famed Brussels lace is derived, are open to strangers; and the poor girls, whose skill in the production of the exquisitely fine articles, is attained by working in rooms from which nearly all light is excluded, may be seen at their toil.

From the capital of Belgium for many miles toward Liege, the country is very similar to that between Ostende and Brussels—low, plain, well tilled, irregularly shaped fields of yellowish loam. Liege occupies the inclinations about a grand amphitheatre, and is the commencement of a section of the Vervier railway, upon which are most beautiful specimens of architecture, in bridges, tunnels, extended embankments, &c. I am safe in saying there could not have been less than twenty tunnels, and some of them a full mile in length, in the section between Liege and the Prussian frontier at Aix La Chapelle. The viaducts are of hewn stone, and were massive and tasteful in the highest degree. It served to remind me of the "cut" through Mt. Washington, eastward from Pittsfield, though the Vervier railway has been constructed at a far greater expense.

The crossing of the confines of Prussia at Aix La Chapelle, is characterized by the examination of luggage and *viseing* of passports. Charlemagne's resting place, we had no time to see, and we were denied a visit to the interesting points about this town, as well as Waterloo and Cologne, by the fact that the fall course in Chemistry at Giessen, had already been in progress a fortnight.

At Cologne, a most strongly fortified town, I looked for the first time upon the Rhine; a stream with low banks, and about as wide as the Hudson at Cattskill. From Cologne to Bonn, the banks are skirted through much of the distance with trees, and the scenery is about as interesting as that along a bayou in Texas, or a canal in a prairie. On one side, a tow path, along which, horses to the number of eight or ten, (eleven in one instance,) are walking with a long boat in train. The vessels are laden with all kinds of merchandise, coal, &c., and are on their way from the lower towns on the Rhine to Coblentz, Mayence, and the intervening villages. Besides these, freight boats, (which are supplied with masts and sails,) there are skiffs and barges, long and narrow, which seat from twenty to thirty men, women and children, in addition to provisions and luggage for a long voyage. Of the rafts of timber on the Rhine, every body has heard, and many have doubted the accuracy of representations. Several that I saw were of such gigantic dimensions, that I almost fear to name them. On one, there were about fifty men, whose labors consisted in directing the course of the raft. Dwellings, in which the relief watch ate and slept, were erected at four different places on the raft, and its whole area must have been three hundred by four hundred and fifty feet. The guide books mention them as being manned by from 400 to 500 men, but I saw nothing like so many. The number is probably augmented to this extent when the raft reaches the lower Rhine, and is rowed instead of being floated and merely guided. Pigs and poultry, with the stock of provisions, are kept on board. The timber is from the sources of the Rhine. It consists of straight trunks like masts, and is cut on the tops of mountains about these tributaries, where it is made to slide down, after the manner of the log and board slides on the Alleghany and Genesee. In addition to the tow path, there is on the left bank, a fine McAdam road, commenced by the Romans.

At Bonn, the vineyards first appear. This is a walled town, and the seat of one of the first Universities on the continent. Here Schlegel was a professor; and here now, is Godfreys, the writer upon organic remains, whose compeer in America, has the Palæontology of New-York in charge. There are here other agricultural productions more numerous than the vines, but as the river is ascended, the proportion of land appropriated to the growth of the grape increases. The vines are permitted to grow to the height of about three feet, and are each tied to a rod of the same altitude. The rows are not more than two feet apart, and the individual grape vines in each row, much nearer. All the leaves were quite yellow in the advanced season, and the fruit had been gathered about a month previous. Some of the grapes which I procured, and from which much of the light wine about Bingen is expressed, were very like the Summer Sweet Water in flavor, though less in size. From a few miles above Bonn, all the way to Mayence, about a hundred and twenty miles, the hills and mountains are every where overspread with vineyards. Where the hills are very steep, the declivity is terraced; and I counted in one place thirty-six stone wall terraces, one above another. There are indeed few hill-sides not terraced. In some places, the grape vines are grown in baskets, which are filled with muck and lodged in some niche of a cliff. Zigzag pathways extend from bottom to top, and along these, I saw numbers of the peasantry carrying the earth with which to sustain the vines. This labor I understand must be frequently repeated, or the grapes are unproductive.

Will your readers fancy a wider and deeper river than the Hudson, flowing through continuous *Highlands*, for a hundred miles. Then all these Highlands from the base to the summit, and as far up the lateral ravines as the eye can reach; nothing but rows of grape vines and walled terraces; then these rows of vines having a direction corresponding to the most direct line of descent, in order, I suppose, that the rain may readily flow away; then a distinct limit to every five or six or twenty square rods, marking the possessions of a single individual, and giving the appearance of a beautiful garden without bounds, and they may have some idea of the vintage of the Rhine. I stood with my friend, all absorbed with these features of the scenery, but subdued with the associations that crowded upon me, I looked upon others, as immortalized in Childe Harold, and renowned in history from before the Christian era to the close of Napoleon's career. The passes, the castles, towers, fortresses, the ancient towns so numerous as to scarcely afford time for enumeration as you pass them—cannot be described. Here is a fortress from which a robber compelled vessels ascending the Rhine, to pay tribute. It caps and flanks a mountain, as if Anthony's Nose, near West Point, were tunneled and walled and crowned with stupendous masonry. Here is the place where Constantine saw the cross; here the convents of the times of the Crusades; here the castles and towers of the feudal ages; here the road that Cæsar and his legions trod; and here an abutment of his famous bridge; and here—but I cannot write of them. I have determined upon passing a part at least of my next summer's vacation among the vineyards and wonders of the Rhine, between Cologne and Switzerland, when I shall hope to learn among other things, the secret of the vine culture. Truly yours, E. N. HORSFORD.

MR. MITCHELL'S LETTERS—No. V.

Trip from Liverpool to Jersey—The Markets—English Farmeries—Food of Laborers, &c.

St. Hiliers, Jersey, Feb. 1, 1845.

LUTHER TUCKER, Esq.—In my last, for Liverpool to Gravesend in closing paragraph, read "Liverpool to Plymouth;" and for "vines and pruning books of France," read "orchards and dairies of Jersey." The change of arrangement was made after dispatch of letter. The road to Birmingham, was gone over mostly in the dark of the morning; it not being fairly light in that latitude, till after eight. The grass, I could see, was yielding to the unusual severity of the winter, and assuming the yellow tinge of ours in October. Nor were there wanting, along the way, evidences of bad management, such as foul grass lands, straggling hedges, and imperfect tillage;

contrasting very strangely with the richness and order that encompass it. Sheep, feeding upon turneps, checked off by light wooden hurdles, into patches of a few rods square, were frequently seen throughout the country. Perhaps 20 confined to a patch; the fat sheep being turned on first, the store sheep following, and the remaining bottoms grubbed up with the hoe. Your readers must remember, that there is scarce a day in thirty of a British winter, in which the ground is not as soft as in May; and cabbage beds are made up, and brocoli transplanted under the winter solstice. I saw "Prime Ohio Cheese, just arrived," placarded in a shop window in the center of Birmingham! The market was well stocked with meats and with fish in abundance. From Birmingham to Worcester, was gone over in the evening, but next morning, had (for a wonder in England,) a clear sky, and an April air, to look about the market.

Every man who sells meat in England, pays for a license, and he who sells meat, has no authority *ex officio* to sell fish. Hence, in nine cases in ten, the porkman has no veal, and the poulterer no beef, and the vegetable vender none of either. Each has his own stall, numbered and ticketed, and wares displayed before him in most seducing shapes; from a single chop for 3*d.* to the leg for twice as many shillings, from a penny-worth of beef to the red and golden quarter, from a two-penny bunch of celery, to the bunch for half a crown. So I found them on that Saturday morning, (market day) at Worcester. Every avenue about the market house, and the streets in the neighborhood, were lined with country people, (most of them women,) who had come in upon their donkeys, or in horse carts; some with eggs, some with cabbage; all clamorous for the sale of their commodities. That effected, the shop-keepers, or the stall women, who display all sorts of finery under a range of sheds near by, would relieve them of the few pennies resulting from their sales, and by the middle of the afternoon, the donkeys and the horse-carts are pouring in every direction, home. I was much struck with the peculiarly white appearance of the poultry, of which there was a profusion; the heads were left on, and passed under the wing; the feet also remaining, and trussed ready for the spit. The butter was rich to the eye, and the prettily stamped half pound cake, on my breakfast table, rich to the taste. The Herefordshire beef is preferred in the market, and the Yorkshire cows, I was told, were held in most esteem for the dairy.

Worcestershire is famous for its hop culture; 4,000 acres in the county being annually devoted to that crop. The "Hop market" is a large area, enclosed by high brick walls in the center of the city. On the way to Gloucester, the road passed through some of the plantations. Nothing was at that season to be seen but the poles compactly arranged in stacks, about the fields, and thatched over. The farm houses and cottages in the neighborhood of Worcester, are of every conceivable shape, all thatched, and presenting every variety of peak, window, and chimney top.

In the afternoon, I walked through Spetchley Park, in the neighborhood, and took occasion to look about a quiet farmery stowed away in one of its corners. The buildings screened on three of their sides by thickets of evergreens, and arranged in very picturesque, though as it appeared, very serviceable disorder. The more recently erected of them, were of brick or stone, and slated, the others thatched; all in trim order. The farm house would have been a model in America for fancy town cottages; though its shape sat most gracefully upon its own green plat, (which lies before the door of every cottage in England,) and was separated by a light wood paling, from the broad park beyond. I approached the buildings through the rick yard, where were some dozen of large stacks of wheat, barley, beans, &c. set up two feet from the ground upon stone pillars; underneath, the poultry were scratching after the dropping kernels. In the barn, two laborers were threshing wheat upon a slate floor, with flails similar to those in use with us. Before I left, the threshers suspended labor for dinner; and what was it? Half a barley loaf, and a bit of cheese!—this eaten, squat upon the straw, and moistened with a jug of water, and cut in pieces with their pocket clasp knives. This is no joke; it was their *dinner;* and yet a stone's throw away, lay the three hundred acre park for old oaks to fatten on, and herds of deer to dance over, and scores of hares to trip about, and breed, and die upon. Let our farmers and farm laborers, thank Heaven that they are not set down within the range of such odious contrasts. And yet, and it is a shame to every man in America, who has a spot of land and a soul—these same laborers, dining on barley bread, will save enough of time and of means, to put out the sweet brier at their cottage window, to train the ivy up their chimney side, and to keep the grass green and velvety at their door. What for? Do you say what for? *"Out of the ground, made the Lord God to grow every tree that is pleasant to the sight."* But I must make another letter regarding stall arrangements, drainage, &c., at this farm of Mr. Berkeley's, and half a dozen, I fear, out of a week spent in Devonshire. My next, however, shall be of Jersey.

Yours truly, D. G. Mitchell.

MR. NORTON'S LETTERS—No. X.

Multiplication and Analyses of New Manures—Guano from a new locality.

Lab. of Ag. Chem. Association, Edinburgh, Feb. 27, 1845.

Mr. Editor—As the mind of the agricultural community is becoming fully aroused to the necessity of employing every available means for producing and sustaining a high state of fertility in the soil, it is a natural consequence that the varieties of manures should increase with the demand; and that as new light has been thrown upon the subject, attempts should be made to imitate nature by artificial mixtures. More especially has such been the case in this country since the discovery of guano and the application of nitrate of soda and other saline substances. The farmers certainly cannot fail for lack of a variety from which to choose. Advertisements of artificial guanos better than the natural, of patent inorganic manures, of admirable seed steeps, meet him on every side. Judging from these highly colored pictures, no land can much longer remain barren. A few hundred weight per acre will remedy the worst evils.

Fortunately for the farmer, he is not now obliged to trust wholly to the professions of interested parties; for in chemical analysis rightly applied, he has a weapon fatal to imposition. I may as an illustration, give an instance which has lately fallen under my observation in this Laboratory. A manure entitled the "Cornwall Patent Manure," has attracted much attention for some months past, and circulars have been distributed, setting forth its virtues in unmeasured terms. One of them is before me, in which it is said "to have an admirable effect upon wheat, oats, barley, beans, peas, cabbage, potatoes, turneps, carrots, &c; to be an excellent top dressing for grass, and with the rain water, to form a solution destructive to animal life, destroying grubs and worms, to possess all the essential qualities of phosphate of lime, with the advantage of exerting a powerful chemical action in decomposing the rocks and soil, thereby affording potash and soluble silicates."

These are only a part of its alleged virtues, and it must be confessed that they make a goodly show. Unfortunately, however, for the credibility of such statements in this part of the country, a sample of the manure was sent by a gentleman not connected with its manufacture, to this Laboratory for analysis. The result was as follows:

Carbonate of lime,	69.76	per ct.
Hydrate of lime,	9.37	
Sulphate of lime,	0.43	
Common salt,	0.34	
Oxide of iron,	1.67	
Alumina,	1.93	
Water,	0.65	
Insoluble siliceous matter,	15.46	
	99.61	

What a falling off is here. We have every reason to suppose that this was a fair average specimen; if so, this boasted manure is seen to be no better than some of the best marls. A great portion of it is probably shell sand, and it will be especially noticed after the above puff, that there are absolutely no *phosphates.* The whole bears evidence of having been subjected to heat, and in the insoluble part, there were some small white lumps of fused substances which seemed to indicate that a little silicate of lime or soda, had been added. An analysis of this manure has been made for the company by some chemists at Liverpool, and their report is quite favorable. They especially mention the favorable effects to be expected from the soluble silicates; now it happens that there are no *soluble silicates*. They probably obtained silica by fusing the insoluble portion, but that silica existing as silicate of lime in the manure, was not in a state to be immediately taken up by plants. Without in the least degree impugning the skill of these gentlemen as chemists, it may be doubted whether they have any knowledge of agricultural chemistry. The science often suffers in this way from the assertions of those who have not sufficiently studied its laws. There can be no doubt that artificial manures *may* be made equal to the natural; and when the farmer learns to guard himself by the light of well directed science, the dealer will be forced into honesty.

I have spoken above of the silicate of lime. This is a combination of silica (or quartz,) with lime. It is in some rocks present in large quantity, and slowly decomposing, furnishes a constant, though not abundant supply of both silica and lime. Prof. Johnston in his Lectures, p. 608, speaks of the first slag which is obtained at the iron smelting furnaces; it consists almost entirely of silicate of lime. He recommends that this be broken up and spread over the soil where lime is scarce. In a peaty or boggy soil, where vegetable acids abound, it would decompose more speedily.

As I am upon the subject of manures, I may give the analysis of a guano from a new locality, Saldanha Bay, within the British possessions at the Cape of Good Hope. It contains

Water,....................................	3.92 per ct.
Organic matter and ammoniacal salts,......	24.70
Common salt and sulphate and phosphate of soda and potash,......................	8.77
Phosphates of lime and magnesia,...........	61 15
Insoluble siliceous matters,................	1.27
	99.81

This guano is light in color and dry, like the Peruvian, but differs greatly both from that and the Ichaboe, in its composition. The quantity of ammonia is small, but there is a very large proportion of phosphates. Its action would not be so immediately perceptible as that of the other kinds, but might be expected to continue longer. It is said to cover 7 or 8 acres of ground, to the depth of several yards. The papers state that vessels of all nations are permitted to load there after obtaining a license at the Cape. Yours, &c. JOHN P. NORTON.

Domestic Correspondence.

ITEMS OF AGRICULTURAL SURGERY.

1. DYSPEPSIA IN A ROOSTER.—Some years past I observed my children playing with a large rooster, that with other poultry had been removed from the country to the city, and became a pampered animal, like many other bipeds who take little exercise, feed high, and live without work. Upon approaching the group of children who had possession of the bird, it was discovered that he could not stand although his crop was full. On attempting to place him on his feet, he repeatedly fell forward with the weight of his crop, which was distended and hard from the amount of its contents. Presuming that his stomach wanted relief from indigestion, and not knowing how an emetic would work, I took a sharp knife, cut a hole in the crop and emptied it of its contents. It was then washed out with clean water, and the incision sewed up. The fowl being placed upon its feet, immediately flapped its wings and walked away. The materials removed from the crop measured a quart or more, consisting of whole grains of Indian corn, oats and water melon seeds, which, from the commencement of putrefactive fermentation, smelled very offensive. This state of the crop caused me to wash it out clean before sowing it up.

2. A COW SAVED.—On the 2d of March 1842, I was called up early in the morning by one of my men, who stated that we were about to lose a cow. On repairing to the barn, and the enclosure where the animal was confined, a three years old heifer, appeared to be in the agonies of death, from her efforts to expel her first calf, which presented breech foremost. She lay on her side with her feet extended as if exhausted with the exertions of the preceding night. She raised her head, and gave such a look as I never before saw in a dumb beast. It was expressive, penetrating and imploring, and I interpreted it into the words, "*do help me.*" What's to be done! said my man. Why help her to be sure. The cow had evidently been struggling all night, and nothing but the tail of the calf had yet appeared. How will you proceed, said the assistant. Thus, was the reply. Do you take hold of the tail, and I will endeavor to get one or both hands between the thigh and body of the calf, and when the cow makes an effort, we must draw gently downwards. The animal was so much exhausted that her pains were feeble, and at long intervals, but by patience and perseverance, we succeeded after two hours attention, in relieving the cow, but the calf was strangled by remaining so long in the birth. The poor creature was now prostrate and overcome, and there were no after-pains to expel the secundines. After waiting a reasonable time to give her rest, and seeing no prospect of their expulsion, I introduced the hand and extracted them.

In the course of the day we found that the animal could not stand or use her legs, and lest they should become stiff as she lay, we trussed her up by means of an old sacking-bottom under her body as oxen are trussed up when being shod. Her feet were left touching the ground but she did not use them until the fifth of March, three days after her delivery. The unusual presentation in this case, weakened the loins of the cow, and altered her walk, from which she gradually recovered. I still possess the creature, and she has since had a living calf.

I have been informed of a similar case which occurred on another farm, in which the owner fixed an iron hook between the body and thigh of the calf, then tied a rope to the end of it, and three men by main force pulling upon it, delivered the animal, but killed both cow and calf. This occurrence, which was known to my assistant, caused him to think at first that my cow was also to be sacrificed.

3. PROLAPSUS ANI, OR COMING DOWN OF THE INTESTINE IN HOGS.—In the month of January 1844, my assistant in the case of the cow, informed me that we should lose two of our best store hogs, out of a litter of eight, being three quarter Berkshire shoats, between four and five months old. The intestine in both cases had descended and bulged out of the body as large as a man's fist. They were immediately removed to a small out building where they could be shut up and kept warm by themselves. The first operation was to hold up their hind feet, and wash with warm water the protruded intestine, and then to grease it with warm tallow. A man continuing to hold the animal by its hind feet with the head down, my two thumbs were gently pressed upon the gut until it began to yield, and in two or three minutes it was returned into the body. The creature struggled and strained so hard that it came down again several times, and was as often returned in the same manner, sometimes requiring an additional thumb or finger of a third person to overcome the resistance caused by the straining of the hog. External pressure was then made with a roll of rags, confined to the part by a bandage around its body and between its legs. It was then shut up in the dark and supplied with clean dry straw to lie upon. This process was applied to both.

On looking in upon the patients two hours after, they informed me, that the pledget and bandages were uncomfortable, and that they had taken the liberty of rubbing against the building, and had got them off. I could not scold at the unruly animals whose sensibilities are about as acute as the thickness of their skins. So as the intestines had come down again, I called my assistants, and tieing together the hind feet of the young porkers, we secured them to the side of the building in an elevated position, so that they could touch the ground with the fore feet, and after returning the guts once more, left them in that position. My two men had now become so accustomed to the operation, that they acted without my aid. We left the shoats standing heads down, an hour or more until they were perfectly tame from fatigue in standing in such an unusual position. And when they were released, they nestled in the straw and went to sleep. Nothing was given to them the first day but a little drink, and next day some Indian meal gruel. They recovered, and at the end of the year made heavy pork.

4. Cow LOSING HER HORN.—On New-Year's day, 1845, one of my cows in fighting another with a fence between them, caught the horn in the rail and completely separated it from the pith. I was absent at the time, but my man who acted as assistant surgeon in the cases of the cow and the shoats, and who thought he had learned something from *a book farmer*, undertook to practice on his own account. He concluded by reasoning on the nature of things, that as the horn was made to cover the pith, the pith ought to be covered, especially in winter. He accordingly shut up the cow by herself, and looking around, found the horn beside the fence lying on the ground, and as cold as a stone. It was replaced, and he went to my farm medicine-chest, and taking therefrom a roll of sticking plaster, spread long strips of muslin with it, and wound the strips around the base of the horn. The result was, that next day the horn became warm at the base, and gradually extended upwards until the whole assumed its natural temperature. The plaster adhered more than a week, and upon examination at that time, the horn was found to be united. It is now three months since the accident, the horn is firmly fixed in its natural position, and the cow is well, and running at large with the others.

If these facts and observations will be useful to any one of the agricultural community, please to accept them from your friend, RICHMOND.

Staten Island, March 28, 1845.

NOTES OF A TRAVELER—No. I.

Botanical Notices—The best country for Sheep.

MR. EDITOR—In March 1842, I left the southern part of Alabama with a horse and buggy for the purpose of making a botanical tour among the mountains of Tennessee and North Carolina. Already many flowers were in bloom; the woods and trees were green, and all nature looked gay and smiling. Among the flowers, the yellow Jasmine, (*Gelsemium sempervirens*,) *Bignonia capriolata*, the dwarf horse chestnut or small buckeye, (*Æsculus pavia*,) Carolina allspice, (*Calycanthus floridus*,) many species of Phlox, *Silene Pennsylvanicæ*, and numerous others, were of frequent occurrence. On the top of the mountain south of Huntsville, two or three miles from the Tennessee river, were numerous small trees in flower, and among them the *Rhus cotinoides* of Nuttall. This beautiful tree is scarcely distinct from the *Rhus cotinus* of Europe, so frequent in cultivation at the north. Its leaves are larger, and it often attains a greater size than the cultivated species, some trees being from 30 to 40 feet high. It was originally found by Mr. Nuttall on the high rocky banks of the Grand river in Arkansas, and these two localities are all that are known to botanists. It is well worthy of cultivation, and owing to its elevated situation it would be apt to succeed well in our climate. In the vicinity of Huntsville, I first saw fields of red clover; neither this or timothy flourish well much south of that latitude; they being unable to withstand the long dry summers of the low southern country. Here I met with an old northern friend, the Dandelion, (*Leontodon taraxacum*,) which gave rise to sweet recollections of home, and the scenes of childhood. The common locust, (*Robinia pseudacacia*,) is indigenous to the mountains near Huntsville, and is also frequently met among the Cumberland mountains and the mountains of North Carolina. On passing into the State of Tennessee, hay was offered for the first time to my horse; he being a native of South Alabama, had never seen the article before, and showed his displeasure by throwing back his ears and shaking his head, but finally ventured to eat sparingly of it, though ever after he preferred corn fodder.

Tennessee is so remote from market, and provisions are so abundant, that the price of produce is perhaps lower here than in any other State in the Union, consequently traveling expenses through this State are cheap indeed; there are few sections of the United States through which the traveler who has his own conveyance, can go with so little expense. Many of the inhabitants of middle and eastern Tennessee raise hors s, mules and hogs, for the southern market, which are generally driven into the cotton growing States during the month of December, and sold to the planters. I passed through middle Tennessee to Sparta, near the base of the Cumberland mountains, on the stage road leading from Nashville to Knoxville. Here I ascended the mountains and drove along a table land until I descended the mountain again at Kingston, it being more than 30 miles across. This table land abounds in streams of pure water, and is clothed with grass and weeds, among scattering trees and shrubs resembling the oak openings at the west. These mountains, as well as those of North Carolina and Georgia, are well calculated for the summer pasturage of sheep, and as such, are well worthy the attention of wool growers. On the elevated table lands of the mountains of these States, sheep would have a healthy range, abounding in pasture, and never failing springs of pure water. They could be wintered in the low country near the mountains, at comparatively little expense owing to the mildness of the climate, and be summered on the mountains at a cost not much exceeding the wages paid a shepherd, since the price of mountain land is trifling, and it can often be had for the mere expense of surveying. There the pure mountain air and water, and change of scene, would cause the animals to be strong and healthy. Sheep delight in hilly and mountainous districts, where they are not oppressed by the scorching rays which the sun pours upon the plains. If we look at the history of sheep, we will find that they have always flourished best in hilly and mountainous districts; therefore it is not probable that the wool growing business will be profitable on the western prairies, because there is too much sameness in the scenery, and often the want of pure water and air, besides during the summer season, the prairies are often parched by drouth, when the grass becomes dry, affording little nutriment, and then it stands ready to be, and is sometimes consumed by fire. At such seasons, every one knows that sheep would not have a sufficiency of shade, food and water. I allude more particularly to the middle and southern portions of Illinois, and I speak from impressions made in a tour through that region in the dry summer of 1838. I cannot help thinking that the middle and eastern portion of Tennessee, the western part of North Carolina, and northern part of Georgia, has greater natural advantages for the raising of sheep than any other portion of the United States. I spent the summer season exploring the mountains of those States, and may give you some further account of them in future letters.

Yours truly, S. B. BUCKLEY.

West Dresden, Yates co., N. Y., March 22, 1845.

SCOURS IN SHEEP.

This malady is one of the worst complaints that attack the flock; as soon as discovered, the diseased animals should be removed from the flock and kept fasting at least twenty-four hours without any food. Then commence by feeding them in small quantities, ripe hay; coarse timothy is as good as any; keep them up on ripe hay until you are satisfied the disease has abated. This is the most simple and surest method I ever tried.

Fresh feed, grass or hay, may cause this complaint, and when thoroughly commenced among the flock, it may spread by contagion; therefore a shift of place and feed is obviously necessary.

If the hay be brined once or twice each week through the foddering season, say, dissolve one pint of salt in three gallons of water, for a flock of fifty, it will prevent the scours, and is one of the best methods of winter management, if fed in mild weather, that can be recommended for sheep. S. W. JEWETT.

Weybridge, Vt., 1845.

NOTES OF TRAVEL IN THE WEST—No. III.

BY SOLON ROBINSON.

At the close of my last communication, I think we had just begun to get among the mineral hills of Missouri. And what can we find in this rugged, uncultivated, and almost uncultivatable district, to interest the readers of an agricultural paper, when the only staple is that same heavy commodity with which guns and brains are sometimes alike loaded? I have to hope that my present leaden article, may not be thought to emanate from a brain overfilled with that substance, or that I shall infuse such a quantity of the arsenical vapor that arises from the smelting furnaces, into this letter, that I shall kill off my friends who have traveled with me thus far. But we must proceed. These rocky hills and mountain sides have to be climbed, before we can reach that rich and sunny southern clime where we hope to find more matter of a practical kind to interest the agricultural reader. I wish I had been favored with that branch of education that ought to be taught in all schools, and I would give you here an interesting view of an "old Spanish house" that I passed this day, January 24th. There are many of these old houses yet to be seen in this country, but they are fast disappearing. This one was only different from many others, that it must have belonged to one of the aristocracy of olden times. It was perhaps an hundred and fifty feet long, one story high, elevated upon high stone pillars, a wide portico the whole length, under which were the several entrances to the different apartments; that into the center hall, being fitted with very wide, massive paneled doors, the windows small, roof steep and ornamented by three high peaked projections or turrets, in the face of which were small windows or loop-holes, that look as though designed to reconnoitre for savage foes that might be lurking in the romantic valley of this location. The vallies of this region are all fertile, and ever will continue to be, while the limestone hills continue to disintegrate and send down the best of manure. Col. Snowden, a gentleman whom I met with to-day upon one of these rich bottom farms, tells me that he raises as fine hemp as he ever raised in Kentucky. I also was informed by Dr. Cooley, (with whom I dined,) another gentleman in the same valley, who lives upon an "old grant," that the long and continued cropping of this land had no perceptible effect upon it. In buying an "old grant," a man has a great advantage over one who enters land surveyed by the United States, because the old settlers having no rigid rules to confine them to straight lines, have run them in all kinds of curious angles so as to make up the amount of their claim entirely of the best lands contiguous.

At Hillsboro, the County seat of Jefferson county, I very unexpectedly met with a warm friend of agricultural improvement, who not only reads himself, but induces others to subscribe for such papers; and yet this man is not a cultivator himself, but as is often the case, is a much more efficient friend of every thing that tends to improve the condition of that class than they themselves are. The reason is soon told. *He reads*—and what is all important, he knows just enough to know that he yet can learn more. The most difficult class to contend with, being those that already know so much that they cannot be taught any more. This gentleman, John S. Matthews, Esq. clerk of the county, has a very fine cabinet of minerals, nearly all of which he has collected himself. It was here that I saw some beautiful specimens of shell marble, quantities of which exist in the neighboring hills, and which might be profitably worked. He also showed me some specimens of cannel coal of excellent quality, from the Osage river, where it has lately been discovered, and will prove of great value to the prairie region of the west, it being much lighter for transportation, and answering in the place of charcoal for mechanical purposes.

Mr. Matthews informs me that the oak ridges of this country, which are at present but little cultivated, are very fertile, and the north sides invariably the most so; and that they produce as great a burthen of blue grass as any land that he is acquainted with. Here then is another "good country for sheep." Yet none are here, for no one has money to buy sheep in a country where silver turns to lead; and often stays turned. For although fortunes are sometimes made by mining, yet taken as a class, the miners are not as well off in the world, as those who follow the slow and sure road to comfortable independence in the cultivation of the earth. Jan. 25th, I visited one of the largest mining establishments in this part of the State, and at present yielding probably the most lead for the amount of labor employed, of any one in the United States. It is known as the "Mammoth Diggings," and is situated in Jefferson county, 55 miles south-west of St Louis. The method of hunting for mineral is this: a man goes upon any land where the external appearances indicate mineral; in fact it is often found in small quantities upon the surface, and commences "prospecting," that is, digging holes 3 or 4 feet in diameter, and more or less deep as the prospect induces, and if he discovers lead, then he goes on "proving" until he finds whether it is worth following, or till the lead give out. The whole country is full of these prospect holes, some of which prove barren, and in others, the miner discovers mineral enough to pay him for his labor, but the "prospect is too poor" to induce him to penetrate into the solid rock below the earth and loose stones near the surface, and he abandons that spot and goes to another, in the hope of eventually making a "discovery," which will lead to quick and certain fortune.

But in this, as I will soon illustrate, as in agriculture, it often happens that a steady and untiring perseverance in the "old diggings," continually turning up the earth a little deeper, would lead to more certain fortune than an abandonment of the old and familiar ground, for a new beginning upon an untried soil, when like the desperate gambler, we place all upon the cast of a single die. At this "Mammoth Digging," some poor fellow about 15 years ago, was within a foot of his fortune: but he was a surface skimmer, and knew not the value of subsoiling; and so he missed the crop that since has been made. But to explain. Some 18 months since, a boy in the neighborhood, who was out "prospecting" among the rugged hills, began digging out one of these old holes, and in a little time discovered the "blow out" of the mine beneath. This lead being followed up, and the earth and rocks removed a few feet further, opened into a cave lined all around the sides and arch with immense masses of ore, to the amount of one hundred thousand pounds, and so pure that it yielded 75 to 80 per cent of pure lead. And here again is a lesson to encourage perseverance; for after this cave was exhausted, the work was suspended for some time, till at length a small lead was discovered, that lead into a second cave of equal size and richness, and from that to a third one still better, and when I visited the diggins a single blast of powder had thrown open a passage into a fourth cave which by some, was supposed to contain 200,000 pounds, but I think that amount may be divided by two, which still leaves an immense mass to be exposed to one view. The opening of the cave is in the side of a hill, and the descent so gradual, that the ore is brought to the surface in wheel barrows, where it is cleared of the adhering rock, called by the miners "tiff," a white metallic substance which I am unable to name correctly. It is probably a corruption of tufa. It is then hauled to the furnace, where the operation of smelting has been so simplified within a few years, that I believe I can "tote" fuel enough to melt a thousand pounds of lead. The fuel is dry cedar chips and charcoal, which is mixed with the broken mineral in a furnace holding a bushel or two, and the fire kept in blast by a blow-pipe, driven by a steam engine. In other locations, water power is used. The extent this digging has penetrated into the hill, is about 200 feet, and there is no telling how long they will continue to discover other caves. At other diggings, caves have been found in larger numbers, but lesser size, and much further from the surface.

Some diggings are dry, others so wet as to require a steam engine to pump out the water. Large quantities of mineral have been found in different places in "clay diggins" near the surface. This mineral clay is almost red, very unctuous and very productive. The ore in the clay is in detached cubular masses. In the caves, in globular form—in the rocks, in sheets, varying from the thickness of this paper, to two feet, and these veins are sometimes followed down into the rocks by blasting an hundred feet deep, always with the exciting hope of finding a mass. Many of these mines have been worked for a long time. Those at a place called "old mines," for forty years, by the French residents who still occupy the place, and from the appearance, in the same log cabins they did at first. But those at "Riviere La Motte" in Madison county, are the oldest, there being still an unsettled claim upon the tract, by the heirs of Rino, a Frenchman, who was here in the employ of the king of France in 1723, but as is now supposed, looking for silver instead of lead. There is a large amount of business done at these mines by a poor looking population who work without the hope that animates the class in other places, as here they are all tenants, and have to give the proprietors of the tract of land, which is I believe 3 miles by 6, one-tenth of all their earnings. There is now here ten smelting furnaces for lead, and one or two for copper are building. Cobalt, nickel, and manganese ores are also found here. The south-western part of Missouri is rich in mineral wealth, but shows few examples of agricultural wealth; and the mining population are of that class that every thing that comes light goes lighter, and they live to day, and live poor too, with no thought of the morrow. Now although money may be sometimes easier made by mining than farming, it is an uncertain business, and does not seem to produce so good a state of society as that old fashioned mode of making a good living at least, in the cultivation of the earth. But the business withdraws an immense amount of labor from cultivation, and profitably employs a large amount of capital, and furnishes a market for all the surplus produce of the few farms in the mining region. I must not forget to mention one of this class who I found in the vicinity of the Mammoth Diggings, Willard Frissell, Esq. whose rich and well cultivated farm has enabled him to live free from the temptation of mining some of the rich mineral hills which skirt the fine bottom land that he has in cultivation. Having long been a reader of the Cultivator, I found myself warmly welcomed as an old acquaintance, and rested with him over a lovely sunny day, the last Sabbath in this month. But I have to charge this man, and I doubt not the charge will fit many other readers, with a failure to profit by what he has read. His only water is "toted" up a long steep hill to the house from a spring at the foot, when right by the side of that spring runs a stream of water, that if applied as directed by Mr. Bement, would bring a constant supply from the spring to the house and as "time is money," would save enough every year to pay the expense. Reader—I mean you, don't apply it to your neighbor—have you profited by what you have read, any better? If not, now is the right time to do so. If you have no spring to make run up hill; I'll bet a bucket of cool water you have a well as hard as lime can make it, and no cistern to make your wife look so good natured "wash day."

Jan. 27th. A warm spring-like rain detained me nearly all the forenoon. This is the first "sprinkle" since I left home, which proved rather a hard one in the course of the day; for lured by false appearances, I undertook to drive a dozen miles over a road that the very thoughts of is enough to make the bones ache, of one who is accustomed only to the smooth prairie roads. But patience and perseverance accomplished the task and before the next morning, the rain turned to snow, and for the first time this winter, coated all nature in a white mantle about two inches deep, that soon melted in the morning sun, making as fine a compound of snow and mud and water as ever was mixed together. At Old mines, I saw as fine a young apple orchard as ever grew, proving what might have been proved long before, that the country is well adapted to raising fruit as well as lead. The owner also showed me the benefits of manure as well as lime, upon this limestone soil. By the use of lime, the finest crops of grass can be raised, and many of the hill sides could be set with fruit trees, that are unfit for cultivation.

Potosi is the county seat of Washington county, built of course like all other towns, upon seven hills; for here there is not level ground enough to build scarcely one house, much more a town upon. At this place I was shown a well dug through a bed of lead ore, and was assured that this mineral never injures the water, all of which must come more or less in contact with it. Near Potosi, I visited the farm of John Evans, a good English farmer, who has proved that fruit trees, grass and sheep, will flourish in this part of Missouri, if they can have a chance. At a Frenchman's where I staid over night, I learned a new way to build a barn in a country where saw mills are few and very far between, as is the case here. I will describe it for the benefit of new settlers in general, and some folks in particular.

A row of cedar posts, being first grooved on each side, are set in the ground about five feet apart, and in these grooves are fitted puncheons of any convenient width, the edges resting upon each other, which forms the sides of the barn. Upon the top of these posts, the plates and roof are put. The partitions are all made in the same way, so that there is no sawed stuff and no nails except in roof and doors, and it makes a very good cheap building. The grooves are cut in the posts by a tool made on purpose, shaped like an adze. The plan is worthy the attention of new settlers in many situations that I know of. It will answer very well for making "cheap sheds" for some of the prairie flocks and herds. And now, my dear friends, while I take another rest, let me beg you to have patience. we travel slow, but we have much to see, and life I hope will be long enough to see it all. So once more, I am affectionately your old friend,

Solon Robinson.

DITCHING—COTTON CULTURE.

Editor of the Cultivator—It affords me great pleasure to inform you that I have succeeded in reclaiming my swamp lands by draining, which has rendered them not only safe for fine crops, but their value I now rate very high. I am now engaged in repairing and deepening the ditches I cut last winter, and locating a few smaller ones required. The work has been executed by my own laborers under my directions, and the ditches will compare with any dug by Irishmen. The time employed, I conceive the most advantageously spent of any work bestowed on my plantation. True, the last summer was very dry, but notwithstanding we had a very heavy rain in April, and one in August, which would have left a sufficiency of surface water to have injured the growing crop, had not the waters been conducted off by my ditches. Our winter rains prove their efficacy, as the fields are rid of waters which heretofore stood on the lands. I have accurate and well finished plates of all my swamp fields, with their ditches and ponds thereon, which I would forward on to you, was it not for the expense of the mail, which would give you an idea of the utility and correctness of the work. My stiff swamp lands, that I was apprehensive would not be materially benefited by draining, owing to their tenacity of absorbing water, have by far exceeded my expectations. My ditches, with the aid of a few water furrows, have rendered such lands, as I heretofore despaired of, in my opinion, after a few good plowings, the most productive, and the best quality of cotton is being made on them. Your treatise on draining in your August number for 1844, I examined with great delight, in comparing its instructions with the work executed; and the plan fig. 68, page 241, same number, is an instructive lesson of what I am to undertake, in reclaiming a piece of low land surrounded by high, for the season of 1846. I made one attempt in cutting off a spring on a hill side, which partially answered the desired purpose. My mistake was in placing the ditch a little too high. Experience in this case, shows that where the wet land commences, occasioned by such springs, the ditch should be located a few feet below where the spring emerges, so as to absorb the first springs, and by the depth of the ditch, it cuts off the lower springs. Had I proceeded in the work accordingly, entire satisfaction would have been the result. In examining the ditches of most planters, and such heretofore has been my own mistake, the ditches are all too small, for after a few heavy rains, they become so filled up, as to render very little benefit; but where a ditch is sufficiently large, it not only keeps itself clear, but drains more rapidly and effectually, and requires less attention in keeping them in order.

So much towards ditching—now for cotton. It is an article at present nearly worthless; but as regards its culture, we may say something. Two of my friends and neighbors experimented on Dr. Cloud's method—good lands, well prepared, and well managed throughout; and I am sorry to say I was greatly disappointed in the result. These gentlemen who tried that system, are good planters, energetic, and indefatigable; and they left no stone unturned, in giving it a fair trial. They intend the coming crop, to try it again. One perhaps reached 2000 lbs. to the acre; the other hardly reached that amount. I planted against the former, on the old drill system, and I beat him. His trial was on ten acres, according to Dr. Cloud's method; I placed eighty acres against it, on the old system, acre for acre, or an average against the ten. By this statement, nothing is intended against Dr. Cloud's system, for I am of the impression, it must increase the product of land, and I candidly believe the season of last summer in this section was unfavorable to manured cottons, owing to the drouth it experienced. I manured some fifteen acres of my own in the drill culture, which was by far the most inferior cotton I had, and no doubt the drouth in a measure caused the disappointment in the above crops. One great difficulty they had to contend against, was in procuring a stand, which in the end could not be obtained with no less than four separate plantings, which was against their crop.

Owing to the very low price of cotton, there is some talk among the planters of trying tobacco, as our neighbors, the Floridians, have made the last season a small test of its product, and are so well pleased with the results, that the present year they are going into it on a large scale. Something must be done, for at present rates, the cotton planter is not remunerated for his labor and plantation expenses. The evil I presume will work its own cure.

Jno. H. Dent.

Eufaula, Ala., Feb. 1, 1845.

FEEDING CALVES.

Mr. Editor—I have noticed several articles in the Cultivator upon rearing calves. I will just give you my plan, with results.

Feed and growth of a Calf.—Calved Jan. 19th, 1843—weaned at six weeks old, and weighed 220 pounds. One quart of Indian meal, and one quart of middlings were boiled together and mixed with eight quarts skimmed milk, with which he was fed morning and evening, with as much hay and carrots as he would eat for three weeks and five days, when he weighed 276 pounds—gain 2 1-13 pounds per day. He was then fed with 2¼ quarts Indian meal boiled, without the middlings, for 18 days; weighed 326 pounds; gain per day, 2 7-9 pounds. Meal increased to 3 quarts; fed 22 days; weight 377 pounds; gain 51, or 2 7-22 pounds per day. I do not write this boastingly, for it may be beaten; but if any of my brother farmers have a mind to try the process, I do not hesitate to assure them in advance, they will not find it as great a humbug as manuring potatoes with 4 barrels of poudrette to the acre, or using a penknife blade instead of a shovel to put the manure in their corn hills.

Oyster Bay, L. I., March, 1845. D. K. Youngs.

TO PREPARE SHEEP FOR SHIPPING.

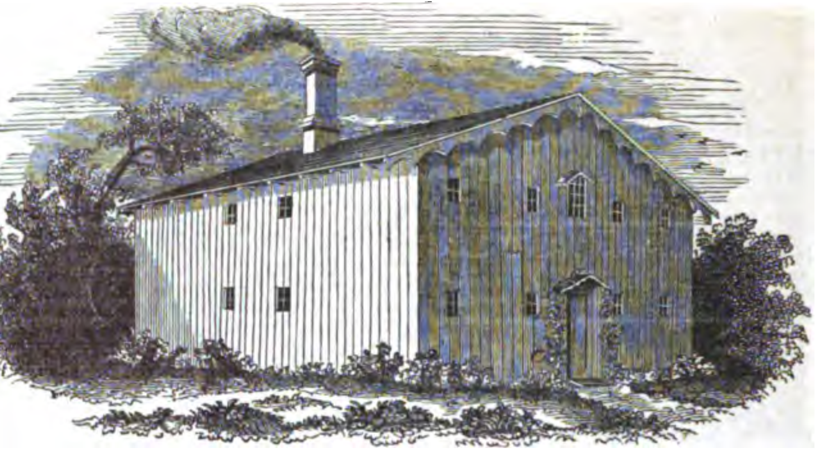
Sheep should be fed on hay a day or two before they are shipped, to change the nature of the dung, and thus prevent their becoming filthy when confined in small quarters. They should also be fed with grain one week at least before they are shipped, and also on the route, oats or other grain, regular twice each day.

The best kind of hay should be selected, and after it has been moistened a little, twist it into a rope as hard as it conveniently can be made, and wind it up into tight balls or bundles and pack it away at a little distance from the pen of animals.

By this method, the hay not only occupies the least possible space on the boat or cars, and is easily handled, but it is kept as fresh as possible, a very important thing in feeding. A small rack or box should be prepared for feeding, and cut off the hay rope for them as occasion requires.

S. W. Jewett.

The quantity of poultry exported from Dublin to England during the Christmas week, amounted to five hundred tons, and was worth 50*l* per ton.

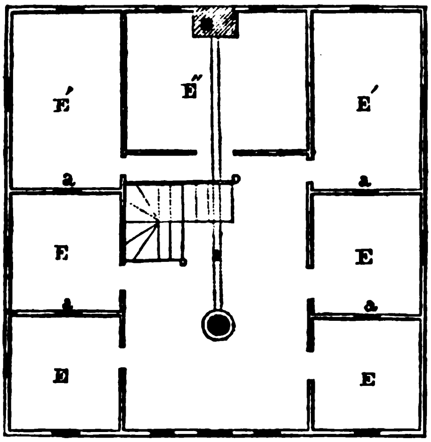


ECONOMICAL DWELLINGS FOR PLANTATION LABORERS—(Fig. 50.)

TO THE HON. J. S. SKINNER:*

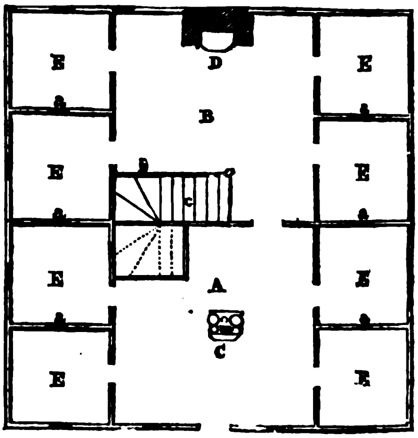
MY DEAR SIR—I have availed myself of the earliest opportunity, which a pressure of business would allow, to prepare a brief description of the buildings erected in 1843, by my father-in-law, the late VIRGIL MAXY, Esq. as quarters for the field hands and their families, employed on his farms at West River, Maryland, which I promised to furnish you with when I last had the pleasure of seeing you in Washington; and I now have the honor to transmit to you, at the same time, drawings of one of these buildings, (the two being essentially alike,) exhibiting it in plan, side and front elevation, and in perspective. For these very artistical drawings, I am indebted to Mr. J. G. Bruff, of the Topographical Bureau, Washington. They are in some respects inaccurate, as will be seen from the text.

The perspective view presents a very exact picture of one of these houses, and the plans I trust will be readily understood. One of the buildings is surrounded by groups of large and venerable locust trees, with a pump of pure water near the front door. The other stands in the vicinity of a beautiful grove, and numerous young trees have been recently planted around it, as well for ornament as for protection from summer's heat and winter's cold; while a copious and never failing spring of cool and delicious water gushes out of a ravine hard by. Both houses are so situated that the down fall water drains from them in all directions.



Ground Plan—[Fig. 51.]

EXPLANATION.—(Reference to Ground Plan and Second Floor.) A. kitchen—B. living room—C. cooking stove—D. Franklin stove—E. E′ E″ dormitories—E′ and E″ family rooms—F. drum—a. lattices for ventilation—b. closet—c. stairs—d. pipe of drum.



Second Floor—[Fig. 52.]

The house (to which the drawings, refer) is 34 feet square, on the ground plan, from outside to outside; and from the bottom of the sills to the top of the plates, is 16 feet high. The sills rest on stone walls, (laid in cement) sunk 2 feet below the surface of the ground, and rising one foot above it. The rooms on the ground floor have a pitch of 10 feet including the joists—the upper rooms are therefore 6 feet high to the eaves or top of the plates, and rise to the height of 10 feet along the roof. The large room E″ and the open space adjoining it, have a uniform pitch of 10 feet. All the rooms on the second floor are lathed and plastered over head. Those on the ground floor have no ceilings, below joists.

The sills and posts are of white oak—the former, 12 inches square, the latter, 8 by 7 inches. The plates are of white pine, 8 by 7, and the rafters of the same materials. The frame has no braces, the exterior covering rendering them unnecessary, and at the same time imparting to it great strength and rigidity. This covering or siding consists of 2 inch white pine plank, (commonly called ark-stuff, and costing at Port Deposit, about $8 per M.) jointed and spiked vertically to the frame. The joists are covered on the exterior with narrow slats or buttons of the same materials. The roof is rather flat, covered with white pine shingles, and projects from the walls about 30 inches all round. It is also provided, as will be seen from the drawings, with a simple kind of barge-board, cut in a rough way from pine planks.

The ground floor is formed of *cement*. The space within the sills and foundation walls is filled with clay, *hard rammed*, to within about 2 inches of the top of the sills. On this sub-stratum, the cement is deposited. It consists of a mixture of 10 parts, irregular brick fragments, rather less (in the average) in cubic contents, than black walnuts, 5 parts of clean sharp sand, and 3 parts of the best hydraulic lime. If the cement is not of the best quality, the fragments should be reduced to 8 parts; oyster shells, when convenient, may be advantageously substituted for brick-bats.

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* Furnished for the Cultivator, by Mr. SKINNER.

The cement and sand are first thoroughly mixed, care being taken that no more water is used than is just sufficient to produce a slight cohesion; the great mistake is often made of employing too much water. After the mixture has been well worked, the fragments are added, with a little more water if thought necessary, and *thoroughly* incorporated with the other ingredients. When fit for use, the mass must present a perfectly homogeneous appearance. This condition of things is essential to success. It is then to be immediately removed before it has time *to set*, to the place which it is to occupy, to be deposited in a layer sufficiently thick for the purpose designed, and hard rammed with quick short strokes, until it is quite solid, and gives no more under the rammer. This operation will bring a good deal of water to the surface, from what had seemed to be a mass of materials but slightly moistened. After the whole floor has been formed in this manner, and before it has time to dry, it is *sluiced* with water, covered with clean straw, to retard evaporation, and at least twice a day for 12 or 14 successive days, deluged with water. At the end of this period, the straw is removed, and the floor is permitted to dry, when, if the cement has been of good quality, and all the operations have been properly performed, it will be found to be as hard and as firm as a solid rock, which no moisture can effect, no vermin penetrate, and that will wear as well as the best mica-slate pavement. To give it a smooth surface, it will be expedient to plaster it with a thin coating of *coal-gas-tar* sprinkled with sand. When this is quite hard and dry, the house may be occupied.

I have recently employed cement manufactured in the manner just described, for the floor of a meat house much infested with rats, with complete success.

A barrel of cement costs in Baltimore, $2,25, and is sufficient with the other materials, to make about 168 square feet of floor, 2 inches thick.* It would, however, I think, be better to form the floor 3 inches thick, which would make the barrel equivalent to about 112 square feet.

There is but one entrance to the house, which leads into a room 16 feet square in which is placed a large cooking stove. This apartment serves as a kitchen, and communicates with a back room of the same dimensions, in which is fitted a Franklin stove for the purpose of affording an open and cheerful fire. This may be called the living room, to which the people generally retire on coming in from labor, and to dry themselves in wet weather; but when not at work, they usually occupy both rooms indifferently. They have each two windows of 6 by 10 glass.

On the ground floor are eight dormitories, opening into the large rooms, each 8 feet square. They are lighted by windows of 4 panes of glass, so arranged that they may be opened by moving the sashes aside.

An easy flight of stairs leads from the back room to the second floor—under the stairs is a back closet for the convenience of the cook. The landing place on the second floor is in an open space 18 by 12 feet. Into this space, the rooms of this story open. Thay are appropriated to married people and children. The four smaller rooms are 8 by 10 feet—the two marked E′ are 16 by 10 respectively, and the one marked E″ is 15 by 12. The whole of this portion of the building is kept warm and comfortable in the coldest weather, by a large sheet iron drum, heated from the cooking stove. From the drum, a pipe is carried to the chimney through the room E″. In each partition, separating the dormitories, on both floors, a *lattice* is fitted, ranging with the gable windows, and over each door is left a space 6 inches square for the purpose of ensuring a nearly uniform and agreeable degree of warmth throughout the building, in wet and cold weather, and a free circulation of pure and dry air whenever the state of the atmosphere will permit the windows to be open. The vacant space in the 2d story is occupied by the children as a play room and for drying clothes in wet weather, and in summer, some of the boys prefer to sleep in it. As soon as the hot season sets in, the cooking stove is removed to a detached building, and is not brought back to its place till the return of cold weather. In the mean while, when necessary, a fire is burnt in the Franklin stove.

It will be obvious to the most superficial observer, that in planning this house, the leading objects have been comfort, economy, and the saving of fuel, in the accommodation of a considerable number of persons, rather than the study of architectural effect; and yet, as the perspective drawing shows, the *tout ensemble* is quite agreeable to the eye. This is owing to the good proportions of the building, the flat and projecting roof, and a slight degree of simple ornament. It still wants what may be cheaply supplied, a rustic porch at the entrance. This might be formed by entwining the boughs of cedar trees, inserted in the ground for the pillars, and covering them with creeping vines. These quarters afford more room for their occupants, in proportion to numbers, than the best permanent barracks usually extend to the soldiers of an army; while on the score of privacy, warmth, ventilation and general comforts, they are also superior.

Two objections may, with some propriety, be urged to these arrangements for the accommodation of laborers: 1st, the risk of fire—2d, the greater danger from contagious and infectious diseases. To the first, it may be answered, that there are but two fires in a house, and both of them on an incombustible floor. And to the second, that from the dryness and cleanly nature of the floors, and the careful ventilation which may be always attained with little trouble, there will be less liability to contract sickness, especially typhus fever, than if they occupied (as they too often do) small and badly constructed houses; and that if a contagious disease should break out on a plantation, it would be as likely to spread among the people, from the fact of their working so much together, in the one case as in the other.

The cost of these buildings was about $700 each, and I am satisfied that similar structures might be erected in any part of the State of Maryland and Virginia far that.

Very respectfully, your ob't serv't,

GEO. W. HUGHES.

GROWING LETTUCE EARLY.

MR. TUCKER—Those who are fond of lettuce, usually desire to have it as early in the spring as possible, and before other products of the garden are ready for the table. An obvious means of procuring the article early, is the hot bed; but that is not convenient for every one; though materials for constructing the hot bed should be at command, the attention and watching which it requires may not in all cases be readily spared. This consideration led me, some years ago, to make it a subject of special inquiry, whether it was not possible to have early lettuce without the hot bed.

Lettuce, it was noticed, will bear uninjured, a hard frost; under some circumstances, that which comes up in the fall, will live over winter; in which case it will grow to a proper size for eating much sooner than the spring sown plants. It seemed natural therefore to conclude that we had only to protect it from very severe and long continued frost, in order to preserve it alive till spring. With this view, I tried covering it with straw, cornstalks, stable litter, leaves, boards, mats, but invariably without success; it would all perish. This result was unexpected. What killed the lettuce thus protected? It could not be frost, for care was taken in each case to cover the lettuce so that it should not be exposed to greater cold than it endures without the least injury. Perhaps it was smothered: that is, deprived of a sufficient supply of air. But I had taken care, in one instance, to cover it with a box large enough to enclose an ample store of air. Yet here the lettuce died. While reflecting upon this subject, it occurred to me that the death of the lettuce might be owing to its seclusion from the light; which we know to be essential to the healthy growth of

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† Coals, lime, &c., are usually sold by imperial *heaped* measure, which makes the bushel equal to 2,815 1-2 cubic inches nearly, and I think the barrel contains about 3 bushels, or 4 8-9 cubic feet nearly.

all plants. Upon this, I made a frame with sashes to fit; sowed lettuce in it in September; put on the glass, the latter part of November, and let it remain till March, when I had the satisfaction to find all the lettuce alive and flourishing. Whether my theory was correct or not, I thus ascertained the fact, that lettuce may be preserved over winter merely by a simple covering of glass. In the spring, the lettuce grew luxuriantly, and was fit for the table as early as it would be if grown in a hot bed. The plan of growing lettuce, suggested by the foregoing fact, I have followed for several years with invariable success. If you please, your readers may have the benefit of my experience, which I will give somewhat in detail.

In the construction of the frame, in which the lettuce is to be grown, I do not know that any particular size is material. In the climate of New Haven, it is requisite that the frame should be at least 6 inches thick; mine is made of cedar scantling, laid up like a log house, with a slope towards the south of one foot in five. A board is nailed over and on the outside of the scantling. The sashes should be made like those of a hot bed, with glass lapping, so that the water may run off. Common window sashes will be broke, by water standing on the panes and freezing. The glass should be thick, to prevent breaking by the weight of snow. For the same reason, the frame should be set where the snow will not drift into it. When the sashes are on, they should lie about a foot from the ground, which should have the same slope as the sashes. There must be a contrivance to fasten the sashes, so that they shall not be blown off by high winds, and also to prevent their sliding when the upper end is raised. The manure used in the frame should be well rotted and well mixed with the soil. The same soil will not answer well, for more than four years. As often as that, either the frame should be moved, or the soil taken out and replaced by fresh earth. The kind of lettuce which I think best for cultivation in this manner, is one of the cabbage varieties—the *white head*. It forms a solid head 6 to 8 inches in diameter. The time of sowing is the middle of September. It is sowed broadcast and raked in. The frame is left open till the setting in of winter—till the ground begins to freeze hard. The sashes are then laid on the frame, and remain undisturbed till the opening of spring. No watering is required during winter; nor is it necessary to admit the external air. The glass must not be covered. Snow may fall upon it, but it will not (in New Haven,) continue long enough to do injury. When spring opens, it will be necessary in clear warm days, to raise the upper end of the sashes 6 or 8 inches. When there comes a warm rain, the sashes should be taken off. If a suitable rain does not occur often enough, it will be necessary to give water in some other way. As the ground during winter, will have dried to a considerable depth, there must be, early in spring, at least one thorough watering, by rain or otherwise, deep enough to reach the moist earth below. As soon as the open ground is thawed, lettuce may be transplanted from the frame to any warm place. That in the frame must be thinned, if heads are wished, to 9 inches apart. If the frame is small, it will be best to leave the plants about 4 inches apart, and depend upon heads in the open ground. There the plants should be set 12 inches apart. It is a common practice to pick off for use the lower leaves. This will infallibly prevent the heading of the lettuce. In gathering the lettuce from the frame, it is better to cut it off at the surface of the ground, than to pull it up. The stumps will throw up sprouts, which produce the best of seed. Indeed it is almost impossible to procure seed, otherwise. If the head is left on, the seed stalk is so wrapped up by the leaves, that it commonly decays before it breaks through. Some of these directions may appear minute; but whoever attempts to cultivate lettuce in the manner here described, will find them important to his success.

The eating of the lettuce may be performed without any special instruction. But I may be allowed to say, that a little sugar with vinegar, forms a palatable dressing, for those who do not crave egg and mustard.

I think it probable that the *principle of supplying light in winter*, may be advantageously applied in the case of other herbaceous plants, and to half tender flowers, and even to cabbages. In respect to the last mentioned article, I would suggest to those who have old window sashes, to try the experiment by making their *cabbage hole* with *windows* that will admit the sun to the cabbages within. Roses and fig trees are well preserved under glass, in the same manner as lettuce, only the sashes must be higher from the ground. NOYES DARLING.

New Haven, Conn., Feb. 15, 1845.

MANAGEMENT OF THE ORCHARD.

MR. EDITOR—Your correspondent's article on the management of the Peach orchard, (see Cultivator for Jan. p. 38,) has a strong advocate in the person of Mr. John Mason, tenant of John Gill, Esq. of Haddonfield, New Jersey, who cultivates a noble farm of 200 acres, upon which is an extensive orchard of apple trees of the finest kinds. In a late conversation with Mr. Mason, who is a native of one of the eastern States, and a very intelligent man, bred originally to a mercantile profession, he remarked,

"When I came here, I found that the orchard had always been kept under careful tillage, such management being considered essential to its well being, according to the generally received opinion; but I observed, that although the blossoming of the trees was abundant, the trees themselves soon become covered with the nests of caterpillars so thick as to give the appearance of hoar frost; while the fruit soon after began to drop off in immense quantities; what remained, being cankered, and almost worthless. I therefore determined to change the plan, and immediately laid the orchard down to grass, converting it into a hog pasture; only mowing the tall weeds that spring up during the summer, and turning in young cattle to graze occasionally. The next year there were scarcely any caterpillars' nests to be seen, the hogs picking up the fallen fruit, and destroying the malady in the bud. The year following, the evil was totally eradicated, the yield of fruit being of the finest quality, and enormous in quantity; and at present, I know no orchard so vigorous, or that promises so fair a prospect, whether for grass or fruit."

On accompanying him to the spot, I was struck with the neatness of the husbandry and the vividness of the pasturage; the thrifty state of the trees affording abundant proof of the justness of the theory practiced by my friend. The grasses were of the finest kinds, chiefly indigenous to the soil, the grazing and tramping of the hogs and young cattle having produced a close and rich carpet of the greenest verdure, and remarkably early in its growth also, for although but the 27th of February, the herd were already pasturing in it; while not a weed of last year's growth was to be seen, or any thing to impede the springing of the young crop. Upon this orchard, from sixty to eighty hogs, besides young cattle, were pastured the last year during the whole summer, which took good care of the fallen fruit; after which, more than 3,000 bushels of the choicest apples were fed to the former in the way of fattening, and for which they proved most valuable, saving a vast amount of corn.

Here I witnessed the justness of your correspondent's remarks. The orchard has become a hog pasture, where the weeds are kept down, and the necessary cultivation by tramping, has been performed far more profitably and economically than by the use of the plow; while the source of the caterpillar and the borer has been cleared away by the aid of a class of laborers whose wages have been paid in a measure by the food thus collected, at great profit and the most lasting benefit. In conclusion, and in justice to Mr. Mason's very neat and careful management displayed in this experiment, I must add, in no part of the orchard or elsewhere, did I observe a single instance of the rooting of the hogs while at pasture; all was level as a bowling green or a well trimmed lawn, with not a weed or a bush, even in the fence rows. What has been said, however, does not by any means militate against the mode every where adopted and pursued in this part of the country, of cultivating and cropping the orchard while the trees are young and small; this is a system differing in toto from that in question, which has been introduced for the purpose of preventing disease, but which it is suspected, has proved the cause of much of the evil complained of. Nor is the laying down and sowing the orchard, to be too long delayed, the crop being far better adapted to grazing than mowing for hay, or grain.

I find that the system of "rigid pruning of the peach tree" has been adopted by the Messrs. Downing at their extensive nurseries at Newburgh, and no doubt it will be attended with success; the fact that "no tree bears the knife so well as the peach," having long since been ascertained and verified by universal practice in England. And to prove my faith by my works, I have taken off many leading branches the present spring, and find the trees much improved in appearance by the operation. The experiment has led to the inquiry, whether, as it is proposed to keep the orchard in grass as a hog pasture, the mode proposed would not admit of the trees being planted thicker or nearer together, depending on the system of "rigid pruning" to keep them within due bounds and with upright heads, affording a proper degree of exposure to atmospherse influence, and a due and equal proportion of sunshine? The question is an interesting one; would your correspondent take it up?

Your subscriber, J. L.

Springfield, N. J., 1845.

ON BREEDING SHEEP.

Mr. Editor—After looking over the pedigree of my sheep in the November number of the Cultivator, and some of the remarks at the close, I feel it my duty to give a fuller explanation of my views and experience in the breeding of sheep. It is the duty of wool growers to have three objects in view in breeding sheep—1st, they should breed that kind of sheep whose fleeces will be large enough to nett them a handsome income from the growth of their wool—2d, a kind that will produce a fine, long, and silky staple, which will be profitable to the manufacturer—3d, a kind which will, when manufactured, make a heavy body, and a durable goods for the consumer. I would here ask, is there any one distinct breed which will answer all these purposes? I know that the Saxon sheep produce fine wool, but not enough in weight to make it profitable to the wool grower.[*] It may be a profitable wool for the manufacturer, but I very much doubt the durability of the goods for the laboring and business part of community. The Paular Merinoes are heavy fleeced, and when well fed, have more native oil, than can pass through the harl of the wool in a proper manner—it is common for it to form a sticky substance among the wool, which makes it heavy and unprofitable for the manufacturer—they are somewhat wrinkled about the neck, and are apt to have hairs in those wrinkles, and not uncommon to have hairs on the body so as to prevent it being manufactured into fine goods, so that this kind of sheep will not answer our full purpose. It is more for our interest to grow *fine* wool in the Eastern States than it has been. We cannot expect to compete with the west on *coarse* wool. How can we grow a large fleece, of long staple, *fine* wool? I will tell you how it has been done, viz: by crossing three different breeds of pure Spanish Merinos. The most perfect of the three was the Escurial, and I believe the most perfect breed that was ever imported into America when imported by David Humphrey in 1802; in their pure state, their wool was more compact at the outer end than any that I have ever seen, and in possession of stronger felting properties. The one which was imported in 1811, was a larger fleece and a little darker at the out end of the wool. In selecting my bucks to breed from, I have even taken great pains to select those which partook most of the Escurial blood. Experience has taught me that in breeding animals, the offspring partake stronger in their outward coat and appearance of the male, in their temper and disposition of the female; in this way I have managed my sheep, until many of them resemble the Escurial sheep when in their pure state. In selecting bucks to breed from, we should take those that are of handsome form, large fleece, and long staple, in which the native oil circulates freely through to the outer end of the wool, leaving the wool within, white, like cotton. This kind of wool is free from *dead end*, cleanses easy, and is soft and silky when cleansed. That kind of wool which has a great deal of yolk lodged about in the wool wastes too much in scouring, and is very harsh and wiry and not easily manufactured into fine goods. Some gentleman in the Nov. number of the Cultivator, mentioned the *Escurial Saxon Sheep*. I have never seen any that were imported from Saxony, that bore any resemblance to those imported by David Humphrey. In Mr. Grove's letter to Mr. Colman, he states that there was an importation of Escurial sheep from Spain to Saxony in 1764, and another importation in 1777, of different breeds. This was 47 years before the introduction of the Saxony sheep to this country. I think it quite improbable at least that we have any of the pure Escurials from Saxony. Where are the 200 that Wm. Jarvis brought to this country in 1809, or their offspring? I know of no trace of the Escurial blood but what has been preserved from the importation of General Humphrey, and the one imported in 1811.

In looking over a communication of Mr. L. A. Morrell, in the April no. of the Cultivator, 1844, he assigns a number of reasons why wool of the same fineness would be some of it dry and harsh and some soft and silky. I think if he had raised the same breed of sheep that I have, he would have assigned a different reason. I will here repeat some of my remarks, and speak a little more particularly of the kind of sheep and wool which I have raised. The complexion of the wool is dark at the outer end, white within, is always soft, and after being cleansed for use, remains soft and oily. The reason I give, is this; it has been ascertained, and acknowledged I believe, that every harl of wool is a hollow tube; when the perspiration is open, the native oil passes through these tubes. This native oil preserves the life of the wool, renders it free from *dead end*, and leaves it in full possession of its felting properties; and I very much doubt, when cleansed for use, whether this oil in the centre of the harl is ever all extracted, for it always feels oily, and the goods made from it are soft and silky. This native oil has its desired effect. It preserves the health of the sheep, the life of the wool, and adds to the strength and durability of the goods.

Manufacturing men have sometimes found fault with this kind of wool because they are large fleeces; would it not be honorable in them to keep both *debt and credit?* If the wool wastes a little more in washing, and is a more perfect and valuable article when washed, the account is balanced. I am satisfied so far as the experiment has been tried, that there is no kind of sheep as profitable, uniting the interests of the wool grower and manufacturer. Some gentlemen are of the opinion that the Saxony breed of sheep should be kept pure, and not crossed with any other kind; but I think that a mistaken idea. I think there is a very great benefit derived from crossing different breeds. But we must have pure blood male animals to breed from. It is our duty as farmers to make all the improvements in the different branches of agriculture which we are capable of. The agricultural and manufacturing interests are closely linked together; whatever affects the one, affects the other more or less. We should endeavor to draw together, and work for each other's interests. The wool grower must breed a kind of sheep whose fleeces will yield him a living profit; we cannot live from the two pound fleeces; and while our manufacturers ask for a protective tariff, which they really need, and which we wish them to have, we wish them to remember that the farmers in the Eastern States need *protection* to. I will here leave my subject for the present for my worthy friends to correct.

Watertown, Litchfield co., Ct. Jacob N. Blakeslee.

Working Oxen.—At the last Fair of the Middlesex (Ct.) Ag. Society, four ox teams, attached to decorated carts were present, numbering 214 yoke, viz: Team from Middlefield and Long Hill, 96 yoke—South farms, 84—Westfield, 26—Joel Blatchley's, of Durham, 8 yoke.

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[*] The remark in regard to the Saxon sheep not producing wool enough to make them profitable, we think is rather too *sweeping*. We could name flocks of Saxons, which have undoubtedly afforded good profits.—Ed.

IMPROVEMENT OF FARM STOCK.

MR. EDITOR—In a communication published in the June no. of the Cultivator, 1844, page 189, I endeavored to bring this subject before your readers, in the hope it might attract the notice and engage the attention of some of your corresoondents, who can appreciate the importance of its bearing on the great agricultural interests of the country. It is believed that if this branch of agriculture should be brought to the test of a careful and critical examination, the result would prove that few even of those who are most interested have considered the magnitude of its importance. Entertaining this opinion, permit me again to present some remarks, having the same object in view, with the hope that others may take up the subject, and present arguments and facts, illustrating its importance.

In the remarks which I now propose to make, I shall confine myself to the subject of the improvement of *dairy stock*. The question then is, how can this improvement be successfully accomplished? It must be acknowledged there are some difficulties in the way, which should be met and overcome before any considerable progress can be attained.

One of these difficulties I apprehend, will be found in a lamentable want of interest, and an indisposition among the great mass of our agriculturists to fix their minds upon the subject, and engage in persevering and untiring action. Another obstacle, I apprehend, is a prejudice in the minds of many well meaning men, against what is termed "improved stock," without ever having really tested its merits. Formidable as these and other obstacles are in the way of improvement, yet when the mind contemplates the American character, its accurate discernment, its enterprise and its perseverance, when fully engaged in any pursuit worthy of its consideration, and when the understanding has become convinced of its practicability, who can doubt of ultimate and entire success?

With a view if possible, of directing public attention to this subject, and engaging others in active co-operation, I have recently cast my eye over the official statistics of the United States taken in 1840. By this public document, it appears that there was in the County of Rensselaer that year, a fraction of over 66,000 neat cattle; and as a basis for calculation, suppose one in ten of this number to be appropriated to dairy purposes, then the number would be six thousand six hundred. From the inquiry I have instituted, I am led to the conclusion that the dairy cows now in use in this State, do not average more than from four to five pounds of butter a week, for seventeen weeks, say from the 1st of May to the 17th of August. Call it five pounds, and the average product for 17 weeks of each cow, would be 85 pounds, and the total product from the 6,600 would amount to 561,000 lbs. which at 12½ cts. a pound, would amount to $73,320.

As a still further illustration, by a reference to the same official document, it appears that there were in the State of New-York in 1840, 1,911,244 neat cattle. By applying the same rule as above, (one in ten for dairy purposes,) there would be in the State 191,124 dairy cows. Suppose the product in butter to be an average of 85 lbs. for each cow for the 17 weeks, the total quantity produced from the 191,124 cows would be 16,234,540 lbs., which at 12½ cents a pound, would amount to $2,029,692.

Now if the milking qualities of the dairy stock of the county of Rensselaer should be improved so as to produce 10 lbs. of butter a week, for the period above stated, the product from the same number of cows would be 1,122,000 lbs. which at 12½ cents a pound, would amount to $134,640, creating an increased amount of product of $67,320 in the county of Rensselaer alone for the profit of those engaged in this branch of husbandry.

By an application of the same rule of calculation to the dairy stock of the State of New-York, the result would stand thus. The product in butter would be 32,469,080 lbs., which at 12½ cents a pound would amount to $4,059,385, exhibiting an increased product to this branch of husbandry in the State of $2,029,692.50 for the 17 weeks, and a considerably larger amount per annum. It will be seen that if these calculations approximate to accuracy, the subject is of great importance to the agriculturists of this country, and can hardly fail to force itself at once upon every reflecting mind.

The question then is, have we a breed of cattle among us which will produce 10 lbs. of butter a week for 17 weeks of the most favorable season of the year, on pasture alone. My belief is, we have now in this country, dairy stock, among the improved breeds, which may be relied on to produce nearly or quite that result, and by careful, systematic breeding, it may be still further improved.

If this opinion be correct, it becomes an important inquiry, how is it to be made available? And what means should be instituted to promote and insure success to the undertaking.

From the reflection I have been able to give to the subject, I am inclined to the opinion that much may be accomplished through the medium of the State and County agricultural societies; and the fact should not be lost sight of, that the bounty of the State is contributed to promote this, among other kindred objects.

Should the State Society appropriate $300 of its funds to premiums, fixing the highest at $75, and graduate down to $10, for the greatest quantity of butter made from a given number of cows, to be kept on *pasture only*, for a perid of 30 or 60 days, it is believed such premiums would stimulate numerous dairymen throughout the State, to competition, as the premiums would be a compensation for the extra trouble attending the trial. It may be objected by some, that so large an amount could not well be appropriated to this single object; in answer to such objections, it may be said, the State extends its bounty for the improvement of agriculture, and it will be expected that this bounty will be so appropriated as to effect the greatest amount of improvement.

Time will not allow me to say all I intended to have done, but in a future number may resume the subject. In conclusion, permit me to remark, that to insure the greatest amount of benefit to this branch of husbandry, I cannot conceive any better plan than the one indicated above, as it will afford a wide field for competition, and the owners of the different breeds of cattle will have an ample opportunity to test their real merits, and then the great mass of farmers will be able to decide for themselves whether the Durhams, Herefords, Devons, Ayrshires, or Natives, possess the best dairy qualities, as this information would be spread out in the reports of the transactions of the State Society. This being faithfully done, each individual could not fail to be able to decide which is the best dairy stock; he could then make his selection understandingly, and improvement could not fail to be extensively promoted through the State and the entire Union.
C.

Troy, January 5, 1845.

INSECTS INJURIOUS TO WHEAT.

MR. TUCKER—During the summers of 1843-44, the wheat in this neighborhood had suffered considerably from the depredations committed by a small green worm about an inch in length; its head is brownish green, with two brown spots upon it. The worm ascends the stalk of wheat soon after it has put out in head, cuts off the head and feeds upon the top of the standing part.

If the evil increases as rapidly in future as it did last year compared with the year before, there will be but a small chance for any wheat in this section of country. I do not know of any person having seen any other crop injured by the worm, neither did any one observe them before the heads of wheat had fallen, nor know what they had previously fed upon. Some think they are what have been called the army worm, but I have been unable to find any description of that species in either the late numbers of the Cultivator or Farmer's Cabinet. If you are acquainted with such a mischief-maker as I have somewhat described, will you please favor us with any information or any remedy, if there is one.

In some fields, one-fifth of the heads of wheat were eaten off; and the Mediterranean was more injured than other kinds. The ravages as far as I have heard, are confined to a few miles of this place. P. C.

Penn's Manor, Bucks Co. Pa., April 5, 1844.

Note.—The worm described above, is new to us. As to its being the "Army worm," we would observe that the common names of insects are so various that nothing definite can be learned from them. We are unable to find a description of the Army worm in any entomological works; but have heard that name applied only to a species of the *Agrotididæ*, or cut-worm family, between which and the insect described by "F. C." there would seem to be but little similarity.

CONDENSED PARAGRAPHS.

Mr. Editor—Under this head, I send a few articles for your paper.

Prevention of the bee-moth.—Col. Nathan Beckwith, an old and experienced agriculturist of this town, informs me that the bee-moth may be effectually destroyed by placing, during their active season, near the hives, a few basins of honey and water (made weak,) after night-fall, and removing early in the morning. They are attracted to it and drowned.

Cisterns.—Those who design putting down a new cistern, (and no house should be without one,) will find it much to their advantage to use water cement. Take a dry time in the summer, and dig a hole with sloping sides, sufficiently large and deep to contain the desired quantity of water, below the frost. Then mix the cement with equal parts of washed sand and spread it upon the ground two inches thick—carefully exclude the water for ten days, when it may be covered in the usual way, and is ready for the rains. Remember about the frost, and it will last forever.

Protection of Cows against flies.—As the "fly season" is approaching, I am reminded of a discovery I have made, (which should have been made public before,) to prevent the annoyance of cows by flies while milking. It is simply, blanketing. A blanket should be provided for each milker, of such ample dimensions that it will cover the whole animal, falling down as low as the knees, with the right corner scolloped out for the milker. Make a loop for the horns. It may be made of any material, but coarse cottons being the cheapest and lightest, recommend themselves. Animals unused to blanketing, will of course at first demur, but by gentleness or slight coercion, they soon become as gentle to the spreading of the blanket, as they are to the approach of the milker. Try it—"it works like a cham."

Tivoli, N. Y., 1845. G. Cooke.

TRIMMING GRAPE VINES.

Correction.—Mr. Sidney Weller, of Halifax, North Carolina, informs us that we made a mistake in condensing his article on grape vines, in our March number. The produce of his vineyard is there stated at "eight to ten barrels of wine yearly." Mr. Weller says it should have been that the *annual increase* is eight to ten barrels, &c., the whole product of the vintage being from twenty-five to thirty barrels of wine. He would have made more last season, but for a long drouth, and a high wind which occurred at a critical time and injured the crop. He thinks the vine "will stand a severe spell of dry weather, as well if not better than any other sort of farm product; but the effect of a very long continuance of dry weather, causes some of the grapes to dry up and others to fall off the vines prematurely ripe." Mr. Weller is a pioneer in the grape culture in North Carolina, and we think his practice well worthy the attention of others, and would therefore invite the perusal of the following brief sketch of the course pursued with his vinery. He says—"first, it is very important to have the right kinds of vines, or such as not only bear well, but are not subject to tantalize the cultivator by rotting. The Scuppernong, Norton's Virginia seedling, my Halifax seedling, &c., are of those kinds, and are all large fruit, and excellent for the table or wine.

"I plant the rooted vine as a fruit tree; say 10 feet apart each way; or if Scuppernong, 20 or 30, and put a high stake to the north side. I trim 2 or 3 years, to prevent the vines from becoming bushy, and give all the strength to one or two main stems. Then take out the stake and insert a post 8 or 10 feet high, square at top, with two cleats on each side to secure a rail or piece of timber to lay from post to post, to help support the scantling, and form the scaffolding. After this, I suffer the vines to take their own course pretty much in ramifying over the support above; and scarce ever trim any more; and if I do, I simply cut off a branch and let it remain to decay and fall away of itself. Any part decaying or giving way is easily replaced by propping up, and another inserted. Instead of digging holes, I make them by what I call a jabber, or a large pointed piece of hard wood, with a peg inserted across towards the top, by which with a crow bar or stake, the jabber is drawn out of the ground after being pounded in, at a wet time, by a maul or beetle. In this way, it is much less trouble to keep up a vineyard and manage it, than might be supposed. And as to trimming, or saving all or most of the perpetual European labor, in that matter, I believe it the true "American plan," and I see others of your correspondents stating also to this amount. In short, I believe to entirely succeed in grape culture and wine making; the kind of grapes, manner of managing vineyards, and process of wine making must be our own, or *American throughout*, or the *European* will not do in our country."

PROFITS OF POULTRY—KEEPING EGGS.

Mr. Editor—I ask your attention, while I give you a statement of my attempt to profit, in rearing of poultry. I am a mechanic, hire a house and lot; and I wish to submit for the benefit of others in similar circumstances, the results of attempting to profit by poultry. I saw in the Central New-York Farmer, a statement of Master Geo. Bement, upon the subject in question, and that has induced me to ask a place in your invaluable paper for this article.

The result is for one year, ending the 1st of Dec. 1844, as follows:

Dr.	*Poultry Establishment.*		*Cr.*
35 Hens,....................	$4,38	88 Hens,...............	$11,00
1 Top Knot cock and hen,..	1,00	1 Top Knot cock & hen,	1,00
Grain for feeding,..........	18,67	3,115 Eggs, ...	32,45
Rent of yard and barn,....	15,00		
Cost,....................	$39,05		$44,45
			39,06
			$5,40

Thus you will see that I have a clear gain of $5,40, after paying the enormous rent for the use of the barn and yard. My own labors I count as nothing, because they were given before and after each day's labor.

The yard in which the poultry were kept, is a triangular area, surrounded by a high picket fence; through the center of this yard, a stream of water passess, affording the poultry all the drink they needed; and in the center of the yard, there is a bed of coal-dust; and what is not a little novel, each hen had her particular place in which she rolled.

I will however, state that the stock hens had increased from 35 to 88, and that the increase is 53. I hope this effort will spur on others who think they will TRY to do something to live, to make their way through the world in the best mrnner possible for the convenience of themselves and families. Much can be done to render less the sufferings incident to man; and we are hereby admonished of the truth of the adage

> He that by the plow would thrive,
> Must either hold himself, or drive.

Preserving Eggs.—My manner of keeping eggs so that they will be fresh, is as follows: I place a layer of saw-dust in a keg, then pack the eggs closely to each other with the *small end down*, to prevent the yolk passing through the white of the egg, over this, place another layer of saw-dust, packing closely to and between the eggs, where they do not touch each other, and so on to filling the keg; then head it tight, and change it end for end every 24 hours. In this manner, eggs will keep a year, and be as fresh as the day they were laid.

Westmoreland, Feb. 10, 1845. Philip Smith, Jr.

SOILS WHOSE CHEMICAL COMPOSITION GIVES THEM PERPETUAL FERTILITY.

Mr. Editor—There are some very choice pieces of land which I will call lake *intervales*, dispersed here and there along the shores of the middle and northern portions of the Cayuga and Seneca Lakes. A. Durkee, has a farm half a mile south of the village of Union Springs, on the eastern shore of the lake, seven miles south of Cayuga Bridge, which embraces a strip of this all enduring soil, of many acres, next to the lake shore; its subsoil is a calcareous soft gravelly shale, the surface a dark friable loam. This intervale has been under cultivation more than forty years; for the last thirty years it has borne alternate crops of corn, oats, wheat, and latterly wheat and clover, without any other manure than plaster; all the animal manures of the farm being distributed on the higher land. As there has never been any perceptible diminution of crop, Mr. Durkee takes no pains to increase his organic manures; as soon as his wheat is threshed, the straw is committed to the flames; little pains is taken to save even the ashes of the straw; yet so far from being a careless improvident farmer, Mr. D. is one of the neatest, most thriving, industrious farmers, in a county proverbial for good farming. The land bounded by those lakes, is invariably first rate, unless it is in some places towards their southern extremities, where it rises with too great precipitancy to be strictly arable; but it is only here and there, on a low narrow intervale of aluminous schist, underlaid by soft shales, and the limestone ledge, that a semper fertile soil is found. A small portion of the soil bordering those lakes, is a heavy sandy loam, originally covered with beech, maple, bass wood, &c.; another portion is a stiff clay loam, intermixed with pebbles, covered originally with oak and hickory trees; in other places, particularly near the Cayuga lake shore, in Fayetteville and Springport, the soil is a greasy oak bearing clay, rich in lime, marl, &c. without stone or gravel. More money has been made by John Dysinger in raising wheat and clover seed on this soil, within the last thirty years, than would obtain belief, should I name the amount. Yet for all the purposes of summer cropping, this soil is next to impracticable, requiring the aid of long manure, and fall or winter plowing, the frost alone can render it permeable, and the long manure ameliorates its subsequent adhesiveness.

I consider that the experiment on the soil of Mr. Durkee, goes far to disprove the Berzilian theory, that humus in the soil is the main source of vegetable nutrition; and to establish the theory of Liebig, that plants derive their sustenance mainly from the atmosphere, positively requiring little more from the soil than their inorganic bases. We are told by David Thomas, that on a dry prairie near Vincennes, Ind., Indian-corn had been annually grown more than sixty years, without any sensible diminution of crop, although no kind of manure, animal or mineral, had ever been applied to the soil. Such a soil must be rich indeed in available salts, and the metallic bases. The analysis of various soils by Prof. Sprengel, clearly establishes the fact, that the most enduring soil contains the smallest portion of soluble humus, while the barren heath contains the largest portion of vegetable humus, both soluble and insoluble. S. W.

Farm Accounts.—We make the following extract from the excellent Address of J. W. **Proctor**, Esq.—"In the agricultural, as in the trading community, property will not adhere that is not cemented by labor. The young man, therefore, who sets out to be a farmer, must look about him and see how farming can be supported, what kind of crops there are that will pay for themselves and yield something. He must so manage as to make both ends meet. I cannot too strongly urge upon him the necessity of keeping accurate minutes of what he does, and of making exact estimates of the result of his labors and experiments. Nothing is more detrimental to good husbandry than uncertain conjectures. Though the result of our operations may not correspond with our wishes or expectations, we should not close our eyes upon the facts. Truth, exact truth, will ever support itself, and him who cherishes it."

CONDENSED CORRESPONDENCE.

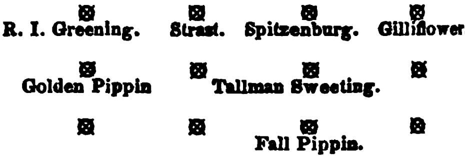
Mixed Husbandry in Mississippi.—We give the following extract from a private letter from a subscriber in Amite Co.—"I reside in what is here called the *Pine* Woods, and follow a mixed husbandry, being content to raise four bales cotton to the hand. My farm has, however, afforded me a better profit the past year, than many farms where 8 to 10 bales to the hand, have been raised. I find a ready market for all the pork, beef and grain that I have to spare, and find no difficulty in disposing of all my surplus stock to my more wealthy neighbors west of me."

Locust Borer destroyed—Spirits of Turpentine.—Mr. Z. P. **Mason**, of Jordan, says—"My locust trees last spring, for the first time, were attacked by the borer—on examination, I found from 20 to 50 in a tree. With a knife I cut off the bark directly over the place they were at work in the wood and applied spirits of turpentine to the place, inserting it when necessary, into the holes with a feather. This was effectual, as no more borers made their appearance during the summer. The trees did remarkably well after the application of the turpentine, the incisions entirely closing up during the summer. Now it is barely possible that I found *all* that were on the trees—if so—*all* were killed—but it is reasonable to suppose some escaped the *direct* application—did not the turpentine circulating with the sap drive and keep them away?"

Early Blossoms.—Mr. N. **Parker** of Trimble county, Ky., writes that he had Peach and soft shelled Almond trees in bloom on the 22d Feb. last.

Large Eggs.—A correspondent at Providence, R. I., informs us that Mr. D. **Chase** has a Poland hen, that in one week laid three eggs weighing 3¼ ounces each, beside one or two others about the common size."

Marking Fruit Trees.—In a late letter to us, Col. **Randall** of Cortland, says—"I can tell you a cheaper and handier way of marking apple trees than the one published in your last; which you can publish in your correspondence, if you see fit. On a leaf of his farm-book, let the farmer put down a *map* of his orchard thus, every dot standing for an apple tree.



The upper part of every map is north. Then by counting rows, and the number of the tree in the row, the tree represented by each dot can be readily identified, and the name of the fruit should be put down under each as above."

Potatoe Rot.—We have received from "G. S.," a respected correspondent at Pendleton, S. C., a well written article on this subject, which nothing but the great press of communications, prevents us from publishing entire. The conclusion to which "G. S." has arrived, after much consideration of the subject, is, that "a superabundance of water, or sap in the potatoe, is the immediate or proximate cause of its premature decay." In reference to a remedy, he says—"it is *depletion*, which in many instances must follow *repletion*, to save life. In other words, I would suggest (whenever it is discovered that the rot has commenced,) the propriety of cutting off the tops just above the surface of the bed, and in one or two days afterwards, to dig the potatoes. It will be found on the day following the cutting, that much water has been discharged from the standing stumps, and that the potatoes have been effectually drained of their engorged sap. This operation, I feel well assured, will very much improve the quality of the potatoe for immediate table use, and I do believe ensure its preservation." We have heard before, the suggestion in reference to cutting off the tops. We are not certain that doing this *after the blight had struck the tops*, would injure the tubers—we rather think it would not, and hence we see no objection to trying the remedy of "G. S." But it may not be amiss to remark that we believe cutting the tops from *healthy* potatoes while the tubers are growing, is injurious. This has been proved by our own experience. It will be noticed that "G. S." advises digging the potatoes in a day or two after cutting off the tops. He may not perhaps be aware of the fact that the blight in many cases has attacked crops before the tubers were half grown. As to the propriety of digging, under such circumstances, we are undecided. In some cases, we have heard of the potatoes being dug as soon as the tops had become blackened by the disease; in others, they have been left in the ground till late in the season; but the results of either practice have not been so uniform as to justify us in saying which should be recommended.

Rot in Potatoes.—J. Stillman, of Schenectady, in a letter on this subject, informs us that he has been familiar with the phenomenon of honey dew, for more than fifty years, and feels confident that it has no connexion with disease in the potatoe. Since reading the remarks of Dr. Jackson in the Nov. number of our last vol. Mr. S. says he has made many inquiries of observing farmers, but has found only one that had noticed the honey dew; and though this man has frequently seen it on the leaves of trees and vegetables, he has never witnessed any of the blighting effects ascribed to it by Dr. Jackson and Mr. Boyd. Mr. Stillman thinks that after all the discussion on the potatoe disease, "we are probably as far from the truth as when we first started." He has no faith in obviating the disease by raising new varieties from the ball, because it is not the *oldest* kinds that are most affected—for example, the "old fashioned reds," he says, are the least affected of any kind he has known. But whatever may be the cause of the disease, Mr. S. advises *early planting* as much safest—this he has proved by several experiments, and it will be seen agrees with our recommendations in the April number.

Rot in the Potatoe.—Mr. D. K. Youngs of Oyster Bay, (L. I.) says—"The earliest planted on dry ground were not much injured—the late ones, and those on low ground, were worthless, and this without regard to the quality or kind of seed." Mr. Y. will have seen our opinion on this subject, which he asks for, in the April number.

A Challenge.—"Will the editor of the Cultivator have the goodness to state for the information of the cattle growing community, that the Empire State is challenged to produce a better pair of five years old cattle than is now owned by Daniel C. Mason of New Hartford, Oneida Co., to be shown at the next State Fair."

Cure of Scours in Sheep.—Mr. N. B. Pinny, of Plymouth, Windsor Co. Vt., informs us that he and his neighbors have tested the efficacy of Mr. Jewett's mode of treating sheep for scours—(see another part of this number.) In connection with this, he relates an incident. Some years ago, his neighbor subscribed for the Cultivator, but took it only one year, thinking that as it was published "out of his own State," it could hardly contain a dollar's worth of information adapted to his wants. In the course of the past winter, his neighbor called one day to inquire for a remedy for the "scours," by which he had lost several sheep and was in a fair way to lose more. Mr. Pinney lent him a number of the Cultivator containing directions in the case. He pursued the course recommended, saved his sheep—became satisfied of his misjudged economy in not taking the Cultivator, and has accordingly again subscribed for it.

Shedding of wool by Sheep.—Mr. E. B. Brown, of Mystic, Conn., informs us that his sheep were found, during the past winter, to shed their wool, which he attributed to their having eaten freely of some species of Juniper on which they had been allowed to browse. On keeping the sheep from the Juniper, the wool ceased to fall off.

The season in Alabama.—A. McDonald, Esq. of Eufalla, Ala., writes under date of 28th March, that the winter had been favorable to the preparation of the ground for the reception of seed, in that section, and that the spring had also been warm and pleasant till within ten days of the time of writing, when the weather had turned suddenly cold, and several frosts occurred that cut down the corn. The planting of corn on Mr. McD.'s farm, was commenced on the 26th Feb., and finished on the 12th March. He says the corn that was bitten down, will not be materially injured, as it is only the blade that is affected. Mr. McD.'s oat crop was sown the last of November, stood the winter well, and will be fit to cut the early part of May. Cotton planting was commenced in April.

☞ Mr. McDonald wishes some correspondent of the Cultivator would give the proper management of the sugar cane—the time of planting, quantity of cane per acre, mode of cultivation, grinding, and the preparation of the syrup, &c. Also directions for cultivating coffee, the olive and madder—where seed can be obtained, &c.

Grafting on Peach Stocks.—Extract of a letter from a gentleman at Holly Springs, Miss., dated Feb. 27, 1845. "There is a gentleman in this vicinity who cultivates and raises fruit trees for market; he engrafts all his varieties of plums, almonds, apricots and peaches, into the peach, with complete success, in getting them to live; his plan is to graft every thing—has never followed the system of budding. All the communications that I have seen on the subject of grafting into the peach, represent a failure on the part of those who have made the trial. The success of this gentleman does not arise from any thing new in the execution of the work; he does that in the usual way; inserts the cutting at the surface of the earth, and draws up some loose earth around it. My opinion is, that his success depends on the time of grafting, which is at the time of the first moving of the sap, before the tree has commenced to put forth its leaves. This work has been done by him some days since. The peach, and some kinds of plum, apricot and almond trees, are now in full bloom; oats have been planted, and in some instances, corn, in our county. Winter has been mild and pleasant; no cold weather, and but little rain."

Mr. Geddes' experiments with corn.—"A Subscriber," at Northampton, Mass., says he "would suggest to Mr. Geddes to cultivate the ground upon which he experimented with corn last season, for a series of years without manuring, or until that which was manured, would produce no more than that which was not manured, as he will thereby not only test the relative value but the *real* value of manure. I have never seen an experiment where the real value of manure has been ascertained."

Warm bath for lambs.—At one of the agricultural meetings held here last winter, several gentlemen spoke of the advantage of the warm bath for resuscitating young lambs that had become chilled. Mr. S. W. Jewett also recommended the practice in our February number. A correspondent at Northampton, informs that he has practiced it for several years. He says, his "manner is to immerse the lamb in warm water for a few minutes, then roll it in a wollen cloth and put in a warm place till it becomes dry and shows signs of hunger. It will generally get along without any further nursing. Should the extremities be frozen, which is sometimes the case, the frost must be taken out with *cold* water. I prefer absorbing the water with flannel to rubbing it off, as it is somewhat upon the principle of *steaming*." He states that the mode has been successful with him, and he can therefore recommend it to others.

Poudrette.—H. B. Glover, Esq. of Newtown, Ct., informs us that he has tried Poudrette two years in succession on corn, a gill to a hill, put in the hill on top of the corn at planting time, and has found at gathering the corn, in the fall, no difference either in quantity or quality, from that which was along side of it, and treated equally the same except the poudrette. It is true, he says, "there was a slight difference in the color of the leaves, when it first came up, and the poudrette rows started a little the most vigorously at first, but the other rows in one month had overtaken them, and no difference could be perceived. I am satisfied that it is not a profitable manure, (at present prices,) for me or farmers in this vicinity to buy, when stable, gypsum, ashes, lime and other manures, can be bought as at present."

Finish planting gardens and fields.

THE CULTIVATOR.

ALBANY, MAY, 1845.

TO CORRESPONDENTS.

Communications have been received during the past month, from S. B. Buckley, A Subscriber, G. Cooke, S. Weller, E. B. Brown, N. Darling, Mrs. N. Darling, Z. P. Mason, J. Stilman, H. B. Glover, L. Feutchtwanger, D. Griffin, N. P. Atkinson, J. L., J. P., Richmond, Wm. Makinster, Alex. McDonald, E. M. Chapman, D. G. Mitchell, J. A. Jones, L. F. A., F. C., G. S., D. F. Barker, Publius, A Delawarian, Thomas Collins, J. P. Norton, Jno. Girdwood, (of Featherhall, Midlothian, Scotland,) M. W. H., A. L. Bingham.

We are under obligations to Mr. **Wm. Burling**, for a copy of his Address before the Ontario Agricultural Society—To A. G. **Summer**, Esq., Editor of "The South Carolinian," Columbia, for Tuomey's Report on the Geological and Ag. Survey of S. Carolina—To **Wm. Mackenster**, for the reports of the Viewing Committees of the Midelesex (Ct.) Ag. Society, for 1844, together with the Address of E. A. Elliot, Esq—To **Wm. Bacon**, Esq., Richmond, Mass., for the 8th Annual Report of the Board of Education of Massachusetts—To **Greeley & M'Elrath**, the publishers, New-York, for "Popular Lectures on Astronomy, by M. Arago, with extensive additions and corrections, by Dr. Lardner—To **Elwanger** and **Barry**, of the Mount Hope Nursery, Rochester, for grafts of the Northern Spy—To Hon. N. **Darling**, New-Haven, Ct., for some ears of the early sweet corn, described in our paper of Jan. last—To J. P. **Fairbanks**, Esq., St. Johsbury, Vt., for nos. of the Caledonian newspaper—To Col. A. **M'Donald**, Eufalla, Ala., for nos. of the Southern Shield, containing proceedings of Barbour county Ag. Society—To Hon. J. A. **Dix**, U. S. Senate, for "Report to the Navy Department, on American Coals, by W. R. Johnson," a valuable volume of 600 pages, and for Mr. Ellsworth's last Report—To C. H. **Bryan**, Esq., for the prize List of the Livingston Ag. Society, for 1845—To ——— for Proceedings of the Virginia State Ag. Convention, at which a State Ag. Society was organized under circumstances promising much for its usefulness—To A. **Randall**, Ed. Plow Boy, Cincinnati, for the Proceedings of the Hamilton County Ag. Society—To Mr. A. L. **Bingham**, Cornwall, Vt., for beautiful samples of wool from his flock of Merinos—To **Greeley & M'Elrath**, publishers, for Part I. of "Popular Lectures on Science and Art," by Dr. Lardner.

J. P. N., (Edinburgh)—We are greatly indebted to Mr. **Norton**, for the "series of practical papers, he has procured for the Cultivator, from one of the best farmers of the Lothians, a body of men confessedly surpassed by none in any part of the world." Mr. **Girdwood's** first communication will appear in our next number, and we need not say that we heartily second our friend **Norton's** request for a continuance of his favors.

S. W. J.—The drawings of "Black Hawk," and the Leicester Sheep, are in Mr. Pease's hands. The drawing of Mr. Bingham's Ram, will be engraved as soon as the others are finished.

N. P. of Bedford—Your paper was sent March 19, as soon as ordered.

☞ A large portion of our March number were, through the oversight of the printer, printed with several of the pages transposed, very much to the annoyance as well as to the injury of the volume.

Z. P. M.—The specimens of Marl have not been received.

A. C. S.—We cannot make room for the subject to which your article is devoted, with the present press of matters of more immediate and practical interest, upon our pages. It shall be given at some future time, if we can make room for it. The same remarks will apply to the communications of "J. A. Jones."

Clearing Land.—We should feel obliged if some one who is acquainted with the subject, would give us an article on the best mode of clearing land from the forest. Information is particularly desired in relation to the expediency of burning a large portion of the growth on the land. On what kind of soil is that practice most beneficial? And is it injurious on soils of any description? Does burning out the organic or vegetable matters, sometimes leave soils, after the action of the alkalies has subsided, too heavy and inert? If so, what course of clearing should be adopted instead?

MONTHLY NOTICES.

Mr. Colman's European Agriculture.—Part III of this work is now in press at Boston, and will be issued early in the present month. In this number, Mr. **Colman** treats largely on the subject of Agricultural Education, embracing notices of the Schools at Glasgow, Templemoyle, Brookfield, Larne and Ealing, and concludes this subject with a "Plan for an Agricultural Institution for the United States." Among the other contents of this part, are articles on the Elevation of Agriculture as a pursuit and profession—Rural Manners in England—A Pencil Sketch—Life in the Country—Veterinary College—Museum of Economic Geology—Guano, &c. &c.

Dr. Lee's Report.—We give in this paper, the Report recently made by Dr. Lee, chairman of the Committee on Agriculture in the House of Assembly of this State, and invite for it the serious consideration of our readers. Its facts and suggestions are of great importance, and are well calculated to induce reflection by those who obtain their living by manual labor. The weight which presses with so much force, and binds so large a portion of our rural population to continual and unmitigated toil, is set forth in a strong and effective light. The necessity of teaching our young men how to produce a good living, and how to keep and enjoy the proceeds of their labor, rather than how to acquire the earnings of others by speculation or other means, is forcibly illustrated; and the remarks on the advantages to be derived from the improvement of the minds of the laborers, commend themselves to the good sense of every one.

We have seen with regret that this document has been denounced in one or two instances, as of "agrarian tendency," for we are sure that nothing could have been farther from the intention of the writer, and also that he has used no language which can properly be so construed. Dr. Lee's object was to show the difference between the value of the labor of the ignorant and the intelligent, and to impress upon the Legislature their obligations to dispense their bounty, so far as in their power, so that it may, like the bounties of Him who has provided for seed time and harvest, reach every one who will avail himself of its benefits. To make the contrast more impressive, he cites the difference in the rewards which are bestowed on the cultivated and uncultivated mind. Whatever opinions may be entertained as to the *expediency* of putting forth prominently some of the positions of the Report, we imagine there are few persons who will undertake to show that these positions are untrue. It is much easier to denounce an article, than to show by fair reasoning that it is false or unsound.

Melons and Squashes.—We are indebted to **George H. Patrick**, Esq., P. M., Locust Lane, Va., for seeds of a Watermelon, produced by himself, which he thinks the best he has ever seen—also for seeds of the Nutmeg and Canteleupe Melons, and Cushaw Squash. Of these, Mr. P. says—"The Nutmeg is a small round fruit, from 3 to 5 inches in diameter. The Cantaleupe is a little larger, and in shape more like the common muskmelon. Both should be taken from the vines when they have the appearance of being green, just as the stem begins to crack or separate from the melon, which it will do when the melon has that fine perfume peculiar to itself. They should be put in a cool room for two or three days, when they will be fit for use. One of the Nutmeg Melons will perfume a large room. The Cushaw or Kentucky Squash matures early, and is much superior to the pumpkin, cooked in the same way, or in much less time, with as little water as possible—or cut open and baked in an oven with the rind on, and served with butter."

Grafting.—We have received from Mr. **Pond**, of Bucksport, Maine, a specimen of a mode of grafting practiced by him and others in his neighborhood, with success. It differs in some respects from any other mode we have seen, though it is somewhat similar to *tongue* grafting. Mr. Pond thinks it has advantages over any other mode for stocks not more than an inch in diameter. The chief difference in this and tongue grafting, is that the stock is not split.

Scions of the "Sweet and Sour" Apple.—We received from Mr. **Wm. T. Hamilton**, Clifton Park, N. Y., a parcel of scions from a tree which produces this kind of apple. The same gentleman also sent us samples from the same tree, last fall, which were tasted by many, and the strange peculiarity acknowledged by all. Mr. H. states that forty years ago, two scions were brought to that place from Horse-Neck. The theory of the origin of the variety, which is only *traditional*, as we understand, is that which has been often given, of a union of two scions of opposite kinds. "For several years," (says Mr. H.) "the fruit from these scions was almost entirely sweet; then a small spot on one side, of greener color, and sour as a greening, showed itself. The tree is still living and *now bears greenings only*. It has some years produced 20 bushels, though they are less sour, and more pleasant than the ordinary greenings. The tree from which those I gave you were taken, produces greenings also, and the two varieties are found growing side by side, on the same twig."

Improved harness-buckle.—One of the most valuable improvements which we have met with for some time, is the "*Compound Lever Buckle*," invented by **Henry Lawrence**, of Chenango county, N. Y. The article is intended chiefly for the use of the trace or tug in harnesses, and is equally applicable to the heaviest or lightest draft. Its peculiar advantages are, that it dispenses with the use of the tongue, thus obviating the necessity of cutting holes in the trace, and giving to it greater strength and durability. Every one has noticed that a trace breaks first where the tongue of the buckle goes through; this is owing to the whole strain of the draft coming on but a small portion of the trace, and to the leather becoming rotten and weakened by the holes letting in wet. With this buckle, the trace can be taken up or altered to any required position, and is instantly fastened with the utmost exactness, to a hair's breadth. It is an article of great simplicity, neatness and durability, and we have no doubt is destined to come into general use. The patentee has left one of these buckles at this office, where it may be seen by those interested in such improvements.

☞ The beautiful and high bred Durham bull "Marius," shown at Poughkeepsie, by Mr. Oliver of Sing-Sing, has, we learn, been purchased by Messrs. Bell and Morris of Morrisania, Westchester county, N. Y.

Harvesting Machine.—We have received from **Zerah M. Chapman**, of Illinois, a sketch of a harvesting machine invented by him. He must excuse us for not giving a cut of it, as it is impossible to get, from the draft sent, such an idea of its construction as is necessary to make a proper drawing and description.

Guano.—We make the following extract from a letter received from **Edward Stabler**, Esq. of Sandy Spring, Maryland:—"Why do none of your correspondents communicate on the subject of guano? I have used it to considerable extent on my wheat crop, sown last fall; the present appearance of the crop is most promising indeed. Mine was the Peruvian guano, Orpheus' cargo, imported into Baltimore by S. K. George, Esq. With two hundred pounds to the acre, side by side, of 25 ox-cart loads, (about 30 bushels to the load,) of barn yard manure, there is a difference of 50 per cent in favor of the guanoed wheat. Nearly half of the field has 12 bushels of ground bones to the acre; but the difference in favor of the guano, is about the same as over the manure. If the guano only proves durable in its fertilizing effects, it is by far the cheapest and most valuable article I have used as a manure. I intend using about a ton on my corn crop this season."

Sanford's Straw Cutter.—In the Dec. number of our last volume, we gave a cut and description of this machine. We have lately witnessed its operation, and think it a good implement for cutting hay or straw. It cuts in lengths of about three-fourths of an inch, and with ease and rapidity. The price is $15.

Advertisements.—A variety of information of public interest will be found in our advertising department this month. The breeders of Short Horns will perceive that Mr. **Allen** proposes to delay the publication of his Herd Book, so as to give them an opportunity to insert their calves of this year.—Those having business to transact at Washington City, or wishing to emigrate to the South, are referred to the notice of Messrs. **Skinner** & **O'Reilly**.—Those wishing to purchase Short Horns, to the advertisements of Mr. **Prentice** and Mr. **Vail**, and those who wish to enter into the grazing and wool-growing business on a large scale, to the notice "To Sportsmen."

Duties of committees for Ag. Societies.—Among the regulations of the Franklin county (Vt.) Agricultural Society, we notice the following article, to which we would call the attention of our readers. It strikes us as a very proper regulation: "It shall be the duty of such committees as shall be appointed to inspect agricultural productions—in making their reports on the same, to take into consideration the skill, industry and economy, with which the same was produced, and accurately note and specify the individual merits and demerits of the principal animals and articles inspected by them, and clearly describe the points in which the preferred animal or article surpasses the others."

Improvement of Horses.—We invite attention to the advertisement of Gen. Salisbury's horse *Diomede*, in this number. We thought highly of this animal when we saw him at the State Show last fall, and our opinion seems to have corresponded with that of a committee of acknowledged good judgment, which awarded to him the first premium on horses. We have no doubt he is well calculated to produce a stock of the highest value for the purposes mentioned by Gen. Salisbury. It will be seen that accommodations are offered to mares sent from a distance.

ANSWERS TO INQUIRIES.

T. P. E.—You can obtain the first series of "The Cultivator," 10 vols., handsomely bound—also the first vol. of the new series, of **Wm. Kean**, bookseller, New-Orleans, who keeps them constantly on hand.

M. V. B.—For drawing and description, from which any carpenter can make a good Roller, see Cultivator for 1843, p. 59.

Dorkings.—F. C. and P. C.—Do not know of any in the vicinity you speak of. We believe they may be had of Mr. H. T. Chapman or Dr. Field, New-York, at $3 per pair.

Gapes in Chickens.—T. G., (Springfield, La.)—See last vol. Cultivator, page 305.

Osage Orange.—"*A Delawarian*"—The most ready way of propagating this shrub, is by *cuttings*, which are advertised for sale by Messrs. Landreth and Fulton, Philadelphia. Price $10 per 1,000. (See advertisement in March No. of the Cultivator.)

Transplanting the Sugar Maple.—The best time is either in the fall, just after the leaves have fallen, or as early in spring as the ground can be worked. See an article in last Cultivator.

Foot Rot.—N. P. A. (Wheeling, Va.)—If sheep having this disease, are kept in a small space, the ground, particularly if it be wet, is believed to become so infected with the virus, that other sheep may take the contagion by coming into the enclosure. The same sheep might also re-take the disease, unless the remedy used counteracted this influence in the ground till it might be dissipated by the air. To make sure, however, we should prefer removing the sheep to a perfectly clean lot, after having applied the remedy, and would not let any go on the infected ground for some time.

Refuse of Flax Mills.—P. B., (Homer, N. Y.)—This substance is not worth your attention as long as you can obtain stable manure at the price you mention—that is, 12½ to 25 cts. per load. The flax refuse rots slowly—on this account we have seen it put round fruit trees to keep the grass from growing, and for this purpose is useful.

Fistula, (not "thistelo.")—D. G. (Quaker Springs, N. Y.)—If the sore is so far advanced that matter is discharged, Mr. Youatt directs, (Treatise on the Horse, p. 153, 163,) to insert a seton so that the whole of the matter may run out, and continue to run out as fast as it is formed. He says, "the needle should enter at the top of the tumor, penetrate through its bottom and be brought out below the abscess." Some recommend cleansing the sore after the insertion of the seton, with vitriolic solutions, but frequent fomentations with warm soap-suds, will probably answer, and as Mr. Youatt says, in the earlier stages of the abscess, will effect a cure.

Whale Oil.—E. B. B., (Mystic, Ct.)—There is no doubt that the oil and "filth" from whale ships would make good manure, if properly managed. A gentleman in this neighborhood, has used the blubber of *seals* to good advantage as manure. His mode of using it, which would probably do well also for whale oil, is to mix it largely with loam or street manure, and let it lie till a pretty thorough decomposition has taken place in the mass. It is recorded that the late Lord Somerville used whale oil at his farm in Surrey. It was mixed with sandy earth, and afterwards applied to crops, and is said to have produced great results. All animal oils are very powerful in their effect on vegetation, and it hence becomes necessary that they should be so incorporated with other substances that they reach the plant in very small quantities only.

Saw-dust—swamp-muck—old coal-pit bottoms—leached ashes, &c.—J. A. B. (B. M. House, Md.)—Saw-dust is useful in breaking up the tenacity of clay soils. It may be spread and plowed in. When it has thoroughly decomposed, it appears to afford some food to plants. That made from hard wood, is thought best—though *oak* saw-dust sometimes contains considerable acid, and ashes, or lime, are recommended to be mixed with it on this account before it is used as manure. It makes good bedding for horses and cattle—absorbs the urine, and keeps the animals clean. *Swamp-muck* varies much in quality, but is generally more or less valuable for uplands. You had better try it. Put some on your wheat and rye lands next fall, and harrow in. Expose some of it to frosts next winter, and in spring put it on your corn land. Note the result in all cases—it may be its effects will be better the second year—it often is so. You may find out in this way, whether it is best for you to use it to any extent. The *bottoms of coal-pits* are useful to mix with stable manures, and to absorb urine—it prevents, to a considerable extent, the escape of ammonia, and it is a good top-dressing for moist grass lands. The effects of leached ashes, lime, plaster, and bones, on your soil, can best be determined by experiment. They may be tried on a small scale, so as not to run much risk, but with such care that the result may be taken as a guide.

Carrots.—H. B, G., (Newtown, Ct.)—The seed may be sown with a machine. We noticed one in our last, page 106, (Seward's) which we have no doubt may do well. There were formerly machines sold at the ware-houses in Boston at five dollars each, with which carrots, turneps, &c., could be sown better than they generally are by hand. From an acre, to two acres per day, according to the space between the rows, may be sown by one man with a good machine. Before sowing, the seed should be well dried and rubbed between the hands, or in some other way, to take off the burrs and make it so smooth that it will not clog the machine. A light soil is considered preferable. About sixteen inches is considered the proper distance between the rows, and they are commonly thinned to two inches in the row. If the ground is quite moist, the seed is sometimes sown on ridges, made by turning two furrows together by the plow. Two rows at the distance of three inches or so, are sometimes sown on a ridge, to make up for the greater space which this mode allows between the alternate rows. The practice of sowing two rows together, as described, is sometimes, also, adopted in level cultivation, in order to give opportunity for the use of the harrow or cultivator, in working the crop. We have been informed that the seed is sometimes sown broadcast, and that very large crops have been obtained by this mode. The argument in favor of it is, that as the carrot makes but a small top, the roots will bear to stand very close, so as almost to cover the ground, and this can be effected more completely by the broad-cast, than by the drill mode. From experience we know nothing of the broad-cast mode—it appears probable it might have advantages over the others on soils not subject to weeds, but where these prevail the additional labor required to clean the crop, might overbalance the extra yield.

MR. PRENTICE'S SALE OF SHORT HORNS.

We very cheerfully give place to the following communication, which has been sent us by one of the best judges and most distinguished breeders of cattle in our country, and one who can have no other interest in the sale than that which should actuate every individual who desires to promote the best interests of the farming community. We doubted very much the propriety of the step taken by Mr. P. in offering his whole stock at public sale, without reservation, because such sales heretofore have generally failed to excite that attention which they deserved, and because we feared he would not in this way realize any thing like fair prices for his valuable herd. Mr. Prentice has, however, offered such inducements for an attendance at his sale, as have never before been offered, by pledging himself that his cattle shall be actually sold to the highest bidder, without any bye-bidding or reserve. That they will therefore be sold, and at such prices as the public are pleased to give, is a matter of certainty; and we should hope that this assurance would inspire sufficient confidence to induce such an attendance at the sale as will prevent their being struck off at half their value. A list of the animals to be offered, together with their pedigrees, will be found in the advertising department of this paper.

Mr. Tucker—I observe in the last Cultivator, that Mr. Prentice of your city, has advertised his numerous herd of cattle for sale. The entire frankness and absence of all reservation whatever, with which they are offered, is not only characteristic of the man, but is a sufficient guarantee to the public that a competition will here be offered greater than ever before on this side the Atlantic, to possess some of the choicest specimens of this noble race of cattle.

This step of Mr. P. at this time, has probably been maturely considered, and his reasons for thus offering them, are no doubt a sufficient justification for the *boldness* of thus inviting a public sale, when the spirit of improving our native herds has so long slumbered, and a renewed energy is hardly yet awakened in our agricultural community. Still, it is to be hoped that public attention will be aroused by this decisive measure, and that our practical farmers, stock breeders, and retired country gentlemen, will avail themselves of an opportunity such as has never yet occurred, in the number and quality of animals offered, to renovate and improve the neat stock of their estates.

After an experience of near thirty years that the Short Horns have been bred in the United States, it has been too well settled by an intelligent public opinion, that they are, individually in themselves, and as improved by the infusion of their blood with our native stock, an invaluable acquisition to our country, to be now denied. It would therefore be the height of mortification that one who has made unwearied efforts, both in time and in expense, and with motives far above all pecuniary considerations, should be left unremunerated, in part, at least, for his invaluable services.

It now remains to be seen whether a discriminating public will recognize such efforts, by attending this sale, and purchasing the animals offered at any thing like fair prices, or by a culpable listlessness and want of true self interest, permit, in their sacrifice, a public disgrace. Were this herd of cattle in England, they would undoubtedly bring twice the sum at public sale, that their proprietor would ask for them at private contract, if he were now at liberty to do so; and to such gentlemen as propose to send to England direct for fine animals, at enormous prices, as is almost every year the case, and then obtain those of no better quality, and perhaps inferior to those now offered, this presents an opportunity of which they should wisely avail themselves.

To breeders, this sale is of vital interest. It must, for a time, at least, fix the *selling* value of American Short Horns. The number and the quality of this herd, and the prices they will bring, are far too prominent to be overlooked or forgotten, by the subsequent purchasers for some time to come; and although the writer of this is a breeder to a moderate extent himself, yet having not the remotest pecuniary interest in this herd, or in the result of the sale, he has a deep feeling that the integrity and high character which this noble breed of cattle possess in the estimation of our most intelligent farmers, shall be sustained by prices that will continue to render them an object of attention for all future time.

Let there then be a rally at this sale, and a *substantial* dispositon evinced to sustain one who has made such important acquisitions to the true welfare of our agriculture as has Mr. Prentice, in the importation and rearing of his beautiful herd of cattle. PUBLIUS.

WHITE-WASHING.

This is the the season of the year for white-washing. There is no doubt that a coating of lime-wash, or some other application, tends greatly to preseve buildings, fences, &c., that are exposed to the weather. The inside of our dwellings, also, is greatly improved in appearance, as well as rendered more conducive to health, by washes of lime. We have in former volumes given various receipts for making white-wash; and would refer our readers to the vol. for 1843, p. 88.

In the Report of the Commissioner of Patents for 1844, we find the following directions for making washes, and which are there recommended with much confidence. The superiority of this wash said to depend upon white vitriol, sometimes called sulphate of zinc, which is represented as a powerful mordant to harden and fix the paint.

For brick or stone.—One barrel of stone lime, (fresh burnt is best,) slake it, and then add two barrels of hydraulic cement or water-lime, stir them together until about the thickness of paint suitable to be laid with a brush; then add twelve pounds of white vitriol, (sulphate of zinc,) stir same for an hour, or till thoroughly mixed; let it remain twenty-four or thirty hours, and it is fit for use. When you commence using it, take for every four gallons, one quart of fine dry sand, and stir them together; put it on the wall with a large paint-brush; if too thick add a little water. This mixture produces a pale yellow; after which, (when dry,) to produce a pure white, go over the same with white-wash, as follows: one bushel of lime, with one pound of sulphate zinc.

For wood-work.—One bushel lime; one pound white vitriol, (sulphate of zinc;) one quart of salt; one peck of white sand.

Sulphate of zinc can be formed by taking one part sulphuric acid, four parts water, and adding as much zinc as it will take up.

THE STING OF A BEE, it is asserted, owes its poisonous nature to its being an *acid;* and therefore liquor potassia, by neutralizing the acid, becomes one of the best remedies. As it is very caustic, and corrosive to the skin, it must be applied at the precise spot, on the point of a pin or on the tip of a camel's hair pencil.

Notices of New Publications.

FRUITS AND FRUIT TREES.

The Fruits and Fruit Trees of America; or the Culture, Propagation, and Management, in the Garden and Orchard, of Fruit Trees generally; with Descriptions of all the Finest Varieties of Fruit, native or foreign, cultivated in the gardens of this country. Illustrated with numerous Engravings and Outlines of Fruit. By A. J. DOWNING. 1 *vol.* 12 *mo*., (*and also* 8 *vo.*) *New-York, Wiley & Putnam.*

It is with feelings of more than ordinary gratification, that we announce the appearance of this invaluable work. We are sure that none of our readers will be in the least disappointed with its contents, notwithstanding the high expectations which have been raised by the known abilities of its author. A deliberate examination of a large portion of the work, enables us to say, without hesitation, that it is by far the greatest acquisition placed within the reach of American cultivators of fruit, which has ever yet appeared.

Nearly sixty pages of the first part of the work are devoted to the general principles and practices of fruit culture. The greater part of this is the direct result of the author's own extensive experience, combined with that of the experience of others; and taken as a whole, it is a perspicuous and admirable digest of all that is known on the subject up to the present time. The remainder of the volume is chiefly devoted to the different kinds of fruit, their management, diseases and enemies, and full and accurate descriptions of the numerous varieties, of a large part of which excellent outline figures of the natural size are given.

The pre-occupied state of our pages, prevents our entering upon an analysis of the work at this time; but we shall next month take up the subject and favor our readers with extracts from several portions of the work. The clear and neat style of the author, his extensive and long continued experience, and the unwearied labor which he has bestowed upon the work, have rendered it nearly all that could be desired in the present state of knowledge on the subject. New and repeated additions to the stock must of course be continually made; and in promoting and facilitating these additions, this work must prove a powerful auxiliary.

There are occasionally incidental remarks made, and opinions advanced, with which we do not fully agree, or which may partake of a conjectural character; but they are very few in number, and can scarcely affect the value of the work even in a trifling degree. The amount of matter afforded in a clear and condensed work as this is, of no less than 500 pages, with about two hundred engravings, illustrating the processes of Grafting, Budding, Training, &c. and outline figures of fruits, at the low price of one dollar and fifty cents, should induce every one who cultivates a single cherry tree or currant bush, to possess it at once, and avail himself of the ample instructions and interesting facts with which it abounds.

Report on the Geological and Agricultural Survey of South Carolina, for 1844, *by* M. TUOMEY—pp. 64.

We are indebted to Col. A. G. SUMMER, of Columbia, S. C., for a copy of this work. The Report consists of three general divisions, or chapters, viz: Primary Rocks, Metals, and Economical Geology—to which is added an Appendix embracing the "Prize Report of Experiments, submitted to the State Agricultural Society of South Carolina, Nov. 1844," by FRANCIS S. HOLMES.

We find in this Report, some interesting facts, particularly under the third division, or Economical Geology; we cannot, however, do more for the present than briefly advert to them. Speaking of *Gneiss*, the writer states that it occupies, in a considerable degree, the mountainous portion of the State, and that he

> "Was not a little surprised to find on the very summit of Glassy mountain, and on one of the highest of the Saluda mountains, crops that would have done no discredit to more favored localities. On the most rugged sides of these mountains, particularly in the moist dells, the luxuriance with which the natural grasses grow, show how well

they are adapted to sheep-walks, and it is strange that so little attention has been directed to this branch of agricultural economy."

The writer again remarks, in reference to a hilly region in the county of Pickens, the soil of which is considerably derived from *Mica slate*, that the hills were covered with verdure, when he saw them, while a few miles lower down, the contrast was striking, every thing being parched by drouth, and that "it was impossible to keep the fancy from picturing these beautiful hills covered with clover, and alive with a thousand flocks and herds—for there is lime in their very midst. Both the climate, and the geological character of this region, mark it as the grazing country of the State."

Under the head of the *uses and action of lime*, the writer observes—

> "A knowledge of the action of lime on vegetable matter, ought to prevent the mistakes committed in putting it in contact with the roots of plant, the delicate fibres of which it must attack, if there be not a superabundance of other vegetable matter in the soil. As lime acts chiefly by bringing into action ingredients that were inert in the soil, and as every crop carries off a certain quantity of soda, potash, phosphoric acid, &c., it follows that unless these be added, in the various forms of manures in which they exist, that a soil may be unproductive, though having lime in abundance. I now speak of lime, not marl, for in marling, many other substances are added as with lime."

The Appendix relates chiefly to experiments with marl, on various crops. The action of this substance is shown to be highly beneficial, and from the quantities in certain portions of the State, no doubt is entertained that it furnishes a source of fertility to the soil, the value of which is incalculable.

We give the result of an experiment of the marl on corn. Its effects on cotton and potatoes were similar:

Half an acre, without marl or manure, produced 8½ barrels ears of corn—with eight cart-loads compost in 1843, 10⅓ do.—with 6⅓ bushels marl, broad cast, 11¼ barrels.

Report of the Hon. H. L. ELLSWORTH, *Commissioner of Patents, showing the operations of the Patent Office, during the year* 1844.

We are glad to learn that an edition of this valuable Report, which we noticed in our last number, has been published for sale, by our Agent in New-York, M. H. NEWMAN, bookseller, 199 Broadway. It can also be obtained of LITTLE & BROWN, Boston—G. B. ZIEBER & Co., Philadelphia—GEO. JONES of this city, and we presume of booksellers generally. Price 75 cts.

LOWELL OFFERING.—This publication, supported as it is entirely by the intellectual talent of the female laborers in manufactories, is not only highly creditable to the editors and contributors, but is even a subject of just pride to the country. It exhibits in a striking light the elevated condition and character of this class of our population, when compared with descriptions of the same class in Europe. Though it is truly the "Factory Girls'" Offering, many of the articles would do no discredit to literary writers of acknowledged merit. Edited by Misses CURTIS and FARLEY—published monthly, at one dollar a year.

THE FARMER'S LIBRARY, and MONTHLY JOURNAL OF AGRICULTURE—Messrs. GREELEY & MCELRATH, New-York, have issued a prospectus for publishing a work under this title, for the editorial management of which they have secured the services of John S. Skinner, Esq., the founder and former editor of that pioneer of Agricultural publications in this country, the American Farmer. The plan of the proposed work is as follows: Each number will consist of two distinct parts—I. *The Farmer's Library*, in which will be published continuously, the best standard works on Agriculture, beginning with Stephens' *Book of the Farm*, a recent Scotch publication of high character. This division of the work will embrace 600 pages a year. II. *The Monthly Journal* of Agriculture, which will contain about 50 pages per month, and will comprise, 1. Foreign selections from the higher class of British, French, and German periodicals of Agriculture, with extracts from new books which may not be published in the Library. 2. *American* Editorials, communicated selected accounts of experiments, &c. Each number to be illustrated with numerous engravings. Its price will be *five dollars* a year in advance, for two royal octavo volumes of 600 pages each. We have no doubt it will be a very valuable work, and we cordially recommend it to the patronage of the public.

USEFUL WORKS FOR THE PEOPLE.—Messrs. GREELY & MCELRATH, of New-York, having lost by fire their stock of books, plates, and engravings of their series of "Useful Books for the People," have commenced the publication of a new series, the first in order of which is the work on Astronomy by M. ARAGO, with additions and corrections by Dr. LARDNER. The works of these philosophers are distinguished for combining accurate scientific information, with much that is pleasing and attractive, and on the subject of Astronomy, in particular, their writings are looked upon with great confidence. We venture to say that no opportunity has before been offered to the American public of procuring so large an amount of valuable scientific information at so small an expense. The number, comprising the lectures on Astronomy, contains 96 pages large octavo, small print, with numerous diagrams and illustrations. This publication is to be followed by others of a like useful character—each series being complete in itself—and of a size so uniform that the whole may be bound together. The price of the number on Astronomy, is 25 cents, which will also be the price of each of the series of Useful Books.

SPIRIT OF THE TIMES.—A Chronicle of the Turf, Agriculture, Field sports, Literature, and the Stage.—As a sporting chronicle, this publication has long been distinguished and unrivalled. Though we are accustomed to estimate things by an utilitarian scale, we must allow the "Spirit" an eminent character even in this respect. If the old adage of "laugh and be fat," is to be regarded in the light of *cause* and *effect*, there is no knowing how much *fatness* the witty sayings and funny stories there given may have produced, or from how many hypochondriacs the "blues" may have been banished, and the dyspepsia cured! And what labors can be considered more *useful* than those which promote health, and save doctor's fees? This old favorite commences the fifteenth volume with new type and other improvements, which render its appearance even more attractive than ever, and together with the style and character of its contents, cannot fail to recommend it to all seeking any thing in that *line*. It is issued weekly, each number containing twelve large quarto pages, at five dollars per annum. Three or four elegant steel engravings of celebrated horses, are given in the course of a volume, without extra charge to subscribers. Published by JOHN RICHARDS, No. 1, Barclay-street, New-York—WM. T. PORTER, editor.

MR. TUCKER—I am aware you have no "poet's corner" in your strictly *utilitarian* paper, but presuming you are in favor of whatever is designed to elevate the feelings, even though expressed in rhyme, I have ventured to send you the following

HYMN FOR THE SEASON.

Bounteous Father! Lord on high!
Who hear'st the raven's feeble cry,
With thy protecting goodness, rife,
Long-slumb'ring nature wakes to life!

Earth's kings may rear the tow'ring spire,
And feed with gold the altar fire—
Not from the organ's peal alone,
Anthems arise before thy throne.

Those holier temples, large and wide,
The glen, the grove, the mountain-side,
Resound with choral songs of praise
To that blest Pow'r who tunes their lays.

Each bud and flow'ret, leaf and tree,
Breathes orisons, O God! to thee,
Whence emanates unchanging love,
Embracing all, around, above.

Revolving seasons now have brought
Sweet Spring with cheering beauty fraught—
Seed-time again to us is giv'n;
We trust to earth, and hope in Heav'n.

Send thou the late and early rain
To vivify the springing grain—
And when the harvest home we bear,
Let grateful peans fill the air!

M. W. H.

NEW-YORK STATE AGRICULTURAL SOCIETY.

At a meeting of the Executive Committee of the N. Y. S. Agricultural Society, held at their room on the 17th April, the President in the chair, there were present, Messrs. Prentice, M'Intyre, Enos, Vail, L. Tucker, Nott, Cheever, Emmons, Howard, and Sotham.

The President presented a letter from Col. A. G. **Summer**, Esq. of Columbia, S. C., expressing his warm interest in the objects of the Society, and informing the President that he had been directed by the State Ag. Society of South Carolina, to forward to our Society, the Reports of the Geological Survey of that State, together with several documents emanating from that Society.

A letter from L. F. **Allen**, Esq. having been read, in relation to the Premiums on Horses, it was resolved that the following *additional* prizes be offered:

Best "blood" stallion,	4 years old,	......	$20.
Second best,	do.	do.	10.
Best "Draught" stallion,	do.	......	20.
Second best,	do.	do.	10.

Additions were also made to the prizes for Fat Cattle, by adding a class for fat cows and heifers, separate from oxen or steers—First, $10—Second, $5—Third, vol. Transactions.

L. A. **Morrell**, Esq. of Tompkins county, was present, and presented the copy of his "American Shepherd," in manuscript, most of which was examined by the Committee, and a resolution was unanimously adopted, highly approving of the work, which is soon to be published.

The following letter, with the accompanying package of seeds, was presented by the President:

"*New-York, April* 17, 1845.

"Sir—The accompanying parcel of seeds was handed to me, in Washington city by Gov. Marcy, with a request that I would transmit it to the State Agricultural Society of New-York.

"It contains a portion of a package of seeds received at the War Department, for distribution, from the Commissioner of the Patent Office.

"May I ask that the proper officer of your society will acknowledge the receipt of the parcel to the Secretary of War at Washington.

"Very respectfully, I have the honor to be your ob't servant. **Prosper M. Wetmore**."

The thanks of the Society were voted to Hon. **Wm. L. Marcy**, Secretary of War, for the package of seeds, which were distributed among the members.

A letter having been received from **Francis Rotch**, Esq. now in London, together with dies ordered by the Society for Medals, executed by Mr. Taylor, a distinguished artist of Birmingham, after subjects and designs by Mr. Rotch, the following resolutions were unanimously adopted:

Resolved, That the thanks of the Society be tendered to Mr. Rotch for his attention to the request of the Society; and the Executive Committee take great pleasure in expressing their unqualified approval of the designs prepared by him for the medals, which, in their estimation, are peculiarly appropriate.

Resolved, That Mr. **Rotch** be desired to present to Mr. **Taylor**, the thanks of the Society for the superior manner in which the dies have been executed, and which reflect the highest credit upon him as a Medallist.

A circular addressed by the Cor. Secretary to the County Cor. Committees, was read and approved, and ordered printed.

County Ag. Societies.—We are glad to see that quite a number of the County Societies of this State, have already issued their Prize Lists for the coming autumn shows. We have received the Prize Lists from *Queens*, to be awarded in October—*Rensselaer*, show to be at Troy, Sept. 24, 25—*Orange*, to be held at Goshen, Oct. 8, 9; all the premiums to be paid in silver spoons—*Livingston*, to be held at Geneseo, Oct. 2—*Ontario*, to be held at Canandaigua, Oct. 14, 15; among the premiums are 20 copies of "The Cultivator"—*Clinton*, to be held at Plattsburgh, Sept. 16, 17.

AGRICULTURE OF SOUTH CAROLINA.

Mr. Roper's Address.—The author will please receive our thanks for a copy of the address, delivered before the State Agricultural Society of South Carolina, Nov. 28, 1844. It is a well written document; and contains much valuable statistical information. The writer endeavors, in a very earnest and striking manner, to induce the people of his State to adopt some course of operations by which they may relieve themselves from their present burdens. He shows that they (as a State,) now spend more than they make, "and consequently the State languishes under an incubus, which will require a strong moral force, independent of activity and industry, to remove." He says—"we allow the negroes to become an expense of more than two and a half millions of dollars for clothing, corn, bacon and tobacco, and their plantation implements." Mr. Roper shows the necessity of diversifying the objects of industry. The production of cotton in South Carolina, cannot be depended on as a source of profit. In relation to this article, he says, "though it was once our wealth and pride, it can continue so no longer; a fairer bloom opens on other lands, and every day imparts a more ominous warning that the sceptre has departed." He regards it as "pernicious that so pervading a propensity exists to investments in lands and negroes, to grow rice and cotton."

The remedy for this state of things, the adoption of which Mr. Roper urges, is the introduction of a more varied system of agriculture, by which the sums now sent out of the State for beef, pork, bread-stuffs, butter, cheese, &c., shall be saved at home; and also the introduction of *manufactures*, several successful examples of which, existing in that State, he brings forward. Of the influence which manufacturing establishments have exercised, so far as they have been tried in South Carolina, he thus speaks: "The effect of this diversity of labor, has been to extend competence among the neighboring people, to *improve their morals*, intelligence and education, and establish a *more respectable order of society*."

BONES AND FISH FOR MANURE.

We have recived from Mr. **Wm. Makinster**, an Address delivered before the Middlesex (Ct.) Ag. Soc., by E. A. **Elliott**, Esq. In this address, Mr. E. speaks of the effects of *bones* and of *fish* as manure. He states that bone-dust has been applied in his neighborhood with good results, to corn, rye, ruta baga, and other crops. An application of twenty bushels per acre to a portion of a rye-field, produced a difference of nearly one-half in the yield, the field being alike in other respects.

In the neighborhood of Mr. E.'s residence, large quantities of "white fish" are taken, and frequently used as manure. This application of fish was commenced, he says, in that neighborhood, about the year 1790. The effects were great—"barren plains, which had been long unproductive, were converted into the most fruitful fields. Their beneficial effects were manifest upon all soils, and for a number of years; while they were taken in large quantities, they were relied upon for the rye, corn, and particularly the potatoe and turnep crops, to the exclusion of almost all other kinds of manure. It was found, however, that their effect upon a second application, was not as great as upon the first, and still less upon a third, and this led many to doubt their utility as a constant dressing for all kinds of crops, and especially upon sandy soils, without an intervening application of barn yard manure, as they are found to exhaust the vegetable matter of the soil, and leave it in a compact and unproductive state. Their effect has continued to be great upon strong rocky loam and clay or moist lands; upon such lands they produce as large crops as can be found in the fertile regions of our western country. Their effect is visible on sandy soils for two or three years, and longer upon loam and clay. The usual mode of applying them, is to spread them, and after a few days harrow and plow them in with a light furrow. Some persons stack them with yard manure, or earth and turf, and think their effect sufficiently increased to compensate for the extra labor of stacking and carting out."

STEEPING SEEDS.

For the purpose of stimulating the growth of plants, various solutions have been employed for steeping the seeds. The substances thus employed have been nitrate of soda, nitrate of potash, or salt-petre, muriate of ammonia, sulphate of ammonia, &c., &c. Salt-petre has long been used, in some form, as a fertilizer, and nitrate of soda has within a few years been recommended as a substitute, in some respects preferable. So far as we have learned, however, the effect of nitrate of soda appears to be rather to produce *vegetable fibre* or straw, than grain or seed; and hence it has latterly given place to muriate of ammonia in the preparation of solutions. Many experiments which have been made in Europe, show that wheat, barley, oats, peas, and beans, have been considerably increased in yield by the seed having been soaked in solutions of the last named substance. The trials which have been made in this country, have as yet been comparatively few, though some results which were made known by experiments last year, have indicated an important benefit from the application of the article to Indian corn.

One of the best examples which occurs to us of the benefits derived from the muriate of ammonia, is furnished by the experiments of Dr. S. Webber of Charlestown, N. H., reported in the N. E. Farmer. Dr. W. used a solution for soaking corn as follows: He dissolved a small piece of the muriate of ammonia, estimated at four or five grains, in about half a coffee cup of water, and threw into the solution a handful of corn, which, after having remained four or five hours, was planted. He planted this soaked corn in hills, side by side with that which was not soaked. In four different cases which are reported, the soaked seed produced much the largest yield--generally full one third more. The land was light and dry, and for several of the experiments, the poorest spots were purposely taken. The corn suffered from drouth, but in all cases that from the soaked seed manifested a decided superiority, and frequently attracted the attention of strangers who knew nothing of the cause.

Ammoniacal liquor, which is produced by the distillation of coal in the manufacture of gas, is thought to be a valuable manure. Mr. Hannam, in his Essay on Waste Manures, describes this liquid as being "an impure solution of the carbonate of ammonia, and is the very gas which is evolved during the decomposition of animal substances, and which escapes from our manure-heaps during fermentation. "It is," (he continues,) "highly necessary to vegetation—the plant extracting the carbon of its structure from the carbonic acid, and its nitrogen from the ammonia of the carbonate of ammonia. The gas liquor holds in solution acetate, sulphate, or muriate, as well as carbonate of ammonia; in all of which states it is fitted to promote the growth of plants. The general average of its ammonia, in one or other of these forms of combination, according to Professor Johnston, is from twenty to forty pounds per one hundred gallons."

Judge Koon of this city made some trials with the ammoniacal liquid last season. He informs us that its effects were in all cases highly beneficial. Corn and oats soaked in the liquid for thirty hours before planting, showed a broader and greener leaf, produced larger heads and ears, and yielded, he thinks, at least twenty per cent more than that without the liquid—the treatment being in all other respects, similar.

Mr. Campbell, of Scotland, has become distinguished for the preparations of steeps for seed grain, which in some cases appear to produce remarkable effects. The salts he uses are sulphate, nitrate, and muriate of ammonia; nitrates of soda and potash, and combinations of these. Mr. Colman gives, in the second part of his European Agriculture, a letter from Mr. Campbell, in reference to the advantage of using these steeps. He mentions the following experiments in illustration of the comparative productiveness of prepared and unprepared seed. Some seed-wheat, soaked in nitrate of ammonia, was sown on the 5th of July, which, by the 10th of August, he says, presented the following results: "The prepared seeds had tillered into *nine*, *ten*, and *eleven* stems; the unprepared into only *two*, *three*, and *four*; and both were from the same sample of seed, and sown in the same soil, side by side. The time of steeping varied from fifty to ninety-four hours, at a temperature of about 60 degrees Fahrenheit." The yield of *grain* from these plants, was not known at the time Mr. Colman sent the account for publication, but we may expect to hear further particulars hereafter.

A year ago, a pamphlet was published by a German chemist named Bickes, in which it was declared that seeds may be so treated as to render unnecessary any manuring of the soil in which they are to be sown, and that even from the most barren sands, luxuriant crops may be gathered. Indeed the wonderful virtue of this newly discovered process seemed hardly less, from the representations given, than were formerly attributed to the "philosopher's stone." It can, however, serve but little purpose to occupy space, or spend time in reading the accounts of this supposed discovery, as the author only imparts a knowledge of its nature and constituents to such as *pay for it*. Professor Johnston, in a notice of the pamphlet of M. Bickes, in the Edinburgh Quarterly Journal of Agriculture, observes that—"He is one of that class of discoverers who wish to sell their secrets, and by magnifying their importance, hope to derive a larger profit by divulging them. With such men the true friends of agriculture can have no sympathy."

As a steep for Indian corn, we should prefer muriate of ammonia, which we would use in the following manner: An ounce of the article, (costing two cents,) is deemed sufficient for a quart of corn. It should be dissolved in a sufficient quantity of water to fairly cover the seed, which may remain in the solution twenty-four hours, in a temperature of sixty to seventy degrees. In order to demonstrate as clearly as possible the effects of the solution, the trial should be conducted with the strictest care and precision. We can think of no better mode than to plant alternately two rows with seed from the solution, and the same number with seed without any preparation—extending the experiment to ten, twelve, or more rows of each—the soil and the management to be as nearly equal as possible over the whole. Let the product of the rows to which the solution was applied, as well as the other rows, be carefully weighed and compared, and the result will indicate the value of the solution to the crop.

Solutions, and the application of various substances to seeds, for the purpose of preventing the attacks of insects, have been recommended and used. The success of most of the experiments of this kind, seems rather doubtful. So far as relates to insects which feed on the *blade* only, we have never witnessed the least effect from applications of any kind to the seed, though we have seen many substances used. The most formidable enemy to grain crops in the early stages of growth, is the wire-worm, (a species of *Elater*.) This worm bores into the seed, eats out its substance, and frequently destroys the plant by eating off the radicle as soon as it protrudes from the kernel. The attempt has been made to apply some substance to the seed which would render it disagreeable to the worm. It has been soaked in solutions of sulphate of iron, (copperas,) &c., and coated with compositions of tar and arsenic. To us, it seems not unreasonable to suppose that these substances would tend to make the kernel unpalatable food for the worm, though it seems generally admitted that the tar is not favorable to the growth of the plant. The substances used to prevent the attack of worms, are likewise used to prevent the grain from being pulled up by birds and squirrels. Those who have tried them, state that after a few plants have been pulled up, the birds, finding the kernel in an uneatable state, abandon the attempt to find food in that way.

As regards the prevention of the wire-worm, however, other means have been recommended, which in some instances at least, seem to have had the desired effect. It has been noticed that the wire-worm will feed on pieces of corn-cobs, and this has led to the practice of dropping pieces of cobs with the corn. The worms burrow into the cobs instead of the corn. We have seen instances where this remedy succeeded to considerable extent, as was ascertained by digging up the pieces of cobs put in the corn-hill—the cobs being found, with the worms feeding on them. Pieces of potatoes have sometimes been used instead of cobs, and are said to answer quite as good a purpose.

The remedies above mentioned, are sometimes recommended as being also effectual against the ravages of the "white worm," or "white grub,"—*Melolontha vulgaris.* It may be proper to remark that the habits of this insect and its modes of feeding, are such that none of the means alluded to, would in the least obviate its attacks. It does not eat the seed itself, but generally commences feeding on the roots at some distance from the seed or center, and thus cuts off from the plant its supply of nourishment.

IMPROVEMENT IN SCHOOLS.

Mr. Josiah Holbrook has recently visited this city, in behalf of the Public Schools of New-York, for the purpose of exhibiting to the members of the Legislature and others interested in the cause of education, some specimens of the results of improvements introduced into those schools, and of explaining the methods of instruction which he has so long advocated. Mr. H. maintains that a system of instruction should be introduced which will attract the attention and interest and call into action the minds of the children, instead of the mechanical course now pursued. Instead of confining the child to the irksome and monotonous employment of learning the ridiculous and unmeaning tables of syllables and words which occupy so large a portion of our "spelling books," he would at once present to the child an object which should awaken its attention and excite its curiosity, and thus learn it the names and uses of things even before it understands the formation of words, thus learning the use of language before it is compelled to learn by rote its construction. For the accomplishment of this object, he has prepared a variety of school apparatus, which has been introduced in many schools to very great advantage. In learning children to write, instead of the old system of setting them to make marks, he presents them with a definite object to accomplish, by directing them to draw some object—a square for instance. The child's ambition is at once excited, and those who have not noticed the attraction which such pursuits afford children, will be surprised at the avidity with which they will follow them. As the child's mind is developed, he presents it with the objects before him, explaining the names and uses of *things*, and from these, proceeds to the works of God—and sets forth the great principles which govern all the works of creation, which are open to the vision of the child, leaving the minuter divisions and rules to be learned as the child himself feels the necessity for them, when they will be sought for, instead of having to be pressed upon them. Thus the *mind* is constantly brought into activity—habits of thought and observation are induced, and the child led on by its own desires for farther acquirements, only needs the direction and kindly influence of the parent or teacher, to induce it to go on from step to step in the pursuit of that knowledge which is to prepare him for happiness and usefulness.

Several meetings have been held at the Assembly Chamber, on the subject, at the last of which, a committee, consisting of the Secretary of State, the State deputy superintendent of common schools, the chairman of the Assembly's education committee, and others, was appointed to take into consideration this great subject, who have prepared a report (published in the Dist. School Journal for this month,) expressing their entire approbation of the views and plans presented for their consideration. Of the efficiency and excellence of this system, which can hardly fail to receive the approbation of those who will give it a careful and unprejudiced examination, we can speak from several years experience in our own family, and can state that while it adds greatly to the improvement, obedience and happiness of children, it very greatly diminishes the expense of their early education; and while it furnishes a source of never-failing happiness to children when young, it fixes in them such a habit and love for improvement and industry as to secure their future progress in improving and useful pursuits.

FOREIGN ITEMS.

Our English papers speak of the weather during the month of March having been uncommonly cold. From the 1st to the 21st, snow fell daily in many parts of the kingdom accompanied by piercingly cold easterly winds. The ground was generally so much frozen as to prevent its being plowed. Great fears had been entertained respecting the condition of the wheat crop, but on the frost breaking up it appeared that but little injury had been done, and our latest accounts say that the prospects of the farmer in regard to crops, are cheering.

The provisions of the British tariff in regard to the admission of foreign live stock, are much complained of, and it is said that the exertions making on the continent for the supply of the English markets, are operating to the decided injury of the English farmer.

It is stated that one nineteenth part of the whole consumption of bread-stuffs in the kingdom was last year imported from Canada, and the exclamation is added—"*what wonderful crops these Canadians must have had*, to spare so much for the mother country!" The low prices of produce are said to have thrown many English laborers out of employment, and in some neighborhoods public meetings had been called to consider measures of relief.

Loss of Manure in Towns.—The Ag. Gazette remarks, "every shower of rain washes much valuable manure down our public sewers and drains, and thence into the rivers and sea; and thus while we employ ships in fetching guano some thousands of miles to enrich this country, we will not pick up that which lies under our feet. The streets are swept indeed, but little more than gravel, sand and litter is saved; the finest and richest parts are taken away by the rain. There would be no difficulty in forming reservoirs into which all this might flow, and from which it might be transferred to enrich the ground." But the facts, showing the influence of good drainage and cleansing of streets, on the health of towns, are very striking. In the best streets in Preston, the number of deaths above five years of age, were about double those under five; in the moderately drained streets about equal; but in the "ill-conditioned" parts of the town, the deaths under five were two-and-a-half times as numerous as those above. That is, five times as many children die under five in proportion to those older, than in the cleanly streets; the death of older persons with whom they are compared, being also much more numerous in the bad streets, which renders the disparity still more appalling.

Depth of Roots.—In light subsoils, the roots of trees have been found at a depth of 10 or 12 feet—roots of the Canada thistle have been traced 6 or 7 feet below the surface. Wheat, in a rich mellow soil, will strike roots 3 feet downwards, and much further horizontally. The roots of oats have been discovered 18 inches from the stem, and the long thread-like roots of grass, still further. The fine roots of the onion, being white, and easily traced in black soil, have in trenched soil been followed two feet deep. The importance of a mellow soil for these fine roots to penetrate, is obvious.

Killing Rats.—The following poisonous mixture was recommended by Humphrey Davy, as being cheap and tasteless, odorless and impalpable, and hence may be put with any substance which rats devour, without exciting their suspicion. It is merely a mixture of carbonate of barytes, with eight or ten times its weight of grease. It produces great thirst, and death immediately after drinking, thus preventing the animals going back to their holes. To prevent accidents to dogs, cats and poultry, it is spread inside of an iron vessel, hung with wire, bottom upwards, over a beam, just high enough for a rat to pass under easily. The writer says he has proved its efficacy many years.

Turnep Fly.—A correspondent says, that repeated and varied experiments have proved, that half an ounce of sulphur mixed with a pound of turnep seed, will completely prevent the ravages of the fly. [? ?]

YELLOWS IN THE PEACH.

We have received an extended communication from "I. M. B." on this subject, consisting chiefly of suggestions, and not of the results of experiments, and which the crowded state of our columns precludes publishing at length.

Our correspondent calls attention to the difference of culture given to the peach in this country and in England, and speaks of the superior management in the latter country, by selection of soil, situation, and stock; and by pruning, training, and thinning the leaves, flowers, and fruit, and where the *yellows* is unknown.

He next proceeds to show, by the composition of the peach tree and its products, that a large share of nitrogen is required in its growth. "One of the distinguishing products of the seeds and leaves, and doubtless necessary to the existence of the peach, is Prussic or Hydroganic acid, a highly nitrogenized substance. The constituents of this acid are as follows:—

Cyanogen, (by weight,)	1.8054
Hydrogen, "	0.0694

Cyanogen is constituted as follows :—

Nitrogen, (by weight,)	29.652
Carbon, "	25.418

"Although nitrogen is an abundant constituent of the atmosphere, it is not in a form well adapted for the food of plants, and yet in a form that can be so used, it is of the utmost importance. The proportion to be sure, is small, but if it fail it must be replaced by artificial means. If we look at the economy of the peach, it will be observed, that probably, double the quantity of nitrogen will be required to sustain it in a healthy and vigorous state, than that of wheat, which we hnow cannot be successfully raised many years on the same field, without an artificial supply of this kind of food. If wheat can exhaust the natural fertility of the soil in eight or ten years, it is not unreasonable to suppose that the peach will do it in less time. If we consider one moment we shall satisfy ourselves that the necessary principle is naturally returned to the peach orchard in very limited quantities; the seeds being carried off entirely, and nearly all the leaves being scattered by the winds, out of the reach of the roots. As one of the universal laws of nature is the propagation of the species, even at the expense of the vitality of the individual; so when this elementary food becomes exhausted in the soil, the seed draws so heavily upon the resources of the root, bark, and leaves, that they become bankrupt of this fructifying principle, and of course, if there is no further supply to be obtained from the soil, the tree must necessarily perish. When we see then, what large quantities of highly nitrogenized *material* the healthy fuuctions of the peach require, can we wonder that when the resources fail, the tree should take the "*yellows*," and die?"

We make this quotation from the remarks of our correspondent, with the view of inviting attention to the comparatively short life of the peach tree when not affected by disease, which may possibly be influenced in part by the nature of the food it requires. The pear is known to grow and flourish for centuries; we have never known a peach tree older than 50 or 60 years; a knowledge of the difference in chemical composition might throw some light on the subject. But that the exhaustion of the soil is the cause of the *yellows*, seems to be conclusively disproved by numerous facts. Some of these are stated in the excellent article of N. Darling, in the second number of the Cultivator, to which our correspondent alludes. Numerous others might be mentioned. We have known young and vigorous trees, growing on the strongest and richest wheat lands of Cayuga county, which had never been occupied before by any fruit trees, take the disease and die. And on the other hand, throughout the western part of the State, where the yellows have never yet extended, (with the exception of two or three limited patches, infected from abroad,) we have known trees, growing under all circumstances, on rich and on poor land, on clay and on sand, in new and in worn soil, the trees thrifty and stunted, all perfectly free from the yellows; and in all cases where we have witnessed it, it has evidently been brought from a distance by the importations of trees, or communicated by infection from them. Exhaustion by crops of fruit cannot cause it, for we could cite many cases in trees which never bore ; and on the other hand, we have known trees which continued to bear for more than forty years which continued healthy and vigorous.

We may be asked, in what way is the disease communicated, above spoken of. The infection appears to be given in all cases where the bud of a diseased tree is inserted into a healthy stock. Doubtless there would be great danger, in pruning a healthy tree with a knife previously used on a diseased one. It is evidently communicated either by the roots, or by the pollen, perhaps by both ; as we have known it to extend from tree to tree from one side of the orchard gradually to the other. A tree which had it one year, was observed to have communicated the disease to the trees standing next to it, but only to the *nearest branches first*, which cannot be accounted for by contact of the roots, as the horizontal pores of the sap vesels would spread the poisonous sap through all the branches during its ascent. The failure of N. Darling, in a single experiment to inoculate artificially by the pollen, only shows that the disease is not thus universally communicated. That infection may result from stones of diseased fruit, seems probable from repeated cases where young imported trees, in perfectly healthy districts, are taken with the malady, and spread it to others. But we must close these remarks, already extended much farther than we intended.

COOKING ASPARAGUS.

We present our thanks to Mrs. N. Darling, of New-Haven, Ct., for the following communication, and would assure her that we shall be greatly obliged for any further contributions she may be pleased to make to our pages. We would also say to all our lady readers, that they would confer a favor on ourselves and the public by furnishing us with communications on any subject pertaining to the duties of Farmer's Wives and Daughters.

"Mr. Editor—Not having seen any recipe for cooking asparagus in the mode which I practice, and having met with very little abroad that to me has seemed fit to eat, I am induced to send you an account of my manner of dressing it for the table.

To be first rate, the stalks should be grown from 4 to 6 inches from the ground, and fresh cut. Wash the stalks clean, and cut them in bits about half an inch long. If the stalks are of different sizes, cut the large ones shorter than the small ones, so as to give them an equal chance to boil and get seasoned. The cook should throw aside the stalk as soon as it begins to cut tough; that is, she is to use only the tender part, unless the asparagus is very scarce, when she can divide the tougher from the tender portions, and put the tougher to boil about ten minutes first. Salt the water in proportion to a table spoonful of salt to two quarts of water, which is sufficient to boil one quart of the pieces in. Have the water boiling when the asparagus is put in, and keep it boiling fast for about half an hour. The best way to know when it is cooked enough, is to take up one or two pieces and taste, for it sometimes cooks quicker than at others, according as it has grown quick or slow. While it is boiling, get ready, say for a quart of the asparagus, 2 slices of bread, cut half an inch thick from a common sized wheat loaf, toasted a light brown, and a large gill of melted butter. When the asparagus is done, take it up with a skimmer, and lay it on a colander or sieve to drain, dip the slices of bread one at a time, first in the hot asparagus liquor, and then in the melted butter. Then put it in the middle of the dish that it is to be served on. When this is done, pour the asparagus over and around the toast, and strew the rest of the butter as evenly over it as possible, when it is ready for the table. If however, the rest of the dinner should not be ready, let the asparagus be kept hot until it is; for if the cook does not serve her asparagus hot, she will lose much of her labor and credit."

"A stitch in time saves nine." In killing weeds, remember this adage, which is as important here as in darning stockings.

FARM HOUSES.

One of the most important subjects that can arrest the attention of our farmers, especially such as have yet to provide their farm buildings, is the position, plan, and construction of their houses, &c. If every man about to build, could have the privilege, or be induced to read Mr. Downing's excellent work on "Cottage Residences," we should feel that there would be much less necessity for urging the subject of farm buildings upon the notice of our readers. As it is, we hope every one who is intending to build will look over the matter carefully, and consider well what kind of a house his farm, family, location, &c. demand.

The *position* of the buildings on the farm, with reference to roads, convenience, or health, is a matter of much moment to the farmer. The fashion so prevalent of forcing all the buildings into the road, or as near it as possible, without reference to the condition, or the wants of the farm, is a very great error, and shows a deplorable want of taste and judgment. The less a farmer or his family has to do with the road, except for necessary purposes, the better for all concerned. It is impossible to impart the least degree of elegance, or convey that idea of rural retirement so desirable in farm establishments, and so easily given where judgment and taste preside over the erection of the buildings, to a place where the houses, barns, &c., are on the margin of the highway, or the space in front does not amount to a *yard*, but only 35 inches. There should be convenient and easy access to the road; but farther than this, the roads are of little account in determining the position of the farm buildings, and should be treated accordingly.

Another point should always be well considered in fixing the location of the buildings for the farm; and that is the arrangement in such a way as to reduce the farm labor as much as possible. If the farm is large, the extra travel of men and teams, in hauling manures, grain, &c., going to and returning from labor, will be very much greater where the buildings are fixed at one extremity, or one corner perhaps, than where their position is central, and access from all parts of the farm direct. This is particularly the case where the buildings are fixed not only at the extremity, but also on the highest part of the farm. How often do we see farmers, for the sake of having their houses so near the road that they can hail, and have a chat with every passer by, draw all their hay and grain to the highest part of their farms, the most bleak and uncomfortable point on the premises, summer or winter, when perhaps there are positions eligible in every respect, and well adapted to the convenience of the whole farm. In all calculations with respect to the labor of hauling to and from the farm buildings, it must be remembered that the quantity drawn to, will exceed in quantity or bulk, and consequently in labor, that drawn *from* the buildings, by nearly two-thirds.

Health is another thing which must not be overlooked in the location or construction of farm buildings. All low, sunken, swampy places should be carefully shunned. They are the sources of malaria, and if not virulent enough to produce fevers and other diseases at once, the constitution is not the less surely undermined, and predisposed to maladies of every kind. Good, pure water, here, is of the first importance, and no expense should be considered too great to ensure a permanent and ample supply. It should of course have great influence in determining the position of the farm buildings; and cannot be overlooked without subjecting the operations of the farm to great inconvenience, and the health of the family to the most serious danger.

The PLAN of a farm house is a matter of much consequence. Convenience and comfort are the prime requisites, and should never be overlooked; with these should be combined the elegance and taste, so desirable in every farm establishment. A large house is not in ordinary cases necessary; a high house, never. If the house is well arranged, much less space is necessary than most seem to consider, and it is here that a good plan operates most beneficially. A parlor, sitting, or dining room, kitchen and bed rooms are necessary on the ground floor; above, bed rooms should occupy the principal space. Public opinion is fast banishing the huge two story "shingle palaces," that once were so fashionable as farm houses, and the far neater, compact, and comfortable cottage style of buildings, is fast taking their places throughout the country. This is one of the most cheering indications that those who have endeavored to diffuse more correct notions on the subject of farm buildings, have not labored in vain. Those who wish to consult plans, drawn with particular reference to the wants of the country, will find many of them in the past volumes of the Cultivator, or in the beautiful volumes of Mr. Downing on "Landscape Gardening," and "Cottage Residences." There are few if any plans, however, into which, in consequence of particular location, position, size of family, &c., changes in some respects, may not be advantageously introduced; but the study of such plans, where they are combined with the elevation of the building, and arrangement of the grounds, cannot be otherwise than useful, as correcting false notions, and aiding the arrival at correct decisions. We may here remark that but few builders have any idea of what constitutes a tolerable farm house. Those in the city, form their plans for the city rather than the farm; and those in the country, have in general too little acquaintance with the principles of the art, or are not sufficiently familiar with the great improvements made in the construction of farm residences, to enable them to meet the wishes of those who desire houses in which utility and elegance are united. There are, however, some honorable exceptions, as the farm buildings in some districts prove; and when once the attention of farmers is directed to this point, where they are qualified to form a correct opinion of the buildings they need, there can be no doubt that builders competent to aid in carrying out their plans will be found.

In the *construction* of farm houses, it is important that the best materials be selected, and that strength, firmness, and durability be consulted in all proceedings. Where stone or brick can be conveniently obtained, houses built of these materials are doubtless to be preferred. Their advantages over those constructed of wood in the ordinary manner are very great. They are not only more durable, but the equality of temperature they afford at all seasons, as compared with structures of wood, is favorable to health. In a well constructed house of stone or brick, the saving of fuel is very great, an object of no small consequence, where fires of some kind are necessary in our rooms two-thirds of the year. There is one serious objection against stone or brick houses, which is, their liability to accumulate dampness in the walls, thus destroying or discoloring the plaster or paper, and rendering them in some instances decidedly damp and unwholesome. This objection is however, easily obviated, and the evil prevented, by what is called *furring*, in which the walls are in effect, made double, a space of an inch being left between the lath and plaster and the brick wall, through which air circulates, rendering the interior part, or the plastering, perfectly dry. Convenience is the great point to which other things must be made subservient in the construction of farm buildings; show is but a secondary consideration. In our climate too, reference must be had to preserving a comfortable temperature during our severe winters; a result to be obtained by a choice of location for the buildings, by a proper arrangement and position of the rooms to be occupied by the family, and by such a construction as shall exclude the direct admission of the external atmosphere. Experience abundantly proves that so far as the comfort and the health of the family is concerned, no room occupied by them, should open directly upon the outer air. By connecting them with halls, abrupt transitions from heat to cold, and vice versa, are avoided, and consequent illness frequently prevented. Ample means for ventilation, and the free circulation of air, should always be provided, a precaution necessary to health, and indispensable in the sultry months of an American summer. We hope that every farmer who intends building, will look at the matter carefully, consult the wants and capabilities of his farm, and while he avoids all ridiculous speculations or imitations, see that his plans combine as far as possible, elegance with utility, and simplicity of structure with correctness of taste, in the design.

VERMONT FARMING.

We are indebted to Mr. J. P. Fairbanks for a copy of the *Caledonian*, containing the statement of Mr. Fuller, who obtained the second premium for the best managed farm, from the Caledonia county (Vt.) Agricultural Society. Mr. Fuller's chief attention is given to grazing and the dairy, his farm not being, as he says, well adapted to cultivation. He appears to be a good farmer, and his course of management is undoubtedly in many respects worthy of imitation by others in similar circumstances.

What land he tills, is broken up from the sward in autumn, and sowed the next spring with oats; the stubble plowed in soon after taking off the crop, the next spring manured and planted with potatoes. The third season it is sowed to wheat, and seeded down with ten to twelve pounds clover-seed, and four to six quarts herds grass, (Timothy ?) to the acre. He states that within two or three years, he has found the furrows of green sward which laid one against the other at an angle of forty-five degrees, produce a much better crop of oats than when turned over flat. He does not particularly inform us in regard to the nature of his soil, but from the remark that it is better adapted to grazing than to cultivation, we suppose that it is rather moist and heavy. If this is the case, it would account in some degree for the advantage of the mode of laying the furrows which is spoken of.

Breeding stock.—In regard to the question whether cattle can be best improved by foreign blood, or by attention in selecting from the native breed, Mr. Fuller gives a decided preference to the latter mode; and observes that were two or three farmers in each town in the county to turn their attention to the matter, the object would soon be accomplished; whereas by the other course, he thinks "half a century may elapse before any think like a general improvement is effected." The grounds for the opinion thus so positively expressed, Mr. Fuller does not give us; but we should think a very extensive experience and observation were necessary to justify so broad an assumption. He does not tell us what trials he has made, or has seen made, with particular breeds, or their crosses, which it is important to know before we can judge of the correctness of his opinion. An experiment with a single animal, or with two or three animals, by no means proves the character of a whole race or breed; much less does an experiment with one "imported breed," prove any thing in regard to the character or usefulness of other breeds. As to the lapse of "half a century" being required "before any thing like a general improvement is effected," we will just remark that we could point to hundreds of cases where a great and acknowledged improvement has been made in a single generation of stock; and what is the insuperable obstacle to such improvement becoming "general" in *five* years instead of fifty ? Let all the best bulls in the country be so disposed of that they may be used to the best advantage, and we are much mistaken if a "general improvement" is not effected and *admitted* in the time we have mentioned.

In saying this, we would by no means discourage improvements by selections from the best of the common stock, especially where better animals can be had than are offered by the imported breeds. Mr. Fuller's course for example, has been attended with advantages, though we can perceive no evidence that he has effected greater improvement than could have been attained by proper crosses with some imported breeds. His principles, so far as any are given, for breeding *dairy* stock, are undoubtedly good. He says, "care should be taken that the mother of the bull should possess all the qualifications of a good cow." He gives his mode of rearing calves, which appears to us to be economical; while at the same time, the results show that his stock are not only well managed and cared for, but from the size they attain at an early age, and the butter obtained from the cows, they must also be of good blood. His calves are taught to drink when two days old, and for eight weeks are allowed seven quarts of milk per day. For two or three weeks afterward, they are allowed a less quantity, when they are weaned and turned into good pasture, with salt always by them. When the potatoes are being gathered in the following fall, the calves are let into the lot, where they soon learn to eat this vegetable. The following winter they are each fed with a quart of potatoes per day till spring. By this method he says he has "never failed of having 2 year old steers that would girt from 6 to 6½ feet the fall after they were two years old. Live weight from 20 to 23 cwt."

We cannot avoid calling particular attention to the dimensions and weight of these steers. The girth, though not extraordinary, shows good steers for that age; but the weight in proportion to the girth is wonderful! We know not what may be the peculiar shape or proportions of these cattle, but from twelve to fifteen hundred is as great a live weight as we ever heard of in animals of the girth given. Again, what would be the dressed weight of such cattle ? Ordinarily, the dead weight of cattle of the girth he mentions, would not exceed 675 to 875 lbs., hide and tallow included. But the usual dead weight from as great live weight as he mentions, "20 to 23 cwt.," is not less than 1350 to 1550 pounds. Mr. Campbell's prize ox, which was slaughtered in this city in Feb. last, weighed alive only 2546 pounds, yet he girthed, by our own measurement, *nine* feet, and weighed, as we stated in our last, 2102 lbs. in beef, hide, and tallow. Is there not some mistake in Mr. Fuller's calculation about the weight of his two year old steers ?

Produce of butter per cow, &c.—Mr. Fuller states that he has never given his cows meal or roots, "worth naming," but for ten or fifteen years past, they have averaged 200 pounds of butter from each cow. Has had cows which in the month of June would give 52 pounds of milk per day for one week, but considers 30 pounds a good yield. He has made from one cow, in the month of July, sixteen and a half pounds of butter per week—the cow being fed only on grass, and allowed salt. He milks his hows early in the morning, and between five and six o'clock in the afternoon, they are milked again. In summer, he never yards his cows. Much of his pasture has never been plowed, and he doubts whether plowing would improve it.

Address to the Addison county (Vt.) Ag. Society, by the President, S. H. Jenison. This is a valuable document, containing sound practical remarks, and much statistical information in reference to the agriculture of that section. We have not room for an extended notice, or for long extracts, but would call attention to one or two important facts mentioned in reference to stock. He observes that the excellent grazing qualities of the soil of Addison county, have been long known. It would seem from what is stated, that the herbage was believed to possess some peculiar qualities, for Mr. J. states he has "heard it remarked that the butchers of Brighton could distinguish by the appearance and feel, the fat cattle from this part of Vermont, from those in market from other places, and that cattle from this part of the State, of the same apparent flesh, had always the preference, opening better, having a greater quantity of tallow, and beef of superior quality and flavor." If there was no mistake about the superiority of these cattle having been as obvious as represented, was it not attributable in a good degree to the breed ? This seems probable, as we are informed by Mr. Jenison, that about the period alluded to, "improved breeds of cattle were introduced into various parts of the county by public spirited individuals." And in reference to the benefits of the introduction of this stock, he observes "every neighborhood can even now furnish a trace of it. I am aware," (he continues,) "that some are strongly biased against improved stock; but I venture the assertion that, where a favorite individual is found, could the pedigree be traced, in most instances you would not go many removes back before you would run against some one of the imported, improved breeds."

Cotton Beds.—In relation to the article on cotton beds, which appeared in the Dec. Cultivator, the Louisville Journal says—"Cotton beds are becoming very much used in steam-boats on the western rivers, and are considered superior to any but hair."

DR. LEE'S REPORT ON AGRICULTURE.

The following report from the Committee on Agriculture, to whom was referred so much of the Governor's Message as relates to that subject, was submitted to the House of Assembly of this State, by Mr. D. Lee, on the 20th March:

Speaking of agriculture, the Governor says: "The interest involved is not merely the most important committed to our charge, but more important than all others."

This is no more than a just appreciation of that portion of the public interests committed by the House to the charge of your committee. Happy shall we be if any thing we can say or do shall serve to lessen the hard work now expended in producing a pound of wool, a firkin of butter, or a bushel of wheat.

Agriculture is a subject that public men are far more inclined to praise than to aid by any legislative enactments. However others may regard the interest of rural industry, your committee believe that, while legislating for half a million of farmers, we owe them something *more* than empty commendation, something *better* than a heartless lip service.

It is known to all that no class in the community give so much muscular toil for $100, as do the common field laborers in the State of New-York. The hard work of skillful farmers is bought and sold at nine or ten dollars a month, and twelve hours' toil is cheerfully performed each day. But the mechanic, the banker, the merchant, the broker, or the professional gentleman, thinks his service very poorly rewarded if he do not receive three or four times that sum.

If a man whose whole life is devoted to the cultivation of the earth, does not and cannot earn so much as the merchant, the physician or the lawyer, in the course of a year, pray tell us what is the cause of this inability, that wise legislation may remove it. And if the agriculturist does earn as much as any non-producer in the State, then please inform us how it happens that an experienced farmer must sell his labor at $120 a year; when he cannot hire one experienced in the mysteries of the law or medicine for less than $1,000 a year.

Surely the toiling husbandman *needs*, if he does not *deserve*, as many good meals, as much good clothing, and as fine a house as one that merely studies to acquire, not to produce, the good things of this world. Nevertheless, the fact is notorious that the great body of our rural population somehow contrive to work a little harder and fare a little poorer than any other class in the community.

We learn from reliable statistics that paupers increase among us much faster than population. The number that live from hand to mouth, only one step from the poor-house, is increasing with fearful rapidity. There are already more than 500,000 people in this State wholly dependent on their daily labor for their daily bread.

No government can exceed us in bestowing idle praise on honest productive industry. But what has this Legislature ever done to secure from the grasp of avarice, to each hungry mouth and naked back, a fair equivalent for all the food and raiment called into existence by the mind and hands which God has given to each person?

In our fierce scramble to exchange with the common farmer ten hours' work for ten days' work, are we sure that we do not trample under our feet every principle of justice, and every right of humanity?

What great public good is there in a system of legislation, which operates practically in a way that gives to one family ten times more than it really needs, and compels twenty families to live on half allowance? How long shall we foster in the breasts of a favored few, that morbid "love of money" which is the "root of all evil?"

Never till this unnatural appetite for needless wealth shall be abated as a public nuisance, by removing from the masses the ignorance that feeds it, will agricultural labor be as well rewarded as the misemployed intellect, which now reaps where it has never sown. The increasing pauperism, suffering and crime, so common in the land, spring not so much from a lack of the comforts of civilized life, as from their unequal and unjust distribution.

If the legislature will do as much to instruct the producing classes how to keep and enjoy the entire proceeds of their honest toil, as it does to teach all non-producers how to exchange their shadows for the workingman's substance, nine-tenths of our growing taxes for the support of the poor, and the punishment of crime, will cease forever. On the contrary, so long as three-fourths of any community, give the products of three, four, or six hands, for the little earnings of one hand, just so long will hungry mouths, naked backs, and houseless heads, claim assistance by a tax on the property of those that are better off. According to the official report, the direct tax in this State for the year 1844, was $4,243,100. This will soon be $8,000,000, unless we cease to manufacture paupers, criminals, and needless litigation.

In the common business transactions of society, men submit to be plundered an hundred times, from a seeming necessity. This necessity will always occur, so long as we refuse to be content with a sum equal to the products of one pair of hands. We violate a law of our being, when we strive to obtain a sum equal to the earnings of two intellects, and of four hands. It is obvious that should one-half the community succeed in acquiring a sum equal to the products of three hands to one human being, the other moiety must of necessity limit all their food, clothing, houses, farms and other property, to an average product of one hand to each person. Such is the present lamentable result of our past unwise legislation. If the alarming evils of this system be not corrected, is there not reason to fear that it will at no remote period, call down the terrible but just punishment of Heaven?

Before we prescribe a remedy, let us view the malady in another aspect:

"To know ourselves *diseased*, is half our cure." Our intense anxiety to acquire property without producing it, is an eating cancer on the body politic; and he is no patriot, who is unwilling to have the sore probed to the bottom.

There are in this State, at least ten thousand persons, that enjoy incomes, on an average, of $2,000 each, derived from interest on money, rents, and for personal services. This secures to them an aggregate annual income of $20,000,000. Estimating the average value of rural labor at $200 per head, and it will be seen that these 10,000 rich men, draw from human muscle and thought, a sum equal to the entire products of 100,000 farmers.

Of this large sum, they may consume as much as 50,000 laboring men produce, and then lay up annually $10,000,000. Let us suppose this money is re-loaned, at an annual interest which will double the principal in twelve years. In that length of time the income of one year will become $20,000,000, and in twenty-four years it will become $40,000,000.

In connection with the above figures, it is important to bear in mind that while interest augments the principal four fold in a quarter of a century, the increase of laboring people to work and pay this interest, is only 100 per cent, in the same length of time. Now, is it not clearly demonstrated that, by increasing our tax on productive industry four times faster than the human family increase to work and pay such tax, that pauperism must also increase much faster than the population?

Had not the productive power of man's physical strength been largely expanded by the aid of lavor-saving machinery, propelled by steam and water, within the last twenty-five years, the number of paupers in this State, and of those just above public charity, would be double what it now is.

One of the greatest misfortunes that fall to the lot of the farming community is their extreme proneness to incur liabilities, and undertake the payment of interest. These people do not sufficiently study the relation that capital bears to humanity. They forget that a human being, who must have more than 1,000 meals, to say nothing of clothes, in 365 days, cannot safely offset his productive labor against the *service of dead matter*.

He should freely give for the use of capital, all it can earn without the aid of human muscle and thought, but no more. The poor farmer should ever bear in mind the fact that no amount of silver can possibly produce one kernel of wheat; and if he offset his industry against the use of 3,000 silver dollars, he must either eat what he had before earned, or what some other man produces, or he must starve.

How cruelly have thousands suffered, because they failed to remember that a debt on land will last for 100 generations, and extort from poor, toiling humanity, an annual tribute more remorseless than the grave. Beware, then, how you degrade the human intellect, and human flesh and blood. These greatly need, for their full development and comfortable support in infancy, manhood, sickness and protracted old age, the entire proceeds of one pair of honest hands. Never forget that whatever you give to inert matter, is so much stolen from a living soul and living body. This great truth should be known, that no man can make a beast of burthen of his physical frame, and not inflict infinite wrong on his immortal mind. To supply our natural physical wants, no one need labor beyond what is necessary to impart health and vigor to his body and his mental faculties. Why, then, degrade a human being almost to a level with the ox that he drives, by compelling him, like the patient ox, to give to the world twice as much as he receives in return? It is thus that we create that rebellion against our unwise and unjust laws, which calls for the brute force of military power. It is thus that we are so successful in filling our poor-houses with paupers, and our jails and prisons with criminals.

Suppose a paternal government, acting on the principle of equal and exact justice, were to credit every member of the community, every family in the State, with all the good things produced by the same, and should debit each person and each family, with all they have ever consumed, how few could show a balance in their favor of $2,000? Under a system of just debit and credit with every mouth, back, and pair of hands, how many who are now rich would be bankrupts for thousands? How many, now really poor, would rejoice in their comfortable circumstances?

Suppose every man that has $3,000 at interest, were compelled to work at 75 cents a day, to pay his own interest? Who then would care to overreach his neighbors, and acquire $3,000 which rightfully belong to the families that gave them existence?

It is because $3,000 will draw for its holder, from human bone and muscle, 200 days' work a year, for ten generations, that we are all so anxious to acquire the means thus to eat bread by the sweat of other men's faces, rather than by the sweat of our own. Humanity gains nothing by the circumstance that capital so often changes owners. To the producing classes, who work 100 days at 70 cents a day, for the service of $1,000 a year, it matters not whether this money has shifted owners a thousand times, or only once.

Having thus briefly noticed a few of the evils which affect most injuriously the great agricultural interest of New-York, your committee regard it as a part of their legitimate duty to suggest a remedy.

The objects sought to be attained are these:

First, to increase the productiveness of rural labor.

Secondly, to secure to every cultivator of the soil the entire proceeds of his better directed and more productive industry.

On what does the productiveness of the farmer's labor mainly depend? Surely not on his mere muscular strength, for in that case the mechanical power of a cart-horse will exceed five fold in value the labor of an agriculturist. It is the sound judgment, experience and acquired knowledge of the directing Mind, that imparts productive value to the labor of human hands. And it is mainly because the intellect employed in rural pursuits is less developed than the mind devoted to other and more professional occupations, that agricultural labor is so poorly reward. The truth is that *passive* intellectual faculties are utterly valueless. They produce nothing. Hence, as the mind of a human being lacks science or knowledge, the market value of his mere physical force depreciates in price. Without going into an elaborate argument, your committee appeal to the ten thousand improvements of the age in which we live, as furnishing conclusive evidence that there is no power on earth so productive of great and beneficent results as the power of highly cultivated intellect.

Those that follow the plow, and swing the axe, and gather the harvest, have not, as a class, been instructed in the sciences which reveal nature's process for changing earth, air and water, into bread, meat and clothing. Hence, to manufacture a barrel of pork, or flour, a firkin of butter, or 100 pounds of wool, from the ingredients necessary to form those agricultural staples, the farmer loses one-third or one-half of his labor by its misapplication. To make one ripe wheat plant, nature requires no fewer than fourteen simple and distinct elementary bodies. Each one of these substances has peculiar properties, and not one can serve as a substitute for another.

The laws established by the Creator of the universe, which govern all the changes in the form and properties of matter, whether in a crude mineral or in an organized condition, making the living tissues of plants and animals, are as uniform and unerring as the laws that regulate the rising and the setting of the sun. By studying the operation of these laws, the practical agriculturist is often able to effect a result in a day, which he could not accomplish in a week, while working against the purposes of nature.

It is not far from the truth to say, that 400,000 of the 700,000 children now attending our common schools, are destined to become practical operatives in the great art of making *something* into grain, grass, roots, milk, butter, cheese, wool, fat, lean meat, bone or some of the other numerous products of rural labor. *Where* that something can be found, and *how* the raw materials of all cultivated plants should be combined, so as to give the largest return for any given amount of capital and manual toil, are problems in practical husbandry, which science alone can solve.

If the ashes obtained by burning a ripe wheat, rye, oat, corn, barley or timothy plant, be analyzed, not far from 80 per cent will be found to be silica, or common flint sand. This silica is an indispensable ingredient in the above named crops: and yet, not one particle of this mineral can enter the root of any plant except it be dissolved in water. Now, of all earthy substances, flint sand is the most insoluble. Indeed, you may boil it for hours in aquafortis, sulphuric or muriatic acid, without dissolving it. How, then, is the practical farmer to dissolve this mineral, which, more than all other, forms the *bone* necessary to give strength to the stems of his grain, that they may hold up, without falling, the load of ripe seed in the ears?

Chemically speaking, silica is an acid, and will unite with a large dose of the two alkalis, potash and soda, and form a soluble silicate of those bases.

This explanation reveals the reason why the alkalis in wood ashes are so valuable as fertilizers on sandy soils. On comparing the analyses of maple, beech and oak ashes, with those obtained from cereal plants, there will be found a striking similarity in their respective constituents.

Next to clay, sand and potash, lime, soda, phosphorus, sulphur, chlorine and iron, are the most important minerals found in cultivated plants. To prepare these ingredients for use, the following is a cheap and easy process.

Take ten bushels of newly slaked lime, i. e. ten before it is slaked, and mix it thoroughly with twenty bushels of 'loam or vegetable mold. Add to the heap five bushels of common salt and an equal amount of plaster of Paris; moisten till the mass is like damp earth.

The plaster will furnish sulphur, and the common salt will yield both soda and chlorine. The latter will leave the sodium and unite with the caustic lime, forming a soluble salt, called the chloride of calcium. The sodium being first converted into soda, will then combine with the carbonic acid from the air and organized matter in the vegetable mold, and form a precious alkaline salt, which will dissolve common sand. This compound still lacks phosphorous and iron. Ground bones furnish the former and copperas the latter mineral If one can get the liquid excretions of domestic animals, or of the human species, and saturate the compost heap with this compound of ammonia, phosphoric acid, and of other valuable matters derived from plants, the fertilizing properties of this artificial manure will be greatly increased

There is no branch of business in which the sciences of geology, chemistry, and of vegetable and animal physiology, are so useful to man, as they are to the practical husbandman. The term science, is but another name for knowledge. It is, however, usually limited in connection with natural phenomena, to the systematic investigation of the laws of nature. Of all men, the practical farmer is most interested in understanding and obeying these wise and salutary laws.

The fact is susceptible of demonstration, that from a general ignorance of these laws, we have wasted in the State of New-York, within the last twenty-five years, the indispensable ingredients that go to form both *bread* and *milk* for our children, which, if placed in New-York and Boston markets, would sell for one hundred millions of dollars.

The guano imported into Great Britian last year, sold for $4.000,000. It is retailed in Western New-York by an exchange of four pounds of flour for one of guano.

To make an acre of wheat that will yield 20 bushels, the plants must have twelve pounds of phosphorus. To purchase that amount of a substance, which forms one of the constituents of the human brain, at a druggist's shop, will cost $24.

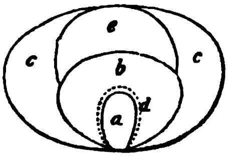
The fact is notorious that there are thousands, if not millions, of acres in this State which once bore 20 bushels of good wheat per acre, that now yield not more than ten bushels. To make our twelve millions of bushels of wheat a year, we annually consume about 7,000.000 pounds of phosphorus. It is the phosphate of lime contained in grass and hay, derived from the earth, out of which all our domestic animals form the solid, earthy portion of their bones. At present prices the phosphorous and ammonia, annually thrown away in the solid and liquid excretions of man and his domestic animals, are worth some $20,000,000.

A cargo of guano—phosphorous and concentrated nitrogen derived from the fish on which sea-fowls feed—arrived in New-York a few days since, which will sell at some $60,000! What consummate folly to throw away the raw materials which form our daily bread!

In a work just published in this country. M. Boussingault states that he has seen fields on the table lands of the Andes, which have produced excellent crops of wheat *annually*, for 200 years. Guano is the fertilizer used on these fields.

Recent experiments in Scotland have demonstrated the practicability of growing 44 bushels of wheat on an acre having only 1½ per cent of organized matter in the soil. It must contain, however, to a limited extent, each of the 14 simple elementary substances which form a wheat plant.

The organized arrangement of the phosphate of lime and magnesia, in an embryo corn plant, and the locality of the salts of iron, zeine and starch, are worth knowing. The following diagram illustrates the section of a grain of corn:



a. The cotyledon or embryo.

b. Starch.

c. e. Oil—zeine—sugar.

d. Salts of iron.

In the cotyledon or germ, is deposited the phosphates which form the bones of animals, and also most of the glutinous substance which is indispensible in the formation of lean meat, tendon, tissue, and the jelly found in bones. Hence, when the mouse eats out the chit of a kernel of corn, he gets the raw material to make muscle, bone, and brain; and by taking into its stomach the *iron* in the dotted line *d*, this little animal, as well as the ox and man, obtain the substance which give color to the blood, and with oxygen, the vital heat of the system.

The iron in venous blood, is in a state of protoxide. This fluid is loaded with carbon, if not carbonic acid. From these causes venous blood is much darker colored than arterial blood. In the latter the iron is a peroxide, imparting to the blood a light vermillion hue. The fact has often been demonstrated, that the air expelled from the lungs of a warm blooded animal contains 100 times more carbonic acid than the air taken into these organs. As the arteries leading from the heart penetrate every part of the living frame, they convey vital gas—oxygen, condensed in the peroxide of iron—to every portion of the system. This oxygen, while the blood is passing through the tissues from the arteries into the veins, combines with that portion of carbon which has performed its office in nourishing the body, and carries it, in the form of carbonic acid, through the veins, heart and lungs, into the ever moving atmosphere.

In thus burning the waste carbon in the system, oxygen gives out just as much heat to the surrounding matter as it would, provided an equal quantity of vital gas had burnt an equal amount of fuel in a stove.

Every body knows that active exercise will warm him in cold weather—that a horse driven forty miles a day will breathe oftener, evolve more heat and consume more food, or fuel, than he will when standing quietly in a warm stable. The waste oxygen and hydrogen will escape from the lungs of the animal, if quiet, in the form of vapor; in perspiration also, if driven hard. This sweat will carry with it some nitrogen and saline matter, which sometimes crystalizes on a horse by the evaporation to dryness of the liquid that escapes through his skin. But most of the valuable salts taken from the earth in the food of all animals, escapes by the kidneys and bowels.

As the demand for carbon to form fat, muscle, cellular tissue, bone, brain, hair and wool, as well as to keep up a continuous heat of 98° night and day, is very great, it will be seen why *starch* is so abundant, not only in corn, as above indicated, but in all plants used as food for man or beast. Starch contains a large amount of carbon.

It is well known that if a bin of corn be moistened, it will heat and grow or rot. In the process of sprouting, a seed first imbibes some portion of the vital gas that surrounds it, which, uniting with the carbon in the starch, forms carbonic acid and evolves heat. When starch thus loses one portion of its carbon, it is changed into a kind of *sugar*, making, as is well known, sweet bread from wheat a little grown. If a grain of wheat be surrounded by a little waxy clay, only a half inch in diameter, it will not sprout, because oxygen gas cannot penetrate the compact earth. By sowing grain in wet weather, so that the harrow covers the seed with mud, thousands of bushels are lost.

It is a matter of great practical importance to know how to develop a large, vigorous growth of roots. On a poor soil this can only be done by the aid of science. Deep plowing and a thorough pulverising of the soil are indispensable to accomplish this object.

If it cost the farmers of New-York twice as much land and labor to produce a bushel of grain as it does their competitors out of the State, how are the cultivators of the earth among us to prosper?

All the farmers in the Empire State should rise as one man, and insist that the science of keeping property, shall be taught in all their common schools.

The same mental cultivation which will enable an honest tiller of the soil to double the products, and double the value of his better directed industry, will also qualify him to keep and enjoy a much larger portion of the nett proceeds of his labor.

Your committee have been constrained to believe that much of the opposition to agricultural schools in this Sate, has arisen from the well grounded apprehension that if we place the farmers of New-York on a par with professional men, in point of attainments, they will cut off at the fountain the large fortunes which now flow into the hands of men who really produce less than they consume.

These educated farmers will demand, it is feared, an equal share of the honors that accrue to our executive, judicial and legislative officers, and hence the light of science must be shut out from their understandings.

It is now twenty-six years since the friends of agricultural improvement first made a serious effort to establish an agricultural college in this State. Your committee have before them an essay published in this city, in 1819, of forty-two pages, advocating such an institution with unanswerable arguments.

At a later period the lamented Judge Buel succeeded in procuring a naked charter for such a school; but not a single dollar could be obtained to aid private enterprise in teaching the unerring laws of nature to the young men who are to pursue the modern art of transforming solid rocks into fertile soils, and these again into human food and raiment.

Wise legislators conferred unlimited authority on a few Canal Commissioners to expend indefinite millions in cutting and beautifying *inanimate stone* along the line of the enlarged canal; but the law making power refused to grant one dollar to teach the science of rural economy to the sons and daughters of practical farmers. Within the last twenty-six years there has been taken from the public treasury about $200,000 to prepare the candidates for legal honors to study successfully the science of law. We have also four well endowed medical colleges, now drawing from the public funds $5,500 a year, besides $200,000 before received.

We have so long paid a large bounty on all branches of unproductive industry that no young man, of any honorable ambition, will consent to toil, and sweat, and burn in the sun on a farm, for $10 a month, when as a clerk in a store, a bank, a broker's office, or as the student in a doctor's or lawyer's office, he can expect, in the course of twenty years, to command five dollars to one, and at one-fifth of the severe bodily labor exacted of the practical agriculturist. But can all our ambitious young men become professional gentlemen, without rendering these professional pursuits utterly valueless? If learning and science are the great highways to honorable distinction and public favor, why deny these advantages to those that do more than all others to feed and clothe the whole community?

It is true that science is the greatest leveler in the world, but, unlike the leveling of ignorance and brute force, it ever levels upward. It takes the highest point of mental attainment already achieved for its standard; and then wisely and humanely attempts to elevate all below up to that standard.

The object of this effort is to make the triumph of *mind* over *matter* universal and complete. All men, blessed with a common share of common sense, should have, in their every day business operations, the full benefit of the best lights of modern science. Science gives to the poor man unknown and ever increasing power over heat, light, electricity, chemical attraction, air, water, and the solid substances which form the surface of the globe.

All these elements are brought into requisition by nature, in changing crude mineral matter into living, organized beings—into the cultivated plants and domestic animals, produced by the labor of the husbandman. To increase the knowledge of the producing classes does not detract, in the least, from the attainments of any class that may stand, or think they stand, above the common average of the community in which they live.

Why shall we refuse to do as much to make skillful and scientific farmers as we do to make skillful doctors and lawyers?

There are 11,000,000 acres under cultivation in this State, yielding an average product worth $7 per acre. Communicate to the half million of men who cultivate these lands a knowledge of the laws of nature which govern all the results of rural industry, and instead of exhausting the soil of its bread-forming elements at the rate of millions a year, they will improve the land and harvest, at the same cost in labor, three dollars per acre more than they now do. This will add to the productive value of our agricultural industry $33,000,000 a year, and to the revenue of our canals more than one million of dollars. For a large portion of this will go to the cities on the seaboard, and be paid for in goods to be returned through our canals to the consumers. Thus the property dug from the earth will contribute a double toll to the State.

Who cannot see that commerce, manufactures, and all other pursuits in civilized society will be largely benefitted by increasing the productiveness of rural labor? Hence, whatever we give to agriculture is truly given to all classes. By unwise cultivation we have all consumed much of the constituents of human food and clothing that a bountiful Providence spread over the virgin earth in the Empire State. Science now comes to our aid, and teaches us how to change a cold, compact *subsoil*, into a loose, friable and most productive surface soil. It reveals to us *why* it is that a good soil will produce 100 pounds of ripe wheat plants, and yet lose only 15 pounds of its weight and substance by the operation, eighty-five pounds coming from the atmosphere.

In combustion, respiration, and by fermenting and rotting, an immense amount of organized matter is decomposed, and dissipated through the air. These gases are all soluble in water Hence, all the carbonic acid expelled from the lungs of all animals, and the ammonia formed by decomposing organized substances, are dissolved in the rains, snows, and dews in the atmosphere, which fall to the earth, and pass into the roots and circulation of cultivated plants. The leaves also imbibe from the air a very considerable amount of vegetable food.

There are a thousand reasons why the laws of nature should be carefully studied, and as carefully obeyed by our whole rural population. It is by this means alone that they can largely increase the products of their honest toil, and *keep* for the benefit of themselves, and their helpless offspring, those surplus earnings which now go to form the immense fortunes of capitalists. England and Wales have a million and a half of public paupers. Do we desire an equal ratio, as compared with our population? If not, then some power must protect the inalienable rights of labor and humanity.

To make a beginning in this great enterprise of universal education which aims to unite *science with labor*, your committee beg leave to introduce a bill, appropriating five thousand dollars a year, for three years, to the Fairfield Medical College, on condition that the institution shall be connected with a model and experimental farm, for the purpose of teaching both the science and the practice of agriculture. This college was chartered in 1811, and has peculiar and strong claims to the favorable consideration of the Legislature. It has about $15,000 invested in college buildings, which are worthless for any other than educational purposes. The experiment then, if any choose so to regard it, can be tried at this institution cheaper than to erect a new establishment. The trustees are eminently practical men, and will be under the strongest inducements to give success to the undertaking. The college has a library and chemical apparatus worth about $2,000, and many conveniences which will be valuable to an agricultural school.

THE AMERICAN HERD BOOK.

TO accommodate such Short Horn breeders as wish to insert pedigrees of the increase of their herds this spring, in the pages of this work, it will be kept open till the first of July next; by which time it is hoped that all who wish to register their cattle, will forward their respective pedigrees. The lists are fast coming in, and it will be a source of pleasure to the subscriber to make them as numerous as possible, that the array of American Short Horns shall at least show some sort of respectability to their friends on the other side of the Atlantic. L. F. ALLEN.

Black Rock, N. Y., April 1845.

EXOTIC, NURSERY, AND HORTICULTURAL GARDENS,

Flushing, L. I., near New-York.

THE subscribers having established a Nursery with the above title, with the determination of conducting it in the very *best* manner in all its departments, offer for sale, *at reasonable prices*, a *select* variety of FRUIT AND ORNAMENTAL TREES, Hardy Shrubs, Herbaceous Plants, Grape Vines of all the best kinds, superior Strawberries, Fastolf Raspberry, Gooseberries, &c. BULBS and TUBERS, superb CARNATIONS, DAHLIAS, &c., and a most extensive and choice collection of GREEN-HOUSE and STOVE PLANTS, embracing every thing *new* and *beautiful* in that department, personally selected in Europe during the past summer, of ROSES and CAMELLIAS.

We have a very choice collection of the former, full 1,000 varieties, and of the latter nearly 300, all in fine order.

Catalogues of the above will be sent gratis to all applicants, *post-paid*, and every order promptly executed. From unknown correspondents, a remittance, draft, or satisfactory reference expected.

May 1, 1845—eom. VALK & Co.

TO LAWYERS, MERCHANTS, MECHANICS, FARMERS, PUBLIC OFFICERS, &c.

AMERICAN GOVERNMENTAL AGENCY, WASHINGTON.

ON retiring from his official station as Assistant Post Master General, JOHN S. SKINNER, devotes himself to the transaction of GENERAL AGENCY BUSINESS, particularly in connection with the various Departments of the National Government—business in which he is henceforth associated with HENRY O'REILLY, of the State of New-York.

Persons in any part of the United States, who have business to transact with either Department of the General Government at Washington, or with any of the State Governments, or who require researches to be made in the Public Records any where in the Union, can nave their requests promptly attended to, by addressing the undersigned.

Extensive acquaintance throughout the Union, consequent on the long continued connection of both the undersigned with the Newspaper Press, with the Post Office and other Public Organizations, will greatly facilitate the prosecution of inquiries and transaction of business through their Agency.

Lawyers, Public Officers, Contractors, and others having business arising under contracts, or under the Pension, Post Office, or Patent Laws—MERCHANTS desiring remission of duties, &c.—MECHANICS or Inventors requiring Patents—and FARMERS having business with the General Land Office—may find this Agency conducive to their interest in the way of promptness and economy. Claims under treaties with the Indian Nations or Foreign Governments also attended to.

Special attention will be paid to those who wish to buy or sell LANDS in Virginia and other Southern States; and inquirers from the North or South, are respectfully referred to our Circular concerning "Agricultural Improvement in the Southern States," lately published in the Globe, Intelligencer, and other Journals.

☞ Letters must be *post-free*, to insure attention; and may be addressed to the subscribers, either at Albany, New-York, or *Washington*—particularly at the latter place. JOHN S. SKINNER.
HENRY O'REILLY.

☞ Sensible of the manifold courtesies with which he has been honored by editors of all parties, from the time when he established the first Agricultural Journal in America more than a quarter century ago, JOHN S. SKINNER adds this note for the purpose of saying that it will afford him great pleasure to maintain the intercourse thus long continued, and to reciprocate the services of editorial friends who may now favor him with a few insertions of this notice.

May 1, 1845.

CATALOGUE OF

IMPROVED SHORT HORNED CATTLE,

The entire herd of* E. P. PRENTICE, *to be Sold at Auction, at Mount Hope, near Albany, on Wednesday, the 25th day of June,* 1845, *at* 10 *o'clock, A. M.

MR. PRENTICE takes leave to say, that if he could have made the sale sufficiently inviting, he would much have preferred to offer but about half this stock. But, to guard against the impression that the best have been selected, he begs to assure the public, that the entire herd shall be sold without reservation; except, as provided by his published advertisement, in order to retain the blood of some highly valued families, which have been secured at great expense and which could not be replaced, he will ask leave to bid, *openly*, on three or four individuals *only*, they first being designated.

☞ The open numbers attached to the pedigrees, refer to Coate's Herd Book. Those inclosed in parenthesis, to this Catalogue, and the letters to the progenitors, whose pedigrees are given in the Appendix.

Several of the cows and heifers, not yet calved, will come in before the sale, and at that time it will be made known when others are to do so, and by what bulls.

The cattle may be inspected at any time previous to the sale, and any information relating to them will be most cheerfully given.

CATALOGUE.

1. FLORA—Roan cow, calved June, 1837, and imported in 1839—got by Imperial 2151—d. Sophia, (Herd Book, vol. 3, p. 537,) by Waverly 2820—g. d. No. 21, bred by Mr Mason, and got by Satellite 1420—g. g. d by Cato 119—g. g. g d by Charles 127—g. g. g. g. d. by St. John 572. This cow is a very excellent milker.

2. CATY—White heifer, calved July 17, 1844—got by Fairfax (49) 3754—d. Flora (1.)

3. CALF OF FLORA, (1) by Fairfax (49) 3754.

4. MOSS ROSE, vol. 5, p. 704—Roan cow, calved January, 1837, and imported in 1841—got by Barden 1674—d. Violet, by Young Colling 1843—g. d. Violet by Remus 550—g. g. d Pink by Sedbury 1424—g. g. g. d. Beauty by Hollings 2131—g. g. g. g. d. Lingcropper by Partner 2409, &c. See Herd Book.

5. COMELY—Light roan heifer, calved February 11, 1845, got by Young Leopard, (A.)—d. Moss Rose (4) 704.

6. CATHERINE, vol. 5, p. 153—Red and white cow, calved May 17, 1839, and imported in 1841—got by Mr. Jobson's Sir Robert 5181—d. Clara, by Reformer 2512—g. d. Chilton, by Don Juan 1923—g. g. d. by Lindrick 1170—g. g. g. d. by Sir Alexander, 591—g. g. g. g. d. by North Star, 459.

7. BLAIZE—Red and white bull calf, calved February 28, 1845—got by Young Leopard, (A)—d. Catherine, (6) 153.

8. MATILDA, vol. 5, p. 629—White, calved March 26, 1834—got by White Jacket 5647—d. Heart, bred by the late Thos. Hollis, Esq. at Blythe, Eng., and by him brought to this country, on his removal for settlement in —.

Heart is said to have been a very extraordinary animal, not only in symmetry and general appearance, but in union of valuable, high bred properties. Mr. H. was offered and refused $700 for her, on landing in New-York.

Matilda took the first prize at the Fair of the Am. Institute in 1843. She has now in the yard with her, eight heifers and one bull calf with fourteen of the next generations, and whether considered as individuals or as a family, with reference to form or quality, they are alike remarkable for combination in each, and sameness in all.

9. SNOWBALL, vol. 5, p. 629—White cow, calved May 13, 1836—got by Carlos, (E.) 1787—d. Matilda (8) 629, &c.

10. NUN—Red and white cow, calved April 5, 1842—got by Leopard (D.) 4213—d. Snowball (9) 629, by Carlos, (E.) &c.

11. MELISSA, vol. 5, p. 629—Red and white cow, calved April 24, 1837—got by Carlos, (E.) 1787—d. Matilda, (8) 629, &c.

12. CAROLINE—Red and white cow, calved April 28, 1840—got by Leopard (D.) 4213—d. Melissa (11) 629—g. d. Matilda (8,) &c.

13. CORA—Red and white cow, calved March 6, 1841—got by Leopard (D.) 4213—d Melissa (11) 629—g. d. Matilda (8) 629, &c.

14. MEG—Red and white heifer, calved June 28, 1841—got by Cato, (B.)—d. Cora (13) by Leopard (D.) 4213—g. d. Melissa (11)—g. g. d. Matilda (8) 629, &c.

15. TYRO—Red and white bull calf, calved January 10, 1845—got by Young Leopard (A.)—d. Melissa (11)—g. d. Matilda (8) 629, &c.

16. DAISY, vol. 5, p. 629—Red and white cow, calved March 18, 1838—got by Leopard (D.) 4213—d. Matilda, (8) 629.

17. NELL—Red and white cow, calved January 30, 1842—got by Northumberland (F.) 4596—d. Daisy, (16) 629—g. d. Matilda (8) 629.

At the State Fair, in 1842, Nell took the first premium in her class, and again did so at Poughkeepsie in 1844.

18. CALF of Daisy, (16) 629—by Fairfax (49) 3754.

19. DIANA, vol. 5, p. 629—Red and white cow, calved March 16, 1839—got by Leopard (D.) 4213—d, Matilda (8) 629.

20. TECUMSEH—White bull, calved March 17, 1844—got by Cato (B.)—d. Diana (19) 629—g. d. Matilda (8) 629.

21. BETTY—Red and white heifer calf, calved Dec. 5, 1844—got by Sultan, (C.)—d. Diana (19)—g. d. Matilda (8) 629.

22. SALLY, vol. 5, p. 629—Red and white cow, calved January 18, 1840—got by Leopard, (D.) 4213—d Matilda (8) 629.

23. DUTCHESS—White cow, calved May 11, 1842—got by Fairfax (49) 3754—d. Sally (22) 629—g. d. Matilda (8) 629.

24. CALF OF (23)—by O'Connell (50) vol. 5, p. 704.

25. ROVER—Red and white heifer, calved May 30. 1844—got by Young Leopard, (A.)—d. Sally, (22) 629—g. d. Matilda, (8) 629.

26. CHARLOTTE—Red and white cow, calved November 16. 1840—got by Leopard, (D.) 4213—d. Matilda, (8) 629.

27. CALF OF (26)—by Fairfax, (49) 3754.

28. ADA, vol. 5, p. 629—Red and white cow, calved October 16, 1841—got by Leopard, (D.) 4213—d. Matilda, (8) 629.

29. CALF OF (28)—by Fairfax, (49) 3754.

30. JUDY—White heifer, calved January 28, 1844—got by Fairfax, (49) 3754—d Matilda, (8) 629.

31. DUKE—Red and white bull, calved January 4, 1845—got by Fairfax, (49) 3754—d. Matilda, (8) 629.

32. APPOLONIA, vol. 5, p. 43—Red and white cow, calved January 26, 1835, and imported in 1838—got by Albion, 2965—d. by Red Star, 4911—g. d. by Chance, 1806—g. g. d. by Shipperly, 2619.

Appolonia is a very extraordinary milker, giving from 24 to 30 quarts a day for months in succession, and never drying before parturition without great care and effort.

33. LOUISA—Roan cow, calved January 28, 1840—got by Leopard, (D.) 4213—d. Appolonia, (32) 43.

34. BURLEY—Red and white heifer, calved May 11, 1844—got by Young Leopard (A.)—d. Appolonia, (32) 43. So far as dam and sire are concerned, this must be all that can be desired for the dairy

35. SPLENDOR—Roan cow, calved May 7, 1836, and imported in 1839, vol. 5, p. 959—got by Symmetry, 2723—d. Pomona, (bred by Mr. Cattley,) by Bedford Junior, 1701—g. d. by Isaac, 1129—g. g. d. by Whitworth, 1584—g. g. g. d. by White Comet, 1563—g. g. g. g. d. by a son of Kit, 2179.

Splendor is a deep milker, giving from 24 to 30 quarts a day through the favorable season. She is the dam of Fairfax, (49,) 3754.

36. PEGGY, vol. 5, p. 959—Roan cow, calved April 4, 1842—got by Leopard, (D.) 4213—d. Splendor, (35) 959.

Peggy is now with her first calf, (Peggy 2d) and gives great promise of milk.

37. PEGGY 2d—Roan heifer calf, calved February 26, 1845—got by Fairfax (49) 3754—d. Peggy (36) 959.

38. RAMBLE—Red and white heifer, calved May 31, 1844—got by Young Leopard. (A.)—d. Splendor (35) 959.

39. CALF of Splendor (35,) by Fairfax (49) 3754.

40. ESTERVILLE, vol. 5, p. 329—Roan cow, calved November 13, 1841—got in England by Daniel O'Connell 3557—d. Esterville 329, (imported in 1841,) by Alfred 2987, (afterwards sold to the King of the French,)—g. d. Amethyst, by Prince of Northumberland, 426—g. g. d. Young Amazon, by Crusader, 934—g. g. g. d. Amazon, by Sultan, 1485—g. g. g. g. d. Belona, by Mars, 411—g. g. g. g. g. d. Rolla, by North Star, 458. Bulled by Fairfax.

41. JENNY—Roan cow, calved June 12, 1841—got by Red Comet—d. Miss Scotson, alias Daisy, (bred by Samuel Scotson, at Toxteth Park, in England, and imported in 1840,) by Henwood, 4012.

Red Comet was out of Red Rose, by Young Albrin, (imported by Thos. Addis Emmet, of New-York,) by Harlem Comet—g. d. by Sir Martin.

42. JILT—Roan heifer, calved August 16, 1844—got by Sultan (C.)—d. Jenny (41.)

43. Calf of Jenny (41,) by Fairfax (49) 3754.

44. AURORA, vol. 3, p. 258—Roan cow, calved May 24, 1835—(imported in 1839,)—got by William, 2839—d. Adelaide, 253, by Young Rockingham, 2549—g. d. by Wellington, 2824—g. g. d. by Major, 2252—g. g. g. d. by Northumberland, 464.

Aurora is a great and rich milker.

45. TIMOUR—White bull calf, calved July 19, 1844—got by Fairfax (49) 3754—d. Aurora (44) 258.

46. Calf of Aurora (44)—by Fairfax (49) 3754.

47. DORA—Red and white cow, calved April 28, 1841—got by Leopard (D.) 4213—d. the imported cow, Princess, (bred by R. C. Lounds, Esq.) by Henry, 4008—g. d. Beauty, by Fitz Form. 2024—g. g. d. White Princess, (bred by Mr. Hines,) by Cupid, 938—g. g. g. d. Young Princess, by Lionel, 1171, &c. See Herd Book, vol. 3, p. 805.

48. MISS SMITH—Red and white cow, calved August 10, 1837—got by Leopard (D.) 4213—d. the imported cow, Susan, by Dutchman—g. d. Rosina, by Mr. Wetherell's North Star—g. g. d. by Old Comet. See appendix A.

49. FAIRFAX 3754—White bull, calved May 10, 1840—got in England, by Sir Thomas Fairfax, 5196—d. Splendor (35) 959, by Symmetry 2723—g. d. by Bedford, Jun., 1701—g. g. d. by Isaac, 1129—g. g. g. d. by Whitworth, 1584—g. g. g. g. d. by White Comet, 1563—g. g. g g. g. d. by a son of Kit, 2179.

Fairfax took the first prize, as the best two year old, at the Fair of the State Agricultural Society in 1842; and the first, as the best bull of any age, at that of the American Institute, the same year.

He has not since been shown, but has been kept low, and at service. His dam, Splendor (35,) is a very superior dairy cow. His sire, Sir Thomas Fairfax, was got by Norfolk, 2377—d Miss Fairfax, p. 509, vol. 3, Herd Book, by Fairfax, 1023—g. d. Lilly, by Young Warlahy, 2812—g g. d. by Young Dimple, 971—g. g. g. d by Snowball—g. g. g. g. d- by Layton, a son of Mr. Charge's grey bull, 872.

"Sir Thomas Fairfax" has taken the following premiums, viz: as the best year old bull, at Otley, in April, 1838, three (3) guineas; as the best two year old, at Leeds, in 1839, twenty sovereigns; (at the same time, he won a match of 5 guineas, against Mr. Tempest's celebrated bull, "Daniel O'Connell," which obtained the first prize, as the best bull of any age at the above meeting;) also, as the best bull of any age at the Yorkshire meeting, in August, 1840, the premium of 30 sovereigns; at the same time, beating that noted bull Clementi, in a match of five guineas each, and has never been beaten.

Most of the cows named in this Catalogue, are bulled by Fairfax, 3754.

50. O'CONNELL—Roan bull, calved January 11, 1842, vol. 5, p. 704—got in England, by Sir Peter, 5173—d. Moss Rose, 704, by Barden, 1674—g. d. Violet, by Young Colling, 1843—g. g. d. Violet, by Remus, 550—g g. g. d. Pink, by Sedbury, 1424—g. g. g. g. d. Beau-

ty, by Hollings, 2131—g. g. g. g. g.d. Lingcropper, by Partner, 2409—g. g. g. g. g. g.d. Lady, by Holling's bull, 2148—g. g. g. g. g. g. g. d. Lingcropper, by Marsk, 418, &c.

APPENDIX.

A.—YOUNG LEOPARD—Red and white, calved October 5, 1838—got by Leopard, (D) 4213—d. the imported cow, Susan, by Dutchman—g. d. Rosina, by Mr. Wetherell's North Star—g. g. d. by Old Comet.

Susan was bred by Mr. John Singleton, at Elmsthorp, England, and imported in 1832, with the bull Copeon. She was a very extraordinary milker, giving from 30 to 36 quarts a day, for several weeks in succession.

B—CATO—White bull, calved May 3, 1842—got by Fairfax (49,) 3754—d. Diana (19) 699, by Leopard, (D.) 4213, &c.

Cato took the first premium in his class, at the State Fair, in 1842, and also at the American Institute, the same year. He has not since been shown. Was calved after the papers were sent forward for the last volume of the Herd Book.

C—SULTAN—Roan bull, calved July 24, 1842—got by Astoria, 3048—d. Flora (1,) (imported in 1839,) by Imperial, 2151—g. d. Sophia, vol. 3, p. 537.

D—LEOPARD, 4213—Red and white spotted bull, calved in 1832; bred by Gen. Stephen Van Rensselaer—got by Ajax, 2944—d. Beauty, by Washington, 1566—g. d. Red Lady, by Washington, 1566—g. g. d. Panzy, by Blaize, 76.

E—CARLOS, 1787—By Charles, 878—d. Galatea, by Frederick, 1060—g. d. Graceful, by Major, 2252—g. g. d. Graceful, by Comus—g. g. g. d. Graceful, by Denton, 198.

F—NORTHUMBERLAND, 4596—Red and white bull, calved in 1839—got in England; by Prince of Northumberland, 4826—d. Appolonia (32] 43, by Albion, 2965, a son of Scipio, 1421—g. d. by Red Star—g. g. d. by Chance, 1806—g. g. g. d. by Shipperly, 5120.

IMPROVEMENT OF HORSES.

THE entire horse Diomede, which received the first premium of the New-York State Agricultural Society, at the Poughkeepsie Show in 1844, will stand at the farm of the subscriber, near Leeds, in the town of Catskill, Greene county, N. Y., for the present season.

Diomede belongs to a stock particularly calculated for the carriage and road. Their uniformity in size, shape, and color, (bay,) renders them readily matched; and being large and handsome, with fine spirit and constitution, they readily command the highest prices.

All necessary care and attention will be given to mares sent from a distance, at very reasonable charges. Terms, $10 the season. Particulars of Diomede's pedigree, &c., may be learned by applying to the subscriber. WM. SALISBURY.

Leeds, Greene Co., N. Y., April, 1845.

TO WHOM IT MAY CONCERN, ESPECIALLY TO FARMERS AND HORTICULTURISTS—Sulphate of Ammonia, Sulphate of Soda, and Nitrate of Soda—These three ingredients are highly useful for forcing the crops, and for protecting the planted seed against the grub worm. Experience has shown that a fortnight may be gained in ripening and raising the grain; also, tomatoes, turneps, cauliflowers, &c., may be brought to perfection by using the above in a liquid state.

As regards the Sulphate of Ammonia, Professor Johnston says, in one of his lectures, that it exhibits a more marked effect upon the leguminious than corn crops, and upon the produce of grain than on the growth of the leaves and stem, which is owing to the sulphuric acid contained in it, and that it promotes the general growth of the plant, and makes the fields luxuriant, which is owing to the Ammonia.

The same may be said of the Sulphate of Soda and Nitrate of Soda. They are certainly the most useful of manures, and may be employed in a dry or liquid state; if the seed is steeped in a mixed liquid, the worm cannot attack it before the embryo is already sprouting; and by sprinkling once in 24 hours over the fields of vegetables, the leaves of the plants are nourished, and the vegetable stimulated to advancing to perfection. If applied in a dry state, and mixed in the proportion of 5 lbs. of sulphate of soda, and 2 lbs. of nitrate of soda, and 3 lbs. of ammonia, and thrown in heaps of about 30 lbs to the acre, wheat, rye, corn, potatoes, cabbages, turneps, rice, cotton, and similar fields, the crops may reasonably be expected to increase 50 per cent.

The following poisons have been improved and are confidently warranted effectual in every instance:

1. The Patchoulty Compound, for dispelling moths and destroying their eggs in flannels, furs, hair seating, carpets, &c.
2. Rat Poison, for permanently eradicating rats without killing them on the spot, from houses, barns, ships, &c.
3. Bedbug Poison, in powder and liquid, the one as a preventive, and the other as a safe destroyer, without allowing them to return.
4. Fly Paper—for destroying flies and musquetoes.
5. Cockroach Poison, for getting rid of this obnoxious and disgusting vermin.
6. Compound Chem. Whale Oil Soap, to shield rose bushes, grape vines, trees, &c., from the worms and other insects.

The subscriber will confidently say that he can warrant all his preparations, having made lately decided improvements, and that he will for instance, surely clear rats from fields and barns with the greatest ease, and without the least detriment.

The only favor he asks, is to follow strictly the specific directions of the subscriber, who stands ready to give all necessary verbal directions, and to apply only personally to him, and not to any other

Dr. LEWIS FEUCHTWANGER,
May 1, 1845—2t. 60 Maiden Lane, New-York.

AURORA AGRICULTURAL INSTITUTE.

THIS Institution, recently opened, is located on a farm of over 200 acres, lying in and directly adjoining the village of Aurora, on the east bank of Cayuga lake, in Cayuga county, New-York, 16 miles from Auburn, by stage, and 12 miles south from Cayuga Bridge and the Auburn and Rochester Railroad, by steamboat direct, in summer.

Its design is to afford every facility for young men to make themselves thoroughly acquainted with the principles of Agricultural science, and their judicious application to practical husbandry; and particularly to afford young men from our large towns, the most favorable advantages for preparing themselves for Agricultural pursuits.

Terms $150 a year, payable quarterly in advance. No person under fourteen years of age will, as a general rule, be received.

Pupils will be received at any time, and the course of instruction continued through the year without vacations, but permission of absence will be granted if requested.

Applications may be made to B. R. McIlvaine, 44 Great Jones st. New-York, to Rev. W. Roosevelt, 413 Broome-st., and Hon. B. R. Wood, or the Editor of the Cultivator. Albany.

CHARLES C. YOUNG, A. M., Proprietor and Principal.
Alexander Thompson, A. M., M. D., Lecturer on Botany, Geology, Agricultural Chemistry, &c.
David Thomas, Visitor and Adviser.
May 1, 1845—tf.

DURHAM BULL CALF AND HEIFERS.

THE subscriber will sell a Durham Bull Calf one year old 21st March 1844, a remarkable thrifty animal and good handler; when about 10 months old weighed 720 lbs. He was got by his prize bull Meteor. Also, a yearling and a two year old heifer, one got by Meteor, and one by the imported bull Duke of Wellington. Letters post-paid, will be answered. GEO. VAIL.

Troy, May 1, 1845—2t.

TO SPORTSMEN, &c.

THE writer (desirous of being at liberty to travel part of the year, and yet have his interests well looked to,) offers an opportunity rarely to be met with, viz: an interest in one of the most perfect and extensive stock farms, on and around which are game and fish in the greatest variety and abundance. The country is very beautiful in scenery, well wooded and watered. There is abundance of water power on and around the place. The climate is delightful and healthy, a desirable occupation and residence for an invalid.

The farm is already stocked with sheep, horses for breeding, &c. &c., but the number will be increased until there are at least (10,000) ten thousand sheep, and other stock in proportion, to which end improvements are in rapid progress.

The annual expense of keeping the animals is so low, that the profits are large; breeding ewes giving over one dollar and a half clear profit per annum.

The advertiser seeks an agreeable companion as partner in the above interests. Should this meet the eye of such who has taste for field sports and rural pursuits, he may learn farther particulars by addressing, post-paid, the "Editors of the Cultivator," Albany.

May 1, 1845.—1t.

IMPORTED ENGLISH GRASS SEEDS, &c.

JAMES M. THORBURN & Co., have received by late arrivals from England, a variety of the most improved grass seeds, cultivated by the farmers of Yorkshire, Northumberland and Devonshire, and will be found well worthy a trial—among several sorts, are the following:

Cynosurus cristatus, (Crested Dog's Tail Grass)—Excellent for sheep, producing upwards of 6,000 lbs. to the acre—50 cts. per quart.

Festuca pratensis, (Meadow Fescue)—For horses, cattle and sheep, produces very early in the spring—25 cts. per quart.

Festuca loliacea, (Darnel-like Fescue)—Possessing all the valuable properties of Rye Grass, and few of its defects; its produce is larger; it springs earlier and improves by age; well adapted for meadows, which are periodically overflowed—25 cts. per quart.

Festuca ovina, (Sheep's Fescue)—Linnæus affirms that sheep have no relish for hills and heaths that are destitute of this grass—37½ cts. per quart.

Poa nemoralis, (Wood Meadow Grass)—Its early growth in the spring, and its remarkably fine succulent and nutritive herbage, recommend it strongly for admission into the company of the superior permanent grasses—37½ cts. per quart.

Poa trivialis, (Roughish Meadow Grass)—Most valuable for moist rich soils, and sheltered situations; oxen, horses and sheep have a marked partiality for it—25 cts. per quart.

Poa pratensis, (Smooth stalked Meadow Grass)—Not less valuable than *P. trivialis*. Earlier in leaf, and will thrive with less moisture—25 cents per quart.

Also, 200 lbs. Madder Seed, crop 1844, $1 per lb. The Tract of Gasparin on the treatment of Madder, gratis.

Multicole Rye.—A native of Poland, will grow in the usual soil suited to rye. Its produce is wonderful in light soils—12½ cts. per lb.

Spurry.—Well adapted for poor sandy soils, and very rapid growth—25 cts per lb.—(See Report of Commissioner of Patents.)

White French Field Carrot.—Superior to all others. Mr. Hamilton of Vermont, last season raised 1200 bushels on half an acre, and found it superior to all other carrots for stock—$1 per lb., 2 lbs. to the acre.

Essex Spring Wheat.—$3,50 per bushel

Early Prince Albert Peas—ready in 8 weeks—50 cts. per quart—with every variety of Garden Seeds that can be procured.

JAMES M. THORBURN & Co.
May, 1, 1845—1t. 15 John-street, New-York city.

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☞ **ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

NOTICE.

IT has been thought for a long time, and often spoken of by men in various parts of the country who feel interested in matters concerning agriculture, that suitable Ware Rooms for Machines and Implements of the most approved kinds, are much needed in this city.

In consideration of this fact, also well known to himself, the undersigned has concluded to open such Rooms in a central position, (No. 5, Burling Slip,) for the sale of Agricultural Machines and Implements of *the most approved* descriptions, on commission, and will receive samples of the same from any who feel disposed to have their inventions introduced to the public from this city.

The undersigned is also exclusive agent for making and vending the "Warren's Improved Portable Horse Powers and Threshing Machines," succeeding H. Bartlett, (successor to L. Bostwick & Co.) who retires on account of ill health.

Now on hand, Premium Plows, Cultivators, Straw Cutters, Portable Mills, Fanning Machines, Corn and Cob Crushers, &c. &c., wholesale and retail.

N. B. All orders for Implements of any kinds will be attended to promptly, also for seeds, &c.

JAMES PLANT,
5 Burling Slip, New-York city.
May 1—1t.

PLOWS.

AT the Syracuse Agricultural Warehouse and Seed Store, can be obtained Delano's celebrated Diamond Plow made by Mr Howard Delano, of Mottville, for the sale of which, we are sole agents for this town. Price, $6 for plain plow, and $10 for the wheel, coulter and clevey. Also, a full assortment of the well known Massachusetts Plow, made by Ruggles, Nourse & Mason of Worcester. 300 bushels seed barley, 300 do. pure Marrowfat Peas, 100 do. Clover seed, 150 do. Timothy, and a general assortment of all the varieties of seed sown by the tillers of the soil; Cultivators, corn plows, Wheel-barrows, Churns, Cheese Tubs, Cheese Cloth, Hoops and Presses, Hoes, Manure, Hay and Barley Forks, Shovels and Spades; and a very great variety of articles appertaining to the interest of the husbandman. Orders promptly executed.

Syracuse, April, 1845. FOSTER & NOTT.

AMERICAN Farmers Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale at the office of "The Cultivator."

SALE OF FULL BLOODED NORMAN HORSES.

THE subscriber having relinquished farming, will offer at public vendue, at his farm in Moorestown, Burlington county, New Jersey, nine miles from Philadelphia, on Tuesday, the 20th of May next, his entire stock of NORMAN HORSES, consisting of two Imported Stallions, "Diligence" and "Buonaparte;" two Imported Mares—three full blooded Stud Colts, one, two and four years old—two full blooded Fillies, three and four years old—two Fillies by "Diligence," from a half blood Canadian Mare, three and four years old, and one Filly four years old, by "Diligence," from a well bred English mare, broke and kind to harness.

The undersigned deems it unnecessary to speak at large of the qualities of these horses, so much having been said of this particular importation, (which is believed to be the only one ever made to the United States,) in all the principal agricultural papers. In a few words, they are the Canada Horse, on a larger scale, combining the form, activity and hardihood of that well known race, with greater size and strength. "Diligence" has been a remarkably successful stallion; he has been exhibited at the Fairs of the Pennsylvania and New-York Agricultural Societies, where he was not entitled to compete for the premiums, but received the highest encomiums from the Committees. At the Fair of the American Institute, in New-York city in October last, he received the Silver Medal of the Institute.

It is expected that a large number of the colts of "Diligence" will be on the ground on the day of sale, some of which, no doubt may be purchased. EDWARD HARRIS.

Moorestown, Burlington Co., N. J., March 15, 1845—2t.

ALBANY SEED STORE.

THE proprietor is now receiving from his seed growers, a full and complete assortment of American Garden Seeds, all of which are selected with care, being grown from the best varieties of vegetables to be found in the country; also European seeds, plants and flower seeds from the best establishments in Europe and America.

Fruit trees of all the choicest kinds furnished to order at the lowest market prices, and warranted true as represented. Agricultural and horticultural implements of American and European manufacture. Also, Root-Slicers, Corn-Shellers, Straw-Cutters, &c. Those who wish to purchase or examine are respectfully invited to call.

W. THORBURN, Seedsman & Florist,
corner of Broadway and Maiden Lane.
March 1, 1846—3 t.

ADVERTISEMENT.

POUDRETTE of the best quality, prepared by the New-York Poudrette Company, may be had on application to the undersigned, No. 23 Chamber-street, New-York. Poudrette prepared by this company, was used in larger quantities in 1844 than during any previous season, and with very general success, as may be seen by reference to the numerous reports in relation to it now in my possession, a few of which may be found in the Cultivator for April The price is, as last year, $5 for three barrels, and $15 for ten barrels, or thirty cents a bushel in bulk at the Factory. ☞ Orders by mail, enclosing the cash, will be as promptly and carefully attended to, as if made personally, by

D. K. MINOR,
23 Chambers-street, New-York.
April 1, 1845—2t.

PERUVIAN GUANO.

THE subscriber will keep constantly on hand for sale, in large or small quantities, the best quality of genuine Peruvian Guano.
Price in single bags, weighing from 125 to 175 lbs., 2 cts. per lb
for half a ton to one ton, ... 2¼ " "
over one ton to five tons, ... 2 1-8 " "

A. B. ALLEN,
205, Broadway, New-York.
March 20, 1845—2t.

PREMIUM EAGLE, SUBSOIL, AND OTHER PLOWS.

THE subscriber having been appointed sole Agent in this city for the sale of the celebrated Premium Plows, made by Ruggles, Nourse & Mason, of Worcester, Massachusetts, now offers them for sale at the manufacturer's home prices. They are calculated alike for the Northern Farmer and Southern Planter, and embrace all varieties. Price from $3.50 to $11,50.

The great number of premiums which these plows have obtained at the most important plowing matches, and the universal satisfaction they have given wherever introduced, renders it unnecessary to particularise their merits. They are made of the best materials, are highly finished, and combine light weight and easy draft, with great strength and durability. Though the first price is higher than the common kinds, they do their work in so superior a manner, and with a draft so much easier for the team, that they are universally preferred where known. It has been repeatedly proved that a single pair of oxen, horses, or good mules attached to the Eagle plow, No. 1, in any reasonably friable soil, will easily turn a furrow of 6 inches deep by 12 inches wide. In addition to the above good qualities, being made of the best materials and highly finished, these plows last much longer than the common kind; they are consequently much the cheapest in the end.

Superior Hand and Horse Cultivators. These are made at the same manufactory. Price from $3 to $6,50.

A New Improved Drilling Machine. This is calculated fo sowing all kinds of seeds. Price, $10.

A. B. ALLEN,
205 Broadway, New-York.
March 20, 1845—2t.

SEED STORE AND AGRICULTURAL WARE-HOUSE.

OUR Spring supply of seeds is now ready, and we shall be happy to receive orders for Field or Garden Seeds, of every description, Black Sea, Italian and Siberian Spring Wheat, Barley, Peas, Clover Seed, Timothy Seed, Seed Corn, Shaker and other Garden seeds, &c. Also, a full assortment of farming tools selected from the best manufacturers in the country. Hoes, Scythes, Forks, &c. cheap by the dozen.

E. COMSTOCK.
Rome, Oneida county, March 1, 1845.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

Vol. II. ALBANY, JUNE, 1845. No. 6.

THE CULTIVATOR

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LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

Seven copies for $5—Fifteen copies for $10,00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

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OFFICE IN NEW-YORK CITY, AT

M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,

where single numbers, or complete sets of the back volumes, can always be obtained.

☞ This paper is subject to newspaper postage only, being one cent within the State, or within 100 miles of Albany, and 1¼ cent for any greater distance.

Foreign Correspondence.

LETTERS FROM MR. HORSFORD—No. IV.

Mayence—Frankfort—Mode of Traveling—Giessen—Prof. Liebig and his Laboratory.

Giessen, Germany, Dec. 1845.

Mr. Tucker—At Mayence, an hour of interval between arrival and departure, permitted me to glance at the most prominent objects. In the river, against the town, are some sixteen grain mills, which seem to be little floating houses, anchored, and their machinery carried by the current. Below the bridge of boats, commanding a fine view of the river and the lands beyond, is a vast red sand-stone pile, interesting as having been the head quarters of Napoleon, when here. It is now a mere store-house. Above the bridge, strong fortifications are going up. Two or three streets back from the river, is the cathedral, of which much was written in the guide books, but which I found it difficult to appreciate from the crowds of little insignificant buildings that surround it; as a specimen of architecture, it is quite lost.

A little farther on is the statue erected to the memory of the accredited inventor of the art of printing. It is of bronze, about 25 feet high—a figure robed, and with a huge bible under the arm—designed by Thorwaldsen. A few yards from it, on one side are wretched little antique buildings, under the shadow of the lofty cathedral; on the other, at no great distance, is the theatre, a splendid modern building; within a stone's throw are the walls about the city, destined to bear up cannon, and echo the peals of artillery; and here in the center, is a memento to the man, through whose invention the features of this ancient city are to be made known to residents of another continent—through which Luther revolutionized the world, and through which we may yet see Mayence strongly fortified without walls and a standing army.

From Mayence to Frankfort, a railway conveyance brings the traveller in an hour and a half. The road is level or nearly so, and the track supplied on either side, much of the distance with a row of trees. Frankfort-on-the-Mayn, is interesting as one of the free cities of Germany. Its streets are about as regular as those of Mayence or Cologne, which is about equal to saying that a right line seems to have had no charms for the practical architects and engineers of these towns. The sashes of the windows are in the form of a cross; being made of four lesser sashes, which, each by itself, turns upon hinges. It is quite impossible to have a window elevated or depressed by weights, since the walls are filled in with bricks. The most modern, as well as more ancient structures, are all arranged in the same way. This is one of the great *Fair* cities of Europe. Every traveller, passing not more than a day here, sees a great many things to be remembered for life. I will mention but two or three. In a narrow street known as the residence of Jews, resides the recently made Baron Rothschild. His dwelling is a palace. A little way from his magnificent dwelling, in a humble unobtrusive structure, still lives his aged mother, refusing to exchange the hearth stones that have become dear to her, for even splendors that few monarchs of the world can command.

Along one of the principal streets, among other displays of costly ware, the colored Bohemian glass, whose manufacture is kept a secret, eclipses every thing of the kind I have ever seen. Blues, carmines, yellows, greens and reds, that seem to have been stolen from rainbows, are impressed upon vessels of every form and use. I understand approximations to the excellence of the article are made in England.

Here also, as in many places on the Rhine, rows of acacia trees have been cropped, causing the branches at the terminus to grow abruptly outward. The cropping again of the branches produces a similar effect upon them, and the foliage is in this way rendered exceedingly dense. It seems to be admired, but I did not find my early estimate of the beauty of the free wide-spreading oaks of the Genesee Valley materially lessened, though driving through them more or less for a day or two. The inhabitants have appropriated a birch shrub to the growth of hedges. It becomes dense by frequent cropping, and seems to serve the purpose well, though much inferior to the hawthorn hedges of England. They compel the same shrub to grow into a variety of fantastic shapes, as ornaments for gardens and passage ways. In a park not far from the theatre, is a statue of Goethe, much in the style of that of Mayence. The poet was born here.

From Frankfort to Giessen, an *Eilwagen* or *diligence*, conveys the traveler in about six hours. The villages along the way are exceedingly numerous, there being one as frequently as one or two miles. The country between is a section of cultivated fields, separated from each other and the McAdam roads, by nothing except little basaltic or red sandstone land marks. There are no dwellings intervening between the villages; some of the towns are walled and garrisoned. The only object that particularly interested me along the route was a mode of evaporating salt. There seem to be springs, like those at Salina, from which the water is taken to the top of a frame work some thirty-five feet high, and then permitted to trickle through bundles of twigs, to vats below. This of course much concentrates the water, and renders less boiling necessary, an important point where wood is so scarce.

The Eilwagen seats just nine passengers; six in one apartment, and three in the other. The seats are numbered and taken in the order of payment. Luggage is locked up behind and strapped on top. The horses, lean, lazy creatures, are attached by rope tugs which are tied to the whiffletrees, and the driver with a trumpet, and a whip which he cracks perpetually, is uniformed in the most inconvenient apparel for discharging his duties—i. e. he wears a ponderous cloak, with an immense cape. His trumpet rings merrily out at certain unascertained intervals. This famous establishment is under the control of government, and over these beautiful roads, that would witness either in England or America, a speed of ten miles an hour, it lumbers along at the rate of five or six.

Giessen impresses the approaching traveler pleasantly. It is situated upon the Lahn, one of the tributaries to the Rhine, and scarcely equal to the Mohawk at Utica. The country around, reminds one of the valley westward from Little Falls. Upon basaltic peaks on either side are the ruins of castles or towers, seven or eight hundred years old. Between these and the Lahn, the cultivation is apparently excellent. Orchards of fruit trees, and of oak, birch and evergreen, beautify the landscape about, and beside the city of Giessen, not less than ten villages are seen across the valley and among the hills. The road enters the new town, in which the hospital, medical college, Liebig's laboratory and residence, and a series of beautiful edifices are situated. Two low stone structures mark the entrance to the city proper, entirely around which, a distance of I suppose a mile and a half, is a delightful promenade, occupying the site of the old ramparts. This promenade is skirted throughout with trees, and changing its direction every few rods, conducts one through a variety of scenes looking from Giessen across the valley of the Lahn, and out upon the basaltic cones, that in summer must be grateful indeed to students who have all day long been engaged with their books.

The old town has nothing to commend it to generous consideration. Boston is said to have crooked streets, and I have known a little surprise expressed at the serpentine character of some of the avenues of Albany; but they are straight lines compared with the narrow, irregular corkscrew passages of Giessen; and then the buildings upon a street are not parallel to any thing. With scarcely an exception, they are constructed of wood, filled in with brick, sometimes burnt, and sometimes unburnt, and plastered over within and without. The hotels have carriage ways through them, which permit the vehicles of travelers to be taken into a court-yard, where they may remain in safety. All the modern houses are entered from the back side; there being, with few exceptions, no marring the uniformity of the front, with so ungraceful an appendage as a door.[*] The pavements are excruciating, the citizens seeming scarcely to have known the luxury of a side-walk. Even the pulverized basalt, which is strown over the roads and streets, and ground to dust by the ponderous freight wagons, is swept away in a little time by the street scavengers, and preserved for purposes of manure.

To the vehicles of Germany, I intend to devote an entire letter; but I have already too long postponed an account of the mighty man whose genius has given such impulse to chemical and agricultural science—the teacher who has congregated in his laboratory, gentlemen from every kingdom of Europe, from Great Britain, the United States and Mexico—the man of whom something is known by every individual who speaks or reads the English language—who has been to organic chemistry, what Newton was to mathematics and astronomy—JUSTUS LIEBIG. My first interview with him was in his private laboratory. The reception seemed to me rather that of a military officer than of a scientific man.[†] He was manifestly engrossed with some matters of thought, and while he conducted me through the different apartments of his great laboratory, I could but feel that working and thinking were the characteristic employments here. A gentleman to whom I was introduced, spake in an under tone, as if conversation were contraband. Liebig turns to me and says, "You may converse in English two or three days, but not more." All this without a smile; decidedly a German mode, thought I, of impressing upon a stranger the necessity of study. I went to seek my lodgings rather depressed. A few days rolled away, and I was one of an audience of about a hundred students assembled in the lecture room awaiting the entrance of the distinguished man. The course of organic chemistry was about to commence. Gentlemen in great variety of costume, with note books, pens and ink or pencils were seated, conversing upon various topics, while before us, the assistant was just completing his arrangement of substances and apparatus to be employed in the lecture of the day. The hour of the lecture was on the point of striking—the murmur of conversation had subsided to a whisper—presently, the whole audience by one impulse rose, and I saw entering and bowing to the salutation, Dr. Liebig. He had just returned from England, where the attentions of the most learned, most wealthy, and most eminent had been lavished upon him, as they have been shared by no man in science in modern times. The published account of the great dinner at Glasgow, had reached Giessen. At Darmstadt, appropriate honors had signalized his return; and now, with the memory of all these things fresh in his mind and theirs, it was most interesting to look upon the scene which the lecture room presented.

The apartment in an instant was breathless, and the lecture commenced. What it was about, I was able to see from the formula on the black-board, and from a word now and then which I understood, but I was too much absorbed with the manner, to give much attention to what he said. He is perhaps two or three inches less than six feet, and stands quite erect, though a little rounding of the shoulders from much writing, labor and study, might be seen if made the especial object of search. His figure is slender rather than stout, which makes him appear taller than he really is. All his movements, and particularly those connected with demonstration, experiment, or illustration, are graceful to a degree I have not seen equaled in any lecturer. To see him hold in the same hand three glass test-tubes and an equal number of stoppers, while with the other he pours from vessels containing re-agents, at first a little excited my surprise. The portrait that to some extent is circulated in America, represents him much younger than he appears. Another, a lithograph, has recently been published, which is better; but no picture can be made of him. There is an expression of thought in all his attitudes and movements, which I could have scarcely believed upon the mere relation, and which the crayon cannot commit to paper; whether with the chalk and sponge, or with the index finger along the chin and nose, presenting that most singular of all German attitudes, or in gesticulation, or with apparatus, it is all the same. He is all mind—and it beams as distinctly through its corporeal tenement, as his chemical compounds are seen through the vessels that contain them. His detail of chemical decompositions and recompositions is clear and expressed without any circumlocution in terms, comprehended by every one. Occasionally these details bring him to review some investigations and theories of his own, and then a new animation is superadded to his ordinary bearing, and the illustrations are dramatic. His large eyes expand, and his features seem to glow. The gesticulations are sometimes so happy and so numerous, that I have fancied one might understand some of his themes even if he were unable to hear.

His notes consist of a few formula, written out upon two or three little strips of paper; and yet his lectures are as systematic as if elaborated with the greatest care. I have heard the remark made that Liebig is not an expounder of chemistry or an operator in chemistry, but is chemistry itself. I am inclined to think the remark encases a German idea, for it has quite eluded my humble American apparatus for sounding. Still, it is not difficult to see some of the probable data upon which this notion is founded. For example, he enters the laboratory, where he is surrounded by gentlemen engaged in a great variety of investigations. Here is one upon Benzoic acid, there one upon Hippuric acid, there one upon Allantoin; there one upon the Cyanogen compounds, here one upon a new gum, here one upon cheese, there others upon bread—and so on, all of them engaged in original investigation. He is ready to tell them the results for which they may look. Such is his familiarity with every fact in known chemistry, that its analogies are perpetually present, and enable him to premise almost any thing with regard to problematical investigations.

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[*] An association which in the New World, would be sought for at a distance from eating and sleeping apartments perhaps, and indeed uniformly disconnected from the residence, and carefully concealed in shrubbery, here salutes one as he passes into what we would consider the entry hall.

[†] Frequent personal interviews have shown me that the bearing observed on the morning of my first visit, belongs to the laboratory and the station of instructor alone. Every where in private life, either around his own board, or in assemblies with friends, or in skating on the Lahn, he is among the first in giving the impulse to pleasure.

He comes to a gentleman who has a new substance. The Professor directs him to bring a dozen test tubes, and perhaps an equal number of re-agents. The unknown substance is in a few moments distributed among the test tubes awaiting the reactions. He goes on through the laboratory repeating similar experiments with other gentlemen; and the next day when he comes round again, if a test tube has been removed from its place, he knows it; moreover, the gentleman who by mistake leaves a process for a night, which ought to have been concluded at once, not unfrequently finds it, on his return the next morning, removed to the Professor's private laboratory. This vigilant surveillance, this powerful local memory, this readiness in affording explanation in all difficult matters connected with chemistry, have induced the expression of the above opinion. However, Liebig has quite deprived the opinion of its poetry, for he has said, for the encouragement of all his pupils, that every fact in the science cost him labor to acquire and labor to retain; and though now ready to pronounce upon the history and properties of every known organic and inorganic compound, he has acquired this prodigious mass of scientific information, only with prodigious labor.

Respectfully yours, E. N. Horsford.

MR. NORTON'S LETTERS—No. XI.

Prof. Johnston's Lectures—Refuse of Distilleries—Sugar Cane—Silicate of Lime—Patent Manure—Guano Birds.

Lab. of Ag. Chem. Association, Edinburgh. March 19, 1845.

Mr. Tucker—I had the pleasure yesterday of attending the first of a series of monthly meetings, which are to be held by the Ag. Chem. Association in conformity with one of their rules as to the duties of the chemist, by which he is required to devote a certain portion of his time to giving advice to members of the Association wishing the benefit of his counsel, and to communicate both the results of inquiries in the laboratory, and of his journeys through the country. Prof. Johnston, untiring in his efforts for the good of the agricultural community, exerted himself so successfully to make this meeting interesting and profitable, that I cannot do better than to notice some of the subjects which were brought forward.

The report of proceedings during the past month, was opened by an account of lectures which Prof. Johnston had delivered at Linlithgow and Colinsburgh. I heard both of these lectures, and saw the eager and delighted audiences who pressed forward to catch every word. Applications have since been made requesting their publication.

In mentioning some of the subjects that have been lately investigated in the laboratory, the first touched upon, was the refuse liquor of distilleries. Now distilleries in *our country*, I am happy to say, are diminishing in number, yet it is interesting to know that the residue after the first distillation, contains substances that are highly nutritious, and also valuable as manures. A large quantity of phosphate of lime is present, and constitutes much of its value. The "dunder," or refuse from the distillation of rum in the West Indies, has also been examined here, and found to be quite valuable. In connection with the same subject, was analysed the ash of the sugar cane, and the intelligent planters, instructed by the result, are now effecting a great saving by the restoration of it, as well as the dunder, to their land.

In my last letter, I made some remarks upon the silicate of lime. Prof. Johnston at this time, brought forward the same subject, illustrated by an analysis of a slag sent from one of the iron smelting furnaces in Ayrshire. Mr. Cameron, fourth assistant in this laboratory, analysed it with the following results:

Alumina,	25.36 per ct.
Lime,	39.47
Magnesia,	22.75
Silicious matter,	32.19
	99.77

The quantity of lime, it will be noticed, is very large, but being in the state of silicate, it will therefore not be immediately available for the growth of plants, especially while it remains in hard masses. The gentleman who sent it says, however, that it may be crushed for a shilling a ton. In this finely divided state, it may be applied with much advantage, as its decomposition, constant, though slow, will furnish an unfailing supply of lime. Of course it should not be compared with limestone or marl, but it may be very valuable where neither of the other two can be readily obtained. It might be laid on in large quantity without fear of injury to the land.

The Cornwall Patent Manure, and the Salduha Bay Guano, which I also mentioned in my last, were commented upon, and the unfounded pretensions of the Cornwall manure exposed. Mr. Fromberg, the first assistant, has just analysed a sample of guano, from a cargo just arrived from Possession Island, a new locality. The following is his result:

Water,	12.72 per ct.
Organic matter and ammoniacal salts,	42.60
Common salt and sulphates and phosphate of potash and soda,	15.11
Phosphates of lime and magnesia,	15.95
Carbonate of lime,	trace.
Insoluble silicious matter,	13.38
	99.76

This is by no means equal to the best samples from South America or Ichaboe, but will compare well with some of the inferior cargoes. It is probably at present prices, worth about £6 per ton.

As guano begins to fail, they are bringing home the bodies of the birds themselves. Some of them were lately sent here, in order that their value as a manure, compared with that of guano, might be determined by Prof. Johnston. They had lain buried for years under the guano, and in appearance resembled the smoked geese from the Shetland Islands, sold in the shops here. They are quite saturated with ammonia, and their large bones add much to their value. They would require chopping into small fragments before depositing in the soil, and in consideration of this serious drawback, Prof. Johnston considers them worth about £4 per ton, or nearly $20. Were it not for this difficulty, they would be worth as much as guano itself.

The remainder of the time alloted to the meeting was occupied by a discussion as to the best means of preserving the immense quantity of manure carried into the sea by the sewers of the city.

The next meeting is on the 9th of April, and a most interesting list of subjects is proposed. Of this I may also give you a sketch in a future letter.

Truly yours, John P. Norton.

MR. NORTON'S LETTERS—No. XII.

Edinburgh, April 27, 1845.

L. Tucker, Esq.—It has occurred to me that in addition to my own letters, a series of practical papers from one of the farmers of the Lothians, a body of men confessedly surpassed by none in any part of the world, might be both interesting and highly instructive to the readers of your paper. Mr. Girdwood has kindly volunteered his services, and I may say without flattery, that very few, even in Scotland, are so well qualified for such a task. I cannot help saying that I sometimes disagree with him in theory, as for instance in the present article, I would have based the theory of rotation upon the physical condition as well as the inorganic constituents of the soil, but in practical matters I would bow to his decision. Without further preface, I am sure that your readers will be benefited by the advice of one who unites the practical wisdom of the Lothians to the enthusiasm of early manhood, and who is making himself also a proficient in chemical science as the means of yet farther advance in his favorite pursuit. Truly yours,

JOHN P. NORTON.

ROTATION OF CROPS.

Featherhall, Mid-Lothian, Scotland, April, 1845.

To the Editor of the Albany Cultivator:

At the request of my valued friend Mr. NORTON, I propose, should my time permit, and your columns afford room, to give you a series of short papers on the Agriculture of the Lothians, in the hope that they may prove interesting to a portion at least of your numerous readers.

I am unwilling to suppose that there is nothing in the experience of a district, so long famous for its agriculture, that may not be studied with profit, even by individuals possessed of great skill and knowledge in that most useful of arts; but at the same time I am aware that the most valuable parts of our system, may have already been transplanted, and may even now be flourishing in the United States, with all the luxuriance which a virgin soil imparts. Had I been ignorant before, the perusal of some late numbers of your excellent periodical must have convinced me that your countrymen are applying their favorite maxim, "go ahead," in a most emphatic way to this branch of industry—a course in which all men must wish them good speed. Having these considerations before me, it is with considerable hesitation, that I venture to make my appearance in the columns of the "Agricultural Literature" of America.

Trusting to your indulgence, I shall therefore devote this letter to some introductory remarks on the rotation of crops. I am fully aware that the sanguine expectations of some, as to the application of chemistry to agriculture, lead them to believe, that at no distant day, rotation of crops will be numbered with the things that were—that the finger of science will point out to us, not only the substances removed with each crop, but also how we may replace them in an economical manner. I am too ardent an admirer of chemical science to doubt its power to do this, but I cannot believe that it will very materially affect the axiom that a sound and philosophical system of rotation, is the basis of all judicious and profitable agriculture; for even were we so far advanced in chemical knowledge, as to be able to grow luxuriant crops of wheat year after year, on the same land, without deteriorating it, it is evident that the supply of this sort of grain would soon exceed the demand. From thus being the most remunerating of crops, owing to the limited extent of land on which it can be grown, it would gradually become less so, while the supply of the other corns which are less remunerating, owing to the fertility with which they can be grown on moist land, would be shortened, and the price of course enhanced; and when that point was reached, at which the profits were equally balanced, the further application of the principle would be arrested. I apprehend therefore, that the legitimate occupation of chemistry, is to point out to us how we may avail ourselves of the large amount of inorganic substances laid up for us in our own soils, by supplying those of which they may be in want—to show us how to draw upon nature, so that our drafts may be honored—how to pay the interest, that we may have the use of the principal, rather than that we are to look upon our fields, as a mere extension of space—the floor of a manufactory, into which we are to bring from without, *all* the raw materials required for the production of the substance we propose to obtain.

The theory upon which the rotation of crops is based, is, that different plants require different series of the inorganic substances contained in the soil, for their growth and development; but as these substances require the action of tillage and the *seasons* to reduce their particles to that minute state of division, in which they can be absorbed by the spongioles of plants, therefore the less frequently those plants which require the same series of inorganic substances are reared on the same soil, the more copiously will they be supplied with properly prepared food, when they are reared.

The following table from the Transactions of the Ag. Chem. Association of Scotland, shows the amount of inorganic substances contained in three different soils, and that a fertile soil contains at least 9 or 10 of these substances.

	Very fertile.	Fer. with manure.	Barren
Organic matter,	97	50	40
Silica (in the sand and clay,)	648	833	778
Alumina (in the clay,)	57	57	91
Lime,	59	18	4
Magnesia,	8½	8	1
Oxide of iron,	61	30	81
Oxide of manganese,	1	3	½
Potash,	2	a trace.	a trace.
Soda, } Chiefly as common salt,	4	0	0
Chlorine, } Chiefly as common salt,	2	0	0
Sulphuric acid,	2	½	0
Phosphoric acid,	4½	1½	0
Carbonic acid combined with the lime and magnesia,	40	4½	0
Loss,	14	0	4½
	1000	1000	1000

Now it must be evident to every one, that if we go on for a length of time raising any particular crop which carries off a larger quantity of any of those elements than the relative proportion of it in the soil, we must by and by reduce the fertile soil to the state of the barren one. As an example, we may take potatoes, which contain a large quantity of lime, magnesia, potash, soda, and phosphoric acid. Now it will be seen that these very substances are almost all wanting in the barren soil; we may therefore conclude that if we go on raising potatoes year after year without adding the whole of the substances removed, we will reduce the fertile to the state of the barren soil.

From what has been stated, it must be obvious that a proper course of rotation, is that which removes equal relative quantities of the different substances composing the soil, and which places those plants which feed on the same substances, at as great distances from each other in the rotation as possible. This holds good even in the vicinity of large towns, where, from the facility of obtaining manure, a large portion of, if not all the substances carried off, are returned to the soil; as by adhering to a judicious rotation even in this case you present such a profusion of aliment to the different classes of plants, as to convert *good crops* into *luxuriant ones*. In forming a correct judgment of any course of rotation, we must also take into consideration the facilities it affords for eradicating weeds, and keeping the land in that state of absolute freedom from them, which, while it adds profit, so it ought to be the pride of every agriculturist.

In my next, following up this subject, I shall give you some account of the rotation of crops as practiced in the different districts. I am, sir, your most ob't serv't,

JNO. GIRDWOOD.

MR. MITCHELL'S LETTERS—No. VI.

Island of Jersey—its Agriculture and Exports—Jersey Cows.

St. Saviour's Parish, Jersey, March 1, 1845.

LUTHER TUCKER, ESQ.—Jersey is like a garden; the soil rich, the tillage thorough, the enclosures small, and surface most various. I have not yet seen a single field of more than half a dozen acres, nor one of more than three, presenting the same plane to the sun. The fences are high hedge rows, about twelve feet broad at bottom, by four or five at top, covered with green turf and ivy, and shooting up tall elms of eighteen inches diameter from their tops. The law obliges every man having such trees along the south side of a neighbor's enclosure, to keep them lopped—the consequence is, half the hedgerows bear the strange growth, of a tree without limbs. The farms are small, and farmers many, who in most instances, own the lands farmed. Jersey laws, unlike the English, provide for younger brothers, and at the death of a father, makes one farm into many. The size ranges from five to forty acres. The lands grow chiefly apples, potatoes and grass. The agricultural exports are cider, potatoes, wheat and cows. The orchards are scattered thickly over the Island; scarce a house being without its perquisite of cider trees. The trees are small, and covered with a green moss, the consequence of the humidity of the climate; I observed the same of the orchards of Devonshire. A great deal of cider is drunk, and many thousand hogsheads shipped annually to England. Their best apples for eating, are much inferior to ours, though superior to any I saw in England. They are fair and beautiful to the eye, but lack flavor and life; the best I have seen is a Pearmain, of flavor very like our Seek-no-further, but inferior to it. They sell at a penny and a half-penny each. Pears, I am told, are of unusual goodness; they have not only the best French varieties, but one peculiar to the Island, of extraordinary size and rarity, selling in its season, for half a dollar each. The cider (I have drunk only the new made,) is very rich. The mode of making quite similar to that with us; as with us, there are here various nostrums for preserving its sweetness.

The potatoes are excellent; large, fair, very white and mealy when boiled, and of the best possible taste; that is, no taste at all. Their crops are large; great numbers pass along the street every day for shipment to England, and various other parts. Both their excellence and abundance are owing, I think, in a great measure to the peculiar culture. An old green sward, is in the winter run over with an exceedingly light furrow, just sufficient to turn the turf. This is left for a month or more exposed to the weather; the field is then cross-plowed, after a very different fashion. To use the words of my informant—"We first skims it, and afterwards we puts the big plow, and ten or twelve horses to her, and takes it down about a foot." The plows are monstrous; very strongly made of wrought iron, and perform the work most thoroughly; their operation differing from the subsoil plow in turning the decaying turfs to the bottom—thus leaving a light deep bed for the tubers. The gearing of the plow is singular, the horses being attached by means of a short rod, and pair of wheels. No small farmer, indeed none on the Island, could command sufficient force for such plowing. But by bringing together the draft horses of a dozen neighbor farmers, the work is effected. This interchange of work is very prevalent in harvesting, as well as breaking ground. The potatoes are invariably cut for seed—dropped in a furrow and covered by a lap of the furrow; planted in drills; and the digging is effected by means of a double mold-board plow. They sell now for exportation, at from 40 to 50 cts. per bushel. They are not, like crops above ground, subject to tithes.

Hay is of good quality, and bears a high price. Nearly all the valleys and lower grounds are kept in grass; and in those which are irrigated, even thus early, (1st March,) there is a cut, longer and thicker and stouter, than in a New-England door-yard, at 1st of June.

All the wheat raised in Jersey is exported. It is explained from the fact that imposts are not known here, and produce of the Island goes to England duty free. The consequence is, farmers find it most profitable to ship their wheat for English prices, and to return for their own consumption, American flour, from the English warehouses, or to supply themselves with bread stuffs from the continent. Absence of duty enables the farmer to purchase other provisions proportionately cheap. Thus, best of Santa Cruz sugar is 7 to 8 cts. the pound, &c. It might appear that advantage would be taken of the privilege of free shipment of Jersey grain to British ports, to mix foreign produce with home stores, and so multiply profits. This is strictly guarded against. Every farmer is obliged to report at the opening of each season, the number of acres he means to put to wheat, barley, &c., to the Island authorities, with an estimate of the probable crops; and any falsification is punished by heavy fine.

Jersey cows are famous; they are better known in England and America as the Alderneys. There is but trifling difference in the breeds of the two Islands; if any, it is decidedly in favor of the Jerseys, in point of size, general appearance, and milking properties. About two thousand are annually exported from this Island; and remembering that the Island compasses but about 40,000 acres, you will conclude, with me, that some roots are "made," (this is their term for growth,) some hay is made, and some money is made. The cows are of middling size, small heads and necks, short crooked horns, clear, intelligent eyes, with small feet, high hip bones, heavy quarters, large bag hanging low; their color is a yellowish brown, changing to deep chestnut along the line of back, and frequent white spots. They are kept stalled in the winter, save an occasional turn out to grass or turneps, upon a pleasant day, at which times they are tied to a stake driven in the ground. They are always kept tethered in the field, summer or winter. Either head tied to foot, or to tree or stake. Various reasons are given; the best, they do not get at the apples, they consume less feed, and (a doubtful one,) they give more milk. They milk them until within a short time of calving, and feeding on parsneps, turneps, and hay. In summer they are milked three times a day. The heifer calves, in consequence of the demand, are all raised. The calf is not suffered to be with the cow at all, but fed upon milk and slops. No cow can be imported into Jersey from any quarter, under a heavy penalty. This is to guard against corruption of the breed; of which Jersey people are over proud. Talk to a farmer of the merits of any English breed, and you will bring a torrent of his Island *patois* about your ears, less tolerable than the bleating of his motherless calves.

Veal begins now to appear in the market. I have tasted none but French, which was miserable. Butter is beautiful. The dairies are above ground; milk is set in earthen pots; in hot weather, suffered to sour before it is skimmed; butter is never worked with the hands. It is made into stamped pound cakes, which bring about 25 cents each. A curious custom prevails in the market, relating thereto; twice a week an examination is made by proper officers, of the butter; if any falls below weight, even so much as half an ounce, it is taken away and given to the poor. The consequence is, the pound cakes range an ounce *above* weight.

Manure is saved with care; there is little draining and little needed. Irrigation is general. There is no lime, or marl, or gypsum, or peat, upon the Island. But, says an old historian,—"The winter *oraic* (our Cape Ann rock weed,) being spread on the green sward, and after, buried in the furrows by the plow, 'tis incredible how with its fat unctuous matter it meliorates and fertilizes the earth, imbibing itself into it, softening the clod, and keeping the roots of the corn moist, during the most parching heats of summer." I should like to tell you more of Jersey, but this is the end of my sheet.

Yours truly, D. G. Mitchell.

KERRY COWS.

Great yield of Butter.—In the rough and mountainous parts of Ireland, there is a small race of cattle called the Kerry breed. They are considered indigenous to the country, and are much esteemed for their good qualities—especially for the dairy. From the descriptions and engravings given of them by writers, particularly by Youatt, and by Low in his "Illustrations of British Cattle," they appear to be a beautiful as well as hardy and useful variety. Mr. Youatt says—"The cow of Kerry is truly a poor man's cow, living every where, hardy, yielding for her size abundance of milk of a good quality, and fattening rapidly when required."

Mr. Colman, in his late speech at Sir Charles Morgan's cattle-show, spoke of the Kerry cows as follows:—"He found in Ireland a dairy consisting of five dairy cows, from which the owner had sent to Liverpool, twenty-five firkins of butter, averaging 64 lbs. a firkin, and that was 320 lbs. of butter to each cow for the season. He conceived a stock of dairy cows worthy as much attention as a stock of fat cows. He believed from observation, and observation not confined to a few years, that in many localities, the farmer's best property, would be a good stock of dairy cows." (Report of Mr. Colman's speech in the London Farmer's Journal, Dec. 30, 1844.) In the Journal of the Royal Ag. Society, we find an account of a trial made between three Ayrshires, three Galloways, and three Kerry cows. The Ayrshires gave rather most milk, but the Kerries exceeded them all in butter.

Domestic Correspondence.

RABBITS.

Mr. Tucker—In your last November number, you intimated that if any of your readers had had experience in breeding and rearing rabbits, you would like to hear from them. The result of my experience you can have in a few words.

A few years since I purchased a pair in the month of May, and before the next winter, the doe produced twenty-eight young ones that lived and were fatted, besides a number of others that died. Since that, I have kept a supply all the time, and can assure your readers that a fat rabbit, stuffed and roasted, is not bad to take at any time. One rabbit has about as much meat as two full grown fowls, and the trouble of taking care of them is very trifling. Finding that, like some bipeds, they were sometimes disposed to make a bad use of their liberty, I constructed a pen of rough boards 10 by 14 feet, and 3 feet high, with a floor and roof. This I divided into three apartments, and put in them a number of tea, candle and glass boxes, with a hole in each large enough to admit a rabbit, and sprinkled in a little hay or straw. For food, I give them through the summer little else but the weeds of the garden; and in the winter, the refuse beets, carrots and cabbages, with a little bran or oats. In this way, attended mostly by children, to whom they afford much pleasure, they grow fat and multiply surprisingly; and their skins supply all the little girls with pretty muffs and various trimmings for their clothes. On the whole, Mr. Editor, I would recommend the keeping of a few rabbits as a source of profit and pleasure; and especially as the outlay, the cost of food, and the trouble, are hardly worth naming. The breeding of them on a large scale for market, might doubtless be made profitable, for the supply is seldom equal to the demand.

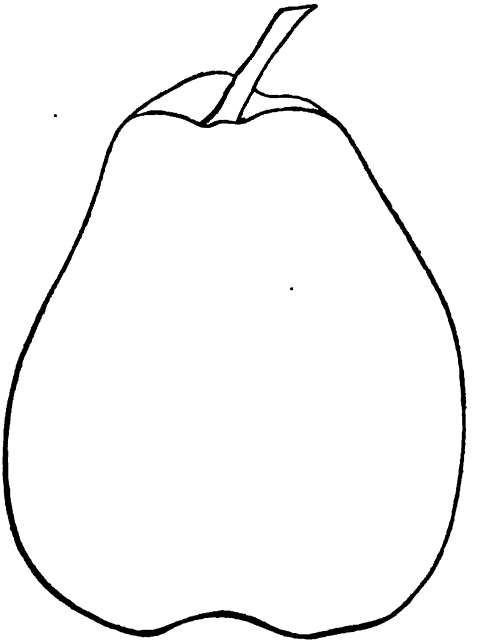
Your correspondent, W. J. Powell, of Marshall, Michigan, inquires in your January number, what course of treatment will produce a large crop of grass on lands in his vicinity, "*admirably adapted to the growth of wheat and other grains.*" I think the answer may be given in a few words, *sow a much larger quantity of seed.* A soil good for wheat, possesses all the constituents for producing an abundant crop of grass; and he admits that clover and timothy readily take root and become very tenacious in the soil. Sow your seed plentifully then, and other requisites being attended to, a large crop is ensured. H. A. P.

SEEDLING PEARS.

Hon. H. W. Edwards, late Governor of this State, having in his garden some seedling pears of great excellence, was requested by the Pomological Society of New-Haven, to give an account of the process which he pursued in obtaining them. He accordingly read to the Society some memoranda made by him in 1839.

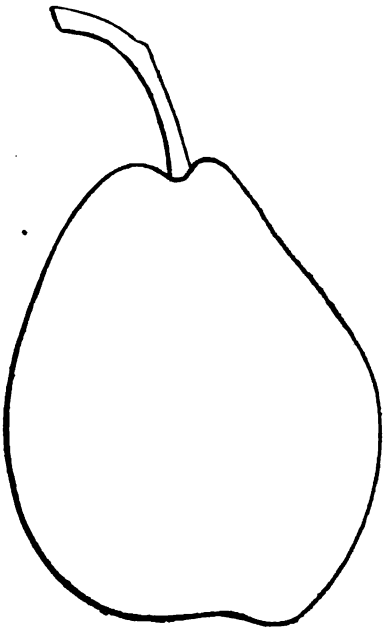
The success of his experiment is well calculated to encourage others to "go and do likewise." I propose to lay before your readers a few of the details of Gov. Edwards' management, as given by him, and a brief description of some of his pears, furnished mostly by the kindness of Dr. V. M. Dow, Secretary of our Society.

The seeds were planted in the summer and fall of 1817, and spring of 1818; some when the fruit was ripe, some late in the fall, and some early in spring. In some instances, the core was planted with all the seeds in. *He planted none but the seeds of good pears.* They were inserted from one to two inches deep in the earth. No particular difference was observed in the growth, arising from the difference in the time or manner of planting. When the whole core was planted, the trees came up in clusters, and soon after they came up were transplanted to a few inches from each other, in rows far enough apart for the hoe to be used. All the trees were transplanted at two years old to about a foot apart. The ground was kept clear of weeds, and manured occasionally. At six years old, about 25 were transplanted, the 8th of March, to different parts of the garden, where they now stand. About 20 were left in the nursery. Some of the trees commenced bearing in ten years from the seed; others have come in bearing in succession up to 1844. No two trees bear fruit exactly of the same kind, and no one tree bears fruit exactly like any other known. In some instances, the resemblance is sufficient to indicate their origin; and when this can be traced, they prove in some cases superior, and in others, inferior to the original.



1. Edwards.

Ripe about the 1st of September, weighs 7 ounces. Flesh rich, juicy, half-melting, high flavored and sweet; of first rate excellence among pears ripe at this season, considering its size and qualities together.

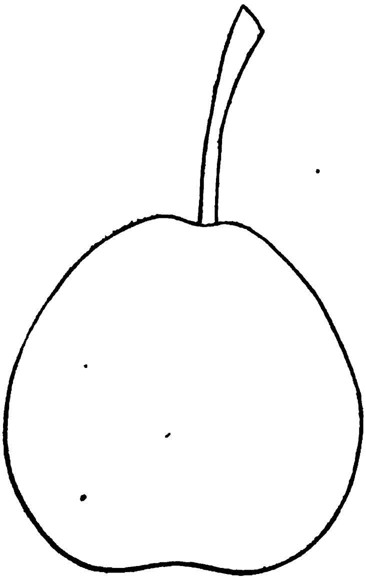


2. Henrietta.

2. Henrietta.—Ripe about the first of September, weighs 3¼ ounces; color green, with sometimes a coppery blush on the sunny side; juicy, melting, sweet, sub-acid & rich. Skin smooth and form regular. A first rate pear.

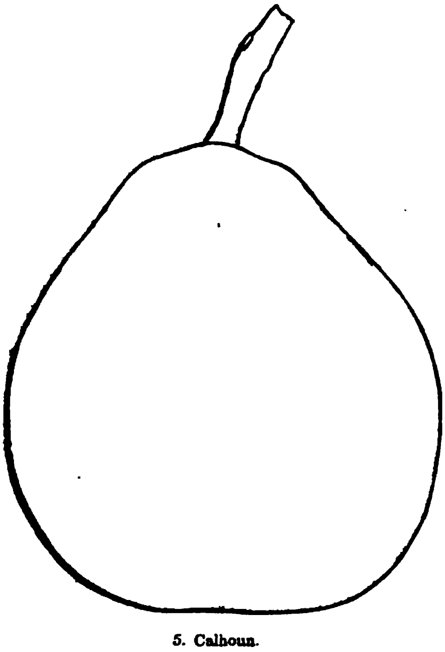
3. Citron. Ripe from 1st to 15th of Septem. weighs 3 to 5 ounces; larger than the Seckel pear; flesh melting, juicy, very sweet and

delicious; skin deep green, cheek slightly ruddy next the sun. It does not change color much in ripening, hence it is difficult to know when it is ripe, except by handling. The fruit will be insipid if the tree is too much loaded. For these two reasons, the tree should be kept down so that the fruit can be *thinned* when small, & *felt*, at the time of ripening.—With attention to these circumstances, we may have a pear exquisitely delicious. It does not keep long after it is mellow.



3. Citron.

4. **Cantelope.**—This is not among the best, but has qualities that are desirable. Ripe, October and November; color lemon yellow; weighs 5 ounces. Fair, round and regular; flesh tender, rather breaking than melting; fine grained, sweet, juicy, but not high flavored. The tree is prone to bear too abundantly. If the fruit is not thinned, it will be almost tasteless. In a hot summer, with few pears on a tree, the fruit will be very fine for the table. But its special excellence consists in being a superior baking pear. It does not decay at the core.

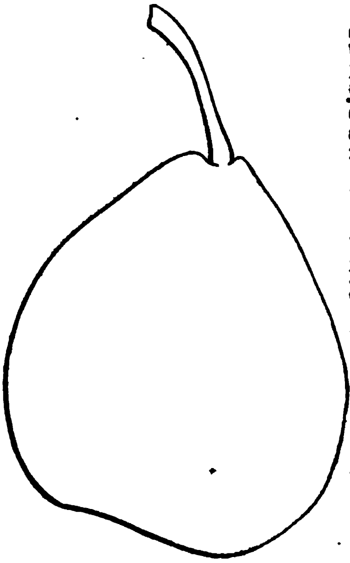


5. Calhoun.

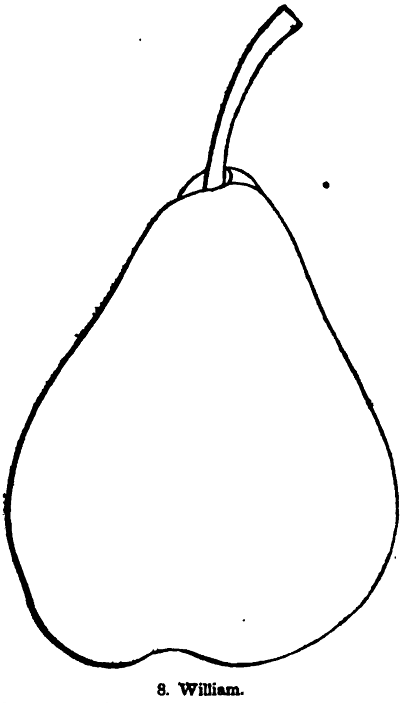
5. **Calhoun**—Ripe September to November; weighs ¼ ounces; color greenish yellow, sunny side inclining o orange, with the larger end spattered with russet; flesh weet, rich, sprightly, and high flavored, scarcely any acid erceptible, very juicy and melting. A first rate pear.

6. **Polk.**—Came in bearing this last summer; ripe ptember 1st; about the size of the Citron, above described; resembling in form a Bergamot. Flesh juicy, melting, sub-acid, sweet and rich; quality first rate.

7. **Henry.** Ripe fore part of September, weighs 2¼ ounces; color green, turning to yellow, with a coppery blush. Flesh juicy, melting and exceedingly rich and sweet; not surpassed by any in richness. It seems inclined to crack; if it recovers from that tendency, it will rank as a first rate pear.



7 Henry.

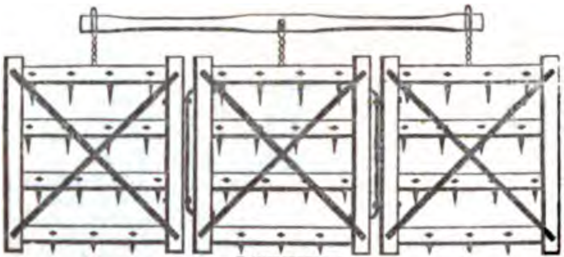


8. William.

8. **William.**—Ripe about the 1st of September; weighs 3¼ ounces, color pale yellow, dotted with red and brown. Flesh sweet, juicy, melting and rich. A lover of sweet pears would pronounce it first rate.

None of these seedlings are remarkable for their size. In flavor and other desirable qualities, there are five, perhaps seven, varieties that are to be placed in that class of older sorts designated as *first rate, excellent, very fine;* and there are seven that may be classed with those termed *good, fine, superior.* Most of the remaining varieties are better than those commonly cultivated about the country. This experiment has resulted in the production of first rate pears in much larger proportion than is common in the experience of others, including Professor Van Mons; and shows, I think conclusively, *the great advantage of sowing the seeds of the best of pears only,* which was the course pursued by Gov. Edwards.

New-Haven, Ct., Feb. 1845. **Noyes Darling.**



F. WORCESTER. Sc

COMPOUND CENTRE-DRAFT HARROW.—Fig. 60.

Strong, light, convenient and long enduring, covering a space nine feet in width, yet under the easy management of a lad and span of horses, these harrows must supersede the use of all others, for the purpose of seeding grain or grass, on lands cleared from obstruction, and of large extent, performing the operation in one quarter part the time, and with one-fourth the labor.

They are worked in sets of three, but can be separated by unscrewing a couple of bolts, so as to form a pair, or three separate harrows, in a minute or two of time. Each harrow covers a space three feet square; the teeth, 17 in number, are placed in cross bars, so that the harrows follow in straight lines, and not *diagonally*, as is customary, and almost universal. No two teeth follow in the same track; and although placed at nine inches distant in the bar, to permit those clods, which are not broken by the first concussion, to pass through and be operated upon by each succeeding row of teeth, without choking the harrow, yet the interstices will be found to measure two and a half inches only, at regular distances, with the surface of the land as perfectly raked as that of the garden, affording the finest bed for the smallest seeds. The most uneven surface is operated upon by these harrows, the joints permitting them to descend into hollows, and to clasp the elevated portions without lifting, choking, or dragging the soil into heaps; whilst among the remains of vegetable matter, too often left exposed on the surface by badly constructed plows, they make their way, requiring little labor to keep them free, the driver lifting the middle harrow by a line fastened to it, which he carries in his hand for the purpose; and guiding the team by lines fastened to the outside of each bridle, the animals being kept at some distance by a jockey stick, he will have the means of attending to this as well as seeing that the harrows are kept perfectly square to the work; which is indispensable to their proper performance; for by dragging diagonally, the teeth will be found to follow in the same track.

It is remarkable, that while improvements innumerable have been made in the plow and agricultural implements in general, the harrow has remained the same for ages. In a late visit to the Patent Office in Washington, amidst scores of other models, not a single one of the harrow was to be found, nor did it appear that any had been patented; the worthy Commissioner expressing surprise at the fact. Those in common use, operate by force, and compressing the surface so as to close the pores of the soil, when the pressure of the atmosphere falling on it, it is rendered in a measure impenetrable to the roots of plants, as well as to the fertilizing influences of heaven. The object of the present improvement is, to lighten the soil, after the manner of the garden rake, by which the seeds are covered, and the land pulverized, in a manner quite different from all others; a single tining after the seed is sown, and another, crossing the land, being generally found all-sufficient for every purpose; much however, depending on the manner in which the land has been plowed; but if that has been done by the centre-draft plow of Prouty & Mears, which operates by breaking and pulverising the land, after the manner of the *spade*, the Compound Centre-Draft Harrows will then be found to leave the surface, with the neatness and precision of the *garden rake*—a perfect spade-labor business, which is "the perfection of good husbandry."

Philadelphia, 1845. JAMES PEDDER.

MAKING SUGAR FROM CORN-STALKS.

MR. TUCKER—A short time since I met with Mr. Adams' account of his experiment in manufacturing corn-stalk sugar; undertaken from the inducements offered by the New-York State Ag. Soc., and for which they awarded him a premium of one hundred dollars. I was much interested in its perusal, as it strongly reminded me of the difficulties and discouragements experienced in the earlier stages of the same inquiry, when experiment was the only available source of knowledge to which we could turn for assistance in our exertions. As I have pursued this subject with unabated confidence and reasonable success, since its commencement, my experience may perhaps be useful to Mr. Adams and others engaged in perfecting this important and interesting manufacture.

Before proceeding further, I must find a little fault with your Agricultural Society. Its premium was offered for the "maximum quantity of sugar made from an acre of northern corn." It appears to me that the great object to attain, is a plan by which sugar may be made *profitably*. It is very possible to expend more labor in the manufacture than the article would be worth; such a plan would of course be worthless practically, whatever might be the *amount* produced. Secondly, in planting corn for sugar, I should prefer seed that had ripened in a more southern latitude, as less liable to run to ear early in the season. In raising this crop, the great end to secure, is the perfect growth of the plant in every particular, except in the formation of its seed. No plan ever yet tried has succeeded completely in effecting this object. Those stalks which (from some cause yet unknown) have shown no disposition to form grain, are always far more juicy, and yield a much larger quantity of sugar, than those from which the ear has been removed. As soon as this hitherto accidental condition of the plant is brought by persevering efforts, within our control, I confidently expect that the corn-stalk will not merely rival but exceed the sugar cane in the amount of saccharine matter it will yield. The past season, a small lot of corn was planted in rows three feet apart and about six inches asunder in the row. As soon as the tassels appeared they were pulled out. The result of this experiment was encouraging, but not entirely satisfactory: another lot of corn growing within one hundred yards, was allowed to tassel, and this perhaps caused the partial failure. In order to try this plan fairly, the corn should be grown distant from any other, and the tassels pulled out before any of their pollen has been shed. Very thick planting, in order to prevent earing, is objectionable, as it renders the crop more liable to be prostrated by storms: and the stalks being small, the labor of handling them is increased; they should not be less than one inch in diameter, or about the size of broom handles; the distances in planting in order to produce this size, will vary according to the quality of the soil. Whatever plan is adopted, to prevent earing, it must be attended to, or the sugar of the stalk will be expended in the formation of grain.

When the corn is ripe, (which will happen about the usual time of cutting corn) cut off the tops at the point where the ear generally forms; the leaves on the stalk below this, are few in number and mostly dead: they may be sufficiently removed by simply passing the knife from top to bottom on each side of the stalk. By pursuing this plan, the formidable labor of stripping the stalks, which has been complained of, is greatly lessened, and the whole business put in a practicable shape.

The method of curing "tops and blades" is so well understood by farmers, that nothing need be said about it here. Experience has proved that the extras of this crop, (the tops, blades, crushed stalks, &c.) are worth more, when properly secured, than the whole labor required in growing and manufacturing, provided this labor is economised, in the way pointed out. In the list of plants cultivated for forage, there is not in the whole world, another one that is equal to this in the amount of nutriment, which it contains. It is well worth cultivating for the fodder alone; the stalks therefore cost nothing; every farmer may see from this, how (if he chooses,) to steer clear from his grocery bill.

The mill for grinding, best suited for the farmer, is a simple one, and need not cost more than $10.

The boiling apparatus should consist, 1st, of two defecating kettles; they may be of cast iron, and capable of holding as much juice as the mill will press out in 15 or 20 minutes; these kettles must be placed so that a quick and strong fire can be made under them; and so arranged that they can be emptied at a moment's warning. 2d. Two or three evaporating pans; a single sheet of Russia iron, bent up six inches at the sides and ends, and riveted, makes an excellent pan of this description. 3. Two copper or tin pans for finishing; these should be flat bottomed, six inches deep, and so arranged that they can be removed from the fire instantly when the charge is finished. They should never have much over two inches in depth of syrup placed in them at one time, and should each be of such a size that a charge of three or four gallons will not fill it deeper than this.

The difficulty of manufacturing sugar to the *best advantage*, has always been considerable. This has grown out of the foreign substances always found connected with it in the juices of plants. Sugar is one of the most easily decomposed substances in nature. The juice of a plant may be very rich in sugar, yet when slowly evaporated, the residue will not show a single trace of saccharine. In the process of vegetation, as the plant approaches maturity, sugar is changed into starch. In the germination of the seed, a contrary change occurs, and starch is converted into sugar. I took a portion of sprouted corn, and macerated it in water until the sugar was extracted; the liquid then strikingly resembled both in taste and smell, the juice of corn-stalk after it has been clarified; it was then set to evaporate over a slow fire; it gradually grew darker in color, and in a short time it appeared very much like beet juice. Before the evaporation was finished, every particle of sugar had disappeared, and from being sweet and pleasant to the taste, it had become black, bitter and nauseous. The same experiment was repeated under the same circumstances, except that a small portion of starch was added to the water; in this case, the sugar was not decomposed, but retained its distinctive qualities throughout evaporation. The chemical reasons for this, it is needless now to discuss; the simple fact, and its application, are sufficient for our purpose. Wheat flour consists principally of starch, and was used with good success, though perhaps pure starch would be better. One pint of flour was mixed with two gallons of skim milk, and one pint of this mixture was added to 30 gallons of juice. These proportions are not given as best, for many more experiments will be necessary before they can be determined accurately.

As the juice comes from the mill, it should run into a receiver which will hold just enough to fill one of the defecating kettles; while in this receiver, the mixture of flour and milk, and also the necessary quantity of lime water must be added and well stirred in. It is then poured at once into the defecating kettle and heat applied; a very firm thick scum is by this means separated, and the juice becomes clear; it is next run through a flannel strainer into one of the evaporating pans, and the boiling kept up briskly. Take a shovel full of red hot coals from the furnace, and after blowing the ashes off, throw them into the pan: as you put in more juice, add more coal, as the pan becomes filled with coal, take out that which has been in longest. From this pan the juice is run in succession through the others, (straining it when convenient,) until it is finished. WM. WEBB.

Wilmington, Del., March 14, 1845.

WESTERN RESERVE MAGAZINE OF AGRICULTURE AND HORTICULTURE.—We have received the first number of a monthly periodical with this title, published at Cleveland, Ohio. The leading character of this number is rather horticultural, and it is illustrated with several cuts of pears, apples, and other fruits. The articles are of a highly creditable character, and well worthy of attention. Among the contributors, we notice the name of Dr. J. P. Kirtland, well known as one of our most able horticultural writers. Edited by F. R. Elliott. Terms, $1 a year.

PRUNING FRUIT TREES.

L. TUCKER, Esq.—Alonzo Gray has written a valuable treatise on agriculture. We have just read it with much pleasure. He advises to prune fruit trees in winter, as many others have done. From our observation, the winter is not the best time for pruning, unless the stocks are immediately covered with liquid grafting salve, or other gummy materials, &c., which may easily be done, if warm and liquid, and put on with a painter's brush. If left uncovered, the stocks become dry, shrink and crack, and let in water, and rot and disease follow.

A neighbor of ours has a few trees of the best kind of apples. He complains that all his trees decay by rot, &c. He trims them every season in February; and scrapes and washes them with great care and labor. All his trees thus decay. We think it is caused by thus trimming in winter.

If trees are trimmed the last of May or first of June, when a plentiful flow of sap is furnished, the stocks heal over soon, or during summer. It is prudent to cover the stocks with salve, as above mentioned, if you would do the work perfectly, which is certainly best.

Schenectady, April, 1845. D. TOMLINSON.

SPONTANEOUS VEGETATION.

MR. TUCKER—I am very far from believing that any condition of the elements, can compel nature into such a violation of her immutable laws, as the transmutation of wheat into chess; yet who can satisfactorily answer the question, *where does the seed chess come from?* I have it from the best authority that an abundant crop of chess has been grown on new land, when the cleanest of wheat has been sown. Some writers have pretended that chess will sometimes remain in the ground many years without vegetating; but our most experienced farmers assert that chess vegetates much more easily than most other seeds; that even red clover seed will remain in the ground much longer without vegetating than chess; yet we never see red clover appear on land where the seed has not been sown.

I would also ask the question, where does the seed of white clover come from? We have it from the best authority, that soon after the trees are cut off from a calcareous virgin soil, white clover invariably appears. A farmer who lives on the Allegany ridge in Pennsylvania, where there is no calcareous soil, informs me that he has tried the experiment of sowing lime and plaster on a patch of ground covered with sorrel, when the sorrel was the next season succeeded by white clover.

When I have seen young oaks growing in the midst of a forest of pine stumps, I have said to myself, where did the acorns come from to grow these oaks; they certainly were not brought here accidentally, because the nearest acorn bearing trees were forty miles off, in a new and sparsely settled country.

It is in perfect accordance with nature's laws, that the oak should follow the pine in the order of succession; most pine bearing soils, being doubtless originally too deficient in alkaline salts, to admit of the growth of the oak and other deciduous trees; but after the soil has been for hundreds of years acquiring carbonic acid, and alkaline matter, through the agency of the incumbent forest, it is sufficiently rich in salts, to admit of the growth of a deciduous vegetation.

But apropos of chess; may we not sometimes refer its presence in the wheat field, to that mysterious principle in nature, which has from the beginning, caused organic matter to spring spontaneously from certain inorganic elements, dependant however for its all subsequent growth and maturity, to the same laws that control, as the French physiologist would say, *the atmosphere of plants.*

Waterloo, N. Y., 1845. S. W.

FRUIT TREES.—An excellent mode for preventing young fruit trees from becoming hide bound and mossy, and for promoting their health and growth, is to take a bucket of soft soap, and apply it with a brush or old cloth to the trunks from top to bottom.—*Boston Cultivator.*

NOTES OF TRAVEL—No. IV.

In Missouri, Kentucky, Tennessee and Missouri.

BY SOLON ROBINSON.

If I mistake not, my last communication closed while we were yet in the lead region of Missouri, and as I wish to keep up a continuous narrative of all our wanderings, I shall take up the yarn as near as possible where it was last broken off, which I think was the 28th of January.

On the 29th, I passed through the town of Farmington, the name of which for once, intimates something of the country around it. During the morning ride, the road continued over the same description of hilly poor land that it had for several previous days, and the appearance of the inhabitants corresponding with the country. But in the vicinity of this town, the land is good, but the dwellers therein lack the go-ahead spirit always observable around a settlement composed of "down-easters." I observed but little good stock of any kind, though from the appearance of the old orchards, it is evident that somebody had been a long time here—not long enough however to trim the fruit trees. In fact, while speaking of this, I find a great many persons who contend that peach trees are better without trimming. Of this, I cannot say, but I certainly shall continue to trim mine, commencing in the nursery.

I don't know but I mentioned before, that the red unctuous clay that is found with the lead, appears to be conducive to the healthy growth of fruit trees. Who can tell what is the fertilising quality it contains? The appearance of wheat still continues unpromising—and mills few and far between.

It may interest some of your readers who keep a memorandum of the weather, that I should give occasional notes of the state of it at different times and places, so that by reference, they can make comparisons. This then, has been a fine sunny day, and mud fast drying up.

Jan. 30, I passed Mine-la-Motte, situated in Madison county, the oldest worked lead mines in the United States. A tract of land, I believe 3 miles by 6, is owned, or rather held under a somewhat doubtful title. (the claim being disputed by the heirs of Reno, who was here in 1723,) by a company who lease out the right of mining for one-tenth of all the ore dug, and also the privilege of buying all the miner's ore at a given price. Notwithstanding these terms are considered hard by the miners, there appears to be a large nnmber of them engaged, and some eight or ten smelting furnaces in operation, and two erecting for copper, which is also found here. Cobalt, manganese and nickel, are also found, but not worked. The land looks as poor as poverty, and shows but little cultivation, and that of a corresponding quality, and if I may judge from the appearance of the miserable little block log cabins, and squalid children, the whole population would be far better off if they were settled upon some of the thousands of uncultivated acres of rich prairie lying waste within a few day's journey of their present abode. Much of the lead ore here found, is what is termed "dry bone mineral," and is intimately mixed with the dirt overlying the blue ore. To prepare it for smelting, it is taken up, dirt and all, and hauled in ox-carts to a stream, where, in a place fixed for the purpose, the dirt is washed out by a somewhat tedious operation. It also requires a different and hotter furnace to smelt it than the blue mineral. Until within five or six years it has been considered worthless. It now yields about 55 per cent of lead. What vast quantities of "dry bones" are still thrown away by farmers as worthless; and if they would not yield 55 per cent on the labor necessary to prepare them for manure, they are still too valuable to be thrown away.

After leaving this last mining tract, and passing over a few miles of equally poor land, we came to Frederickton, the county seat of Madison, around which is some excellent land, and I am sorry that I cannot apply the same term to its cultivation; but I must speak of things as they are, and not as I would like to see them. Here it was my intention to have taken a route leading into Arkansas, but finding that to do so I must make a long detour to the south-west, on account of impassable swamps that would lay between me and the Mississippi; I took the road to Jackson, and passed over about forty miles of as miserable country, as one seeking after such a tract, could wish to find. It is very hilly, some of which are covered with pitch pine, and only along the banks of the streams are found a few settlers, who with few exceptions, it may be said, rather stay than live. After passing a long, lonely road, from the few houses upon which, it seemed as though the inhabitants had died or runaway, I arrived long after dark, at a place where I had been told I should find the only "house of entertainment" upon the road. * * *

"And would'nt I like something warm and good for supper?" asked my landlady—I certainly should—and it length it came. Oh ye epicureans, what a treat! Wild turkey and venison, say you—a right new country supper? I can almost hear your lips smack now But let me tell you, the supper consisted of seven small pieces of pork ribs for four persons, and a "power" of very coarse corn bread, and some muddy looking warm water called coffee, free from any adulteration of cream and sugar, and no other eatable thing on the table. And of this I eat, not having then seen the kitchen, which I afterwards did; and the negro cook. *I did'nt stop for breakfast*, though I did for lodging, and slept quite comfortably under my two buffalo skins: but in the morning, although I stopped at the "stage-house" for breakfast, the only improvement was, that had I been compelled, for want of food to "kiss the cook." it would have been altogether more agreeable than the evening before. If possible, the house was worse. It is an old saying that "one half the world don't know how the other half live." I wish they did. I think they would be more contented and grumble less. And I wish the other half knew how they lived themselves; I think they would live better. In truth, I think it would be beneficial to us all to know a little more how the other half of the world live, and by comparing the situation of others by our own, try to improve

But I must leave moralising over poor suppers and worse breakfasts, and jump over these poor hills and down along the banks of a stream whose waters look as though somebody had spilt their milk in them, and when within a mile of Jackson, the county seat of Cape Girardeau, we seem to strike an entirely different region of land; and the first good looking place after leaving the hills, I find belongs to a Mr. Criddle, an old Virginia tobacco planter, who is very successful here, and has of his last year crop now on hand, about 40,000 lbs. He, as well as many other subscribers, would like the Cultivator to give a price current of several leading articles in several eastern cities. Mr. Criddle's land is rolling, yellowish clayey soil, and produces hemp as well as tobacco.

The town of Jackson is on a hilly location, 12 miles from the river and contains several good buildings; the court-house, bank, &c., and has a land office, in one of the officers of which, Mr. Davis, I found a very warm friend of agricultural improvement, and through his assistance and information, some dozen of the spirited and intelligent gentlemen of this town became subscribers to the Cultivator. If the U. S. government had the same liberal views that this one of her officers has, they would not only graduate the public land to a grade that it would sell at, but much of the land that I have passed over between here and St. Louis, they would give away to whoever would take it, and be well rid of it at that. Indeed, as much as Missouri has been boasted of for richness of soil, it is a fact that many do not seem to be aware of, that the south half of the State contains vast tracts of mountainous barren soil that is scarcely inhabitable, and will undoubtedly so remain for a long time. True, it has great mineral wealth. The celebrated "iron mountain" lies only a few miles west of the route I traveled, and although only some 40 or 50 miles from the Missouri river, yet the impediments in the way of making an easy mode of transporting this richest of all iron ore in the known world, has hitherto kept it in the deep forest buried. And our government is not one to lend much aid to those who buy her lands, whether to improve the science of agriculture or develop mineral wealth. But let us jog on. Though before I leave Jackson, let me say that from experiment of several of the citizens, they find the valley land best for orchards, and old rotten wood the best manure. The hill land appears too dry in summer. I have noticed several orchards that were planted by the French, that are 40 or 50 years old—and don't look as though they had been trimmed in all that time. The question is often asked me, "should orchards be cultivated in other crops?" I answer yes, always, until the trees get big enough to take care of themselves. Grass is injurious to young trees; though for the matter of that, I don't think it is likely to injure them in this part of Missouri; there is not enough raised to injure any thing. Wheat still looks poor—has the appearance of having just come up.

From Jackson, I traveled the "dividing ridge;" all the waters to the north and west, instead of running toward the Missouri, run away from it and spread out in the swamps of Arkansas. After leaving the ridge about a dozen miles from Jackson, we have a swamp five miles across, through which the water run ten feet deep during the high water of last summer, not finding its way back again to the river until it had wended its way perhaps 200 miles through the swamps. This water leaves the river a few miles below Cape Girardeau, in consequence of the high bank that formerly kept it in its channel, having been washed away during the last season, proving very injurious to many who found themselves suddenly in possession of a new water power upon their farms—rather an uncontrolable one to be sure—that instead of serving to grind their corn, served them with notice that they could not have any to grind.

Across this swamp the road is partly through, not over, a very soft black soil, and partly over a raised causeway only 8 feet wide, and upon which, if two wagons were to meet, I suppose one would have to drive *over* the other, as there is but one chance in several miles to drive round.

From here to Benton, the land improves, and there are some good farms; those of Mr. Hutson and Mr. Allen, clerk of the county of Scott, being the best in appearance. Crops, corn and tobacco. Benton is a town that would not do much honor to the gentleman for whose honor it was named. * * * Although it was night, I hurried past the town, and out to a farm house, where I felt much more comfortable. Here I found plenty of corn, and about 40 head of horses to consume it, and of a breed very common in this part of the State, which I wish I could give you an accurate idea of. They are generally light sorrel, with white face and feet, about 15 hands high, with legs bigger than a deer, that support a body in proportion to the legs. In winter they run in "the lot," and eat corn out of a hollow log, and in summer they run wherever they can to get away from the hordes of flies and musquitoes that infest the swamp where they are sent to "range for themselves." The cattle in this part of the State are of the same order, and kept in the same manner. Now corn is an excellent rich grain to make pork, but if it is suitable food to manafacture bone and muscle from for young stock, then Professor Johnston and many others know nothing about science. It is however a fact that where the most corn is fed and little else, there I find the "scrub breed" in the highest state of scrubbiness.

At this last stopping place, I found some excellent sweet potatoes, *the first vegetable that I have seen upon the table since I left St. Louis*; and the owner assures me that the whole secret in keeping sweet potatoes is to keep them *dry and warm*. Mind, warm—not hot. He packs them in sun dried sand. This section of country still shows the marks of the earthquakes of 1811. In fact, there have been slight shocks every winter since—sometimes the earth cracks open and blows out quantities of sand.

Feb. 2, which, bear in mind, was the first Sunday, was a mild, clear, pleasant day, here in Missouri, a few miles west of the mouth of the Ohio river. How was it with you, reader?

This day in a 20 mile drive over mostly poor sandy black oak barrens, and across a small sandy level prairie, I passed through a couple of miles of Cypress swamp, along a road the like of which would be a curiosity in any civilized country. I do not blame the inhabitants here for not making a better road, for if I may judge from their looks, they will soon need to travel but a short road, and that upon a conveyance that never jolts the rider. Although much of this county is very rich, and produces great crops of corn and some wheat, yet there is so much swamp that it is decidedly sickly.

On Monday, and in a dull, gloomy and rainy day, I had to drag through 14 miles more of swamp and overflowing land to reach the Missouri; and this is the only road by which half the inhabitants can reach Benton, their county seat. And over this same road, the emigrants from Kentucky, Tennessee, &c., going to Missouri and Arkansas, have to drag their loads of "plunder." I met many of them in wagons, in North Carolina carts, and on pack horses—the latter being generally packed with a most liberal supply of children and their mothers—"I reckon"—and as it "takes all sorts of folks to make a world," I am constrained to think that some of those I met are some of the "all sorts." "The ladies" in particular, riding in a very primitive way, such as was common before the invention of side-saddles, looked a good deal "sorter like" the coarse filling with which the great western web of wilderness is woven.

After a toilsome day's work of 18 miles, I was under the necessity of stopping 2 miles short of the ferry at the "iron banks," where I was to cross the Missouri. It had been my intention to have gone from Benton to New Madrid, by which I should have avoided these 16 miles of swamp, but I learned that if I crossed at New Madrid, that I should be caught in a trap in a district of country lying between there and Memphis, that is known as the "shakes," from having been shaken by earthquakes into sundry very uninteresting goose ponds. And from New Madrid down on the Arkansas side to opposite Memphis, there is "no road nor nothing." The only good highway—high enough sometimes—in the country, is the Missouri, but not a very good carriage road.

WHEAT CULTURE.

At one of the weekly agricultural meetings held during the past winter, the subject of discussion was the culture of wheat. Mr. **McVean**, member of the Assembly from Monroe county, made some very interesting and valuable remarks, which, at our request, he has furnished us for publication.

In offering a few remarks, said Mr. **McVean**, on the cultivation of wheat, I deem it most proper,—deferring the minor details of special cultivation, manures, diseases, and different varieties,—to introduce the subject by an exposition of the general principles and circumstances of soil, natural adaptation and climate, which will ever control the production of this most important crop.

An examination of the geological map of the State, will at once and most readily indicate to the intelligent observer, what portions of the State are most naturally adapted to wheat.

First in value, and occupying a large surface, is the Onondaga salt group. The rocks of this group are sometimes denominated the gypseous limestone, or shales; connected with which, are the plaster quarries, the water lime, and the salines of the State. This group, as a whole, embraces the most natural and enduring wheat soil of the State. It includes, and extends from Grand Island eastward, narrowing to a point in the county of Scoharie. Its soil is composed of diluvial swells, chiefly resulting from and based upon the limestone—a subsoil, susceptible of fertility at any depth, and which, with the substratum of lime rock, is adapted to absorb the superabundant moisture. Hard water, a prevalent growth of oak timber, also upon much of its southern line a comparative absence of vegetable accumulation, and often of timber, consequent upon the annual burning of its natural product the opening grass, characterize this group. With a surface at once beautiful and accessible, few portions of the State presented a more unpromising *appearance of soil* to the first settler. Its unsurpassed and permanent value has been demonstrated by time and experience, and it is due to the mineral character of its soil, and the fertility and adaptation of the subsoil.

Although I have dwelt on this group more at large, because of its natural peculiarities, I am far from claiming for it exclusive natural adaptation to wheat; and only mean to say that it is more generally and permanently so adapted than any other, as a whole—that as a whole, it is more certain and enduring; and better resists every unfavorable vicissitude of season, climate, or defective cultivation; and that under continued cultivation, there has been little, if any falling off, in its annual product of wheat, except when managed with great imprudence.

I am aware that there are large portions of superior wheat soil embraced in the collateral geological groups, very much of which is but little, if at all, inferior to the above, in natural adaptation to wheat.

Of these, extending north to lake Ontario, are the Niagara, Clinton and Medina groups; and towards the south, the Helderberg, Hamilton, and of the Chemung group, more or less of the northern portion, according to the extent of the northern lime drift; for it is an important fact that the diluvial current from the north, has conveyed and intermixed beneficially, the rock of each of these groups with all the others; conveying the fertilizing lime far south of the actual existence of the rock, in place. These various groups contain collectively a very large portion, perhaps one-fourth, and the most valuable soil of the State.

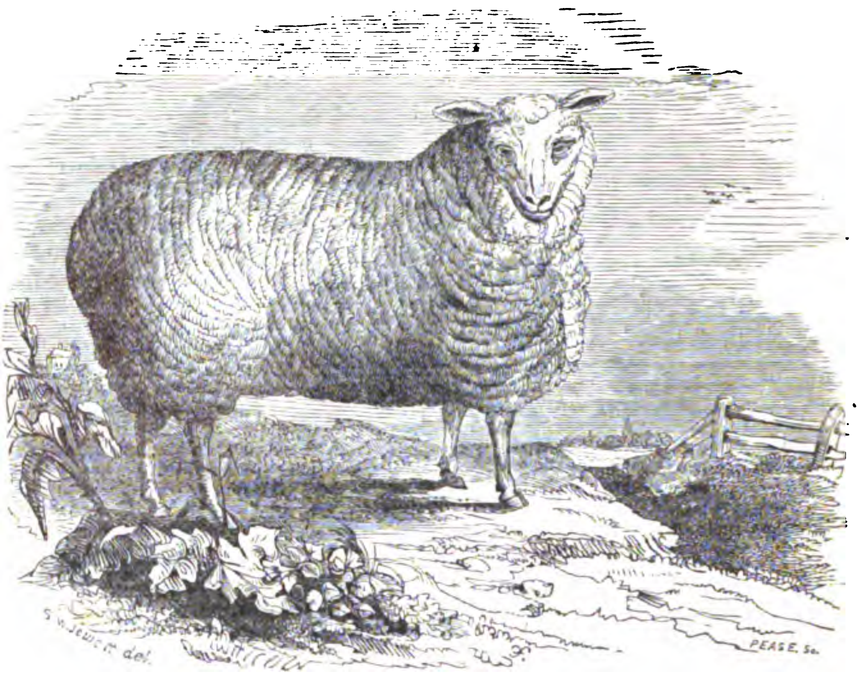
When the important question arises, where have occurred, and to what causes are due, the evident and conceded diminution of the wheat crop of the State? it will be found that it has occurred chiefly, in the last mentioned groups; and generally in the ratio of their distance from the first; owing, in some instances, to the deficiency of lime, deficient mineral qualities, and excess of vegetable matter and humus in the soil; very frequently to the too level and wet surface; but more specially and injuriously, to the tenacity and imperfection of the subsoil; resisting the escape of the superabundant moisture, whereby large surfaces are often supersaturated with water; inducing winter kill, debility, and various diseases of the plant, especially under the action of sudden and extreme frost, or heat and drouth. Collectively, these results become more manifest and injurious as the soil has been retained under long continued cultivation, so that only in the most favorable seasons can a full crop be realized in much of these soils; and in these have occurred the principal falling off in the wheat product of the State.

As there are large portions of soil thus circumstanced, in the wheat region of the State, and especially in the last named groups, it follows, if the premises are correct, that in no way can the area of wheat growing be so advantageously extended, in no way can capital and means be so profitably applied, as in improving and adapting these lands, by open and thorough draining, where the mineral qualities of the soil are in other respects proper. It is an indisputable fact, that very large surfaces under cultivation, scarcely yield a remunerating return, from the causes here indicated.

In further illustration, and in order to a more comprehensive view of the whole subject as connected with the above general principles, I desire to remark briefly upon the influence of climate upon the production of wheat, as I am not aware that the importance of the subject is generally appreciated.

Perhaps there is not on earth a better wheat soil, than is to be found in New-York; so far as the natural capability of the soil is concerned; and yet it is only when the most favorable circumstances of season and temperature combine with a proper condition of the soil, that we obtain products approaching those of Great Britain, from lands under no better cultivation, and inferior in natural adaptation to ours. The cause of this is to be found in the excessive character of our climate. Our growing crop has to surmount the extreme severity of our winter, and the more injurious and frequent spring frosts, acting upon a wet surface, producing what is called winter kill. The succeeding heat and drouth, acting with sudden change on the same wet surface, upon a plant flourishing only in a dry soil, and naturally incapable of resisting these adverse conditions. And finally, encountering the excessive heats of summer, (often in connection with moisture,) stimulating the plant to premature and diseased ripeness. Or, if the foliage is very dense, enfeebling and lodging it, so that the grain is deficient in proportion to the straw. It is a frequent occurrence, that the crop is heavier than can be carried to profitable maturity, under the influence of our climate; and practical farmers have long since learned that crops of a medium weight are generally the most profitable.

These influences of climate apply not only to this State, but with more or less injurious force, to all the United States, in one extreme or the other of heat or cold; and it is probable, that in the south-western States of the Union, the cultivation of wheat is limited, more



LEICESTER EWE—(Fig. 61.)

The above is a good portrait of a Leicester ewe, about one year old, belonging to **Paris Fletcher**, Esq. of Bridport, Vermont. She is descended from the stock of Mr. S. Norton, of Greenwich, N. Y. She is a large, well formed, and very heavy fleeced animal, and will, in the opinion of competent judges, give at least eight pounds of washed wool, at her first shearing. Mr. Fletcher has at present but a few sheep of this blood, but those he has, have proved so valuable, that he is determined to increase the number. He has a fine and very neatly managed farm, well calculated for supporting the finest cattle and sheep.

by the influences of climate, than by imperfections of soil.

In accordance with the above principles, and for the reasons assigned, it will be always practicable in equal, or even inferior conditions of the soil, to raise heavier crops, where the climate is more temperate and uniform; for the reason, in addition to those stated, that the crop occupies the soil a much longer time in arriving at maturity, and is also less subject to the adverse vicissitudes and influences alluded to. This is believed to be the case in some parts of Europe and in Great Britain, in which last, the crop generally occupies the soil, in a growing state, excluding the fall and winter, from the first of March to the middle of August; but doubtless its insular position has a favorable influence. In such climates also, it is more practicable, for the same reasons, to carry down the cultivation of wheat, to soils of inferior natural adaptation.

As the influence of climate is a fixed condition, and little subject to human agency, our alternative is to adapt our soil to the climate; and this we may do, chiefly, by laying the land dry, and obviating on a large extent of our soil, the injurious effects of superabundant moisture.

In clearing new land, the importance and economy of retaining, or even planting, at proper intervals, narrow belts of timber, as protection against the winter winds, will engage the attention of practical men. The white oak, which retains its leaves through the winter, is admirably suited for this purpose, and indigenous to the soil.

In continuation, it may be remarked, that the winter frost, and the heat and drouth of our summers, while offering superior advantages for cultivating and subduing the fallows, affect injuriously at the same time the growing crop, especially in wet and heavy soils; urging their drainage also from the consideration that they are afterwards more easily and seasonably tilled, and more productive of all other crops as well as wheat.

The additional conclusions resulting from these general views and principles, are—that the first requisite, in the cultivation of wheat, is to obtain a good soil—that a good soil is one that abounds in lime, is clean and dry, and right in the mixture and quality of its mineral matter, including fertility and absorbent qualities of the subsoil—that a soil containing vegetable fibre or humus in excess produces much straw and little grain. and that consequently alluvial soils are not well adapted to wheat except when naturally overlaid by a proper mixture of the neighboring upland minerals—that there is much unprofitable application of labor and capital, because of nonconformity to the natural laws of soil and climate—that the cultivation of wheat may be profitably continued or extended on large portions of our land, by adapting the soil to the climate, and thus to the cultivation of wheat, on lands that are too level or wet, provided the mineral qualities of the soil are proper in other respects.

I would finally offer the suggestion to practical men, that as good wheat soils are well adapted to the production of nutritious pasturage, it will be found most profitable at the relative prices of products and labor, to renovate the soil to a greater extent than is now practiced, by rendering pasturage accessary to the cultivation of wheat, in preference to costly or artificial manures, beyond a judicious economy and application of those that accumulate on the farm; and that lands not natural to wheat will be most profitably applied to other crops.

Celery for Ducks.—A writer in the Buffalo National Pilot, says—"The common duck of the poultry yard, if fed—while fattening—copiously upon the tops of the celery plant, will attain a juiciness and a flavor that must call forth unqualified approbation from every epicure. It is the wild celery plant that gives peculiarity of enchantment to the canvass-back, and the common celery top will add a charm to the duck of the yard, that cannot be conceived. You cannot make a tame bird equal one with the wild flavor of freedom and foreign travel, but still you can refine on poultry."

GRADE STOCK.

The attention of the public has often been called to herds of *pure bred* cattle, in different parts of the country, and their pedigrees given to the readers of agricultural papers, in such a manner as to add greatly to their reputation in public estimation. We perhaps think as much of pedigree as any one, and would be glad if every stock grower would keep an exact register of all his stock, with their origin, &c. Notwithstanding these views, we think that many of our best herds of stock have been overlooked, and their merits not duly appreciated, simply for the reason that an exact pedigree cannot be given to the public. If we mistake not, some of the best cows for milk of which we have record, have been produced by a cross between pure bulls of some of our best breeds, and the common cows of the country. Indeed, we have sometimes thought, where the object is to raise cows for the dairy mainly, no better course can be adopted, than to select from our best common cows, and breed to a bull of some one of the improved breeds; and although we might have a choice between the different breeds, we would not hesitate to commence with a bull of either, rather than rely entirely on native stock.

One of the best herds of grade cattle, and particularly of grade cows, with which we have ever been acquainted, was raised by Mr. F. Ingersall, of Vernon, Oneida co. This stock, about thirty in number, was last fall sold at auction, (the owner having previously sold his farm,) so that nearly all have passed into other hands, and are now owned by different individuals, mainly in Oneida co. Four or five individuals only have been retained, from the choicest of his stock.

Of the origin of this stock, we cannot speak with entire certainty. They are, however, a cross between the Devons from the stock of Messrs. Hurlburt, of Connecticut, and a race of cattle which have for years gone by the name of the Sweet breed; probably from the fact that a gentleman of that name, in Onondaga co., bred up a fine stock of cattle; but of their pedigree, we are not now informed. Probably there are persons in the counties of Onondaga and Cortland who can give some information in regard to this race of cattle.

Several of the heifers raised by Mr. Ingersoll have proved extraordinary milkers, and fortunately we have here what is too often neglected, exact accounts of the quantity of milk in pounds, given by several of these for many days in succession. From the records of the Oneida Co. Ag. Society, we glean the following facts:

"Nellee," four years old last spring, came in at two years old, and gave an average of a fraction over forty pounds of milk per day, for fourteen days in succession, commencing 1st June, 1842. In 1843, when three years old, she gave for thirty days in succession, commencing May 15th, forty-four pounds four ounces per day. In the summer of 1844, again commenced weighing her milk, but after a few days, owing to a temporary injury, the account was discontinued. The average for the four days it was weighed, was fifty-one pounds.

This cow has taken the first premium in the class in which she was exhibited, for four years in succession, at the Oneida Co. Ag. Fair, where the competition was by no means limited, and where she has had to compete with many of the best animals in this section of the State.

"Blossom," own sister to Nellee, three years old last spring, also came in at two years old, and has proved scarcely inferior to Nellee as a milker. She gave at two years old an average of forty pounds per day, for seven days in succession; and in 1844, at three years old, forty-three pounds and thirteen ounces per day, for the same time. She also has received three first premiums, with spirited competition.

Several others from the same stock have nearly equaled these; and as a herd, they have perhaps seldom been excelled for dairy purposes. Nothing but grass has ever been fed in summer, and never more than four quarts of bran per day in winter.

These facts are given, because we have here exactness and figures instead of guess work, as is too often the case. It is proper to remark, that the milk is of excellent quality; but as they have been kept in a dairy for making cheese, their milk could not be conveniently set for butter separate from the rest of the dairy. These animals are three-fourths Devon, and the remainder from the Sweet stock spoken of above.

To individuals who have bred such animals, and who have taken pains to furnish exact data when exhibited at our Cattle Shows, the public are indebted for an example well worthy of imitation. Shall we not hear from other herds equally successful? "Nellee," spoken of above, is now owned by the writer, who considers her one of the best milkers which has come under his notice; but from the fact that she is kept as a family cow, he will be unable to continue the experiments as he would desire, and especially to test her qualities for butter making. The mother of these animals, "Cherry," is also in our hands, and shows good evidence of dairy qualities, as well as proof in her calves of her value as a breeder.

Rome, N. Y., 1845. E. Comstock.

M'CORMICK'S REAPING MACHINE.

L. Tucker, Esq.—Being a subscriber to your valuable and extensively circulated journal, not having troubled you hitherto with communications of this or *any other sort*, and not having observed much notice taken in the Cultivator of "M'Cormick's Virginia Reaper," I have supposed it might not be uninteresting to the readers of the same, nor unacceptable to you, to give some account of what it is doing here in the "far west."

I am not a practical farmer as yet, *but I expect to be one soon.* I have long felt a deep and lively interest in the agricultural prosperity of our common country, and have acted some humble part towards promoting this great cause, within the limited sphere of my influence. In this age of improvement, nothing has come under my observation, which promises greater benefit to the farming community, than does this most valuable invention, the Virginia Reaper. After hazarding this opinion, be not surprised when I say, that I have not yet, even witnessed the operation of the machine in the field. I rely mainly upon the HUNDREDS of gentlemen, (many of them personally and intimately known to me,) who during the last three or four years, have in my native State, Virginia, borne testimony of the most conclusive character to the fact. Many of them, as I have seen, after trying one machine through a harvest, stated that it had paid for itself, and supported their statements with orders for additional machines. This was the case with a brother-in-law of mine, Wm. Galt, Esq. of Glenarvon, Fluvanna Co. Va.

It is worthy of remark too, that this machine has not been brought forward and introduced on the humbugging plan. Although invented and publicly exhibited in operation in the harvest of 1831, (two years before Hussey's machine was invented,) as appears from a letter published by Mr. McCormick in the May number of the Mechanic's Magazine for 1834, he (McCormick,) did not attempt to introduce it until the year 1840; since which time, it has been rapidly working its way to public favor in Virginia. It had not been taken out of that State until last harvest, when it was introduced into the western part of New-York, into Michigan, Wiconsin, Illinois and Missouri, with the most signal success. A machine was also sent to this State, but arrived too late for harvest: it was exhibited at the annual fair of our County Agricultural Society, and received a certificate and special report from the committee on Agricultural Implements.

McCormick's Reaper, is now, I understand, being manufactured in the western part of New-York, (by Backus, Fitch & Co. at Brockport, in Monroe county,) in Michigan, Wisconsin, and Missouri, and I learn from Mr. A. C. Brown of this city, one of the most extensive machine builders in the west, that he will have at least one hundred and fifty machines manufactured for the ensuing harvest, for which he is receiving orders by almost every mail. Twenty-five orders have been received by him from a single county in the State of Indiana.

The terms too, upon which the Reaper is offered, are at once generous and confiding, and bespeak a favorable consideration from the agricultural community. It is "warranted to cut fifteen acres per day with ease, (light two horse draft,) to save an average of a bushel of wheat to the acre which would be lost by ordinary cradling, and to be strong and durable—not subject to get out of order," and is sold on a credit, giving time and opportunity to test it before payment is made, at the low price of one hundred dollars.

Of the large number of certificates from Virginia, I herein enclose three or four, which it might be well to append to this, if you can allow it so much space.

Very respectfully, yours, Wm. H. H. Taylor.

Post Office, Cincinnati, May 16, 1845.

We give the substance of the certificates which accompanied the above:

Mr. E. Fletcher, Lynchburg, Va. says—"During wheat and oat harvest I used it some fifteen days without any difficulty. It cut uniformly, clean, and well, on an average, without pushing, from fourteen to sixteen acres a day. One day, when a little more activity was used, it cut twenty acres. Where the wheat or oats were tangled and fallen down, with a little care it cut and saved the grain admirably well. Many of the best farmers in the neighborhood of my plantation, near Amherst Court-House, came to see its performance; all were highly gratified, and many would linger and follow it round the field to admire and witness its neat, rapid and perfect performance. I think it would not be going too far to say that it is a perfect machine of the kind, and that no farmer whose plantation is clear of stumps and stones, (for it does not much matter that the land be rolling,) and raises wheat or oats to any extent, should throw by his reap-hoops and cradles, and make use of your Reaper to save his grain."

Mr. Robert Ives of Oak Ridge, Va., says he was so well pleased with it, that he had ordered a second one.

Mr. Washington Swoap of Augusta county, Va., says that "in cutting 100 acres of good wheat, when the labor and grain saved are fairly estimated, it will pay for itself."

Mr. Wm. Galt of Glenarvon, Va., says—"I have used it in cutting my low ground wheat, and it has performed to my entire satisfaction. I did not measure any one day's cutting, but am perfectly convinced that it will do the work of not less than 10 cradles, and cuts the wheat very clean. I am so well satisfied with the performance of this, that I will take another machine from you for next harvest."

PEACH TREES, CHERRY TREES, &c.

Mr. Tucker—If the following suggestions, relative to the cultivation of the peach tree, as well as some other trees, should be thought worthy of a place in the Cultivator, others may receive the same benefit which the the writer has, from the method here suggested.

The seedlings of the peach are found in almost every garden; and, in too many, they are left to take their chance to live or die, according to circumstances. If a few of these are not destroyed by the hoe, as incumbrances, and a few are permitted to escape, the cold winters of the North hasten on to complete the work of destruction, by killing down a large proportion of the growth.

From his own experiments, the writer can recommend the following method of obtaining and preserving these precious trees: he gathers all the stones that come in his way in peach time, and in the autumn wraps them in a paper or rag, and buries them a few inches in the ground, in any convenient place. Over them he lays a flat stone to denote their position and to preserve them from the digging of ferrets. As the warm weather approaches in the spring, he uncovers them and finds them in a state easily to be cracked. The seed is then taken from the shell, and planted in such places as are convenient for their cultivation. They will then come forward early, and furnish a growth according to soil and care bestowed.

Then, to preserve them in their entire growth from the winter's cold, each tree is in the fall taken up, with with such care as to preserve, if possible, every fibrous root, and placed in a cellar for the winter, with common garden earth thrown over their roots. Here they stand protected, fresh and green, till spring, with not a limb or bud injured by the cold. As the season for transplanting comes on, they are easily transplanted in any place selected for their future location.

The hint to this method of preservation, was derived from the experience of the writer in the winter preservation of the mulberry.

The cherry, apple, pear, &c., though not killed by winter, may be greatly benefitted by this kind treatment, while seedlings.

In mellow soils, the labor is a mere trifle, with those who learn to preserve their trees. But to do the thing *right,* care should be taken not to pull up the trees by a force which will leave half their best roots in the ground. Let the ground be thoroughly loosened by an iron bar, till every root may be obtained. No spade or shovel should be used in this work, inasmuch as either of these tools will cut off many of the best and most fibrous parts of the roots. Much has been written about digging large holes for the reception of trees, and well written, too; but if *all* the roots of a tree are taken up with it, we can assure him who transplants it, that he will have no small trench to dig. No tree should be transplanted without its roots, unless you wish to be in doubt two years whether or not "it will make a live of it." For this reason, the *younger* the tree to be transplanted, the better, because you can secure a greater proportion of its roots. Some people enter a nursery and select the *largest* trees; whereas, they would get fruit sooner by selecting only those whose *roots* they could carry with them. Long roots *must* have, and short roots *need* to have, wide holes.

I am well pleased with the management of peach trees, recommended by "C. D.," in your June number; he is right. Too rapid a growth will subject any thing to a rapid decay. The multicaulis grown slowly in a poor soil, will resist the winter. The peach grown rapidly, usually loses half its growth by winter's cold; and its liability to disease is strongly argued from the analogies of nature. I would only give it a good chance in a gravelly soil, decently cultivated. It is said that the *red* varieties are less liable to the disease than the yellow. P.

Prospect, Ct., January 20, 1845.

SOWING CORN AND OATS FOR FODDER.

Luther Tucker, Esq.—There is no way in which the writer spends a dollar per annum more satisfactorily than in subscribing to the Cultivator. It is not necessary a practical farmer should immediately act upon every suggested improvement in farm management. He has to examine whether the change recommended is suited to his location and circumstances; ever bearing in mind that the great object of the agriculturist, is the *profitable* occupation of his time and capital, and that he may even "buy gold too dear."

With these considerations before him, the writer has for some years read the Cultivator with interest, and (although on a small farm,) derived considerable advantage from the hints of your more experienced correspondents.

During the past winter, by an economical arrangement of his stock yards, and occupying time unsuited to other purposes, he has been enabled to haul out upwards of 200 cart loads of manure more than in any previous year, which if brought from the neighboring city would have cost in the article and labor as many dollars; and in the management of his future crops he hopes to derive additional advantage.

If the limited experience of the writer should be worth a place in your journal, he proposes occasionally furnishing you with a short article without further introduction. And first, in reference to broad cast corn. Having sufficiently proved its value, he determined in the present year to secure a good supply for cutting green, or curing as occasion may require. On the 5th of April, he had an acre of ground plowed and harrowed, then spread over it 20 cart loads of cow manure mixed with the leaves used for bedding, and sowed four bushels of corn and one of oats, which with the manure, were well harrowed in, and rolled; the seed came up well, and when about three inches high, had two bushels of plaster spread over it; it now gives every appearance for a fine crop. He has since sown a second acre in the same way, which is just above ground, and intends in a few weeks to provide a succession.

In preceding years the writer has been much troubled with his neighbor's pigeons and poultry. He this year soaked his corn 12 hours in the liquor from his cow stable, then drained it and well mixed it with plaster; this proved an effectual remedy, as even the few scattered grains left on the surface of the ground after harrowing, remain untouched.

The writer proposes in his next, to give the simple process by which he increased his stock of manure the past winter, and by which he hopes to secure a still further supply during the present year. WOODSIDE.

Maryland, May 12, 1845.

A FEW WORDS ON RAISING POULTRY.

MR. EDITOR—Every farmer who is acquainted with poultry-raising, know show extnemely hard it is to raise young turkeys, and young poultry of any kind. In the early seasons of the year, fowls, ducks, and turkeys, are in the want of salt, more or less. Early in the spring of 1840, I got a few duck's eggs, of Judge Spencer, (the large white kind,) and raised five, (four ducks and one drake,) which I kept through the winter in a warm henhouse, and fed them with corn and Indian meal. They commenced laying very early; I had twelve turkeys at the same time; and as the hens commenced setting, I set them with duck's eggs, allowing from 10 to 15 eggs for each hen, and as fast as they came forth, I shut the hens in coops, and put the coops on the edge of a pond in the yard, where I kept my fowls; I allowed the young ducks to stay with the hen until they were three weeks old, and then took the hen from them, and allowed the ducks to remain; and in a few days, the hens commenced laying. In feeding, I commenced with Indian meal and white sea-sand, which contains salt sufficient for poultry; taking about one quart of meal to one gill of sand, and continued feeding that three times a week until they are completely feathered. I found that my ducks were larger and in better order than any of my neighbors. I did not lose a single one by sickness, and raised 90 from the 4 ducks; and by having hens sufficient, there can be 150 raised from 4 ducks. I would advise all farmers and poultry raisers to pursue the same method, and not allow their old ducks to hatch at all; and feed in the same way turkies and chickens, and they will find that they will do better than on any other food.

BURGESS WANDS.

TRANSMUTATION OF GRAIN.

MR. EDITOR—In page 132, April No. Cultivator, I observe a communication signed J. Townsend, on "Transmutation of Grain." This writer scoffs at the opinion, and attempts to ridicule the idea, of wheat turning to chess; but without, as I can perceive, giving any argument, or reason to sustain the contrary opinion.

Now I profess to have no particular *belief* either way. But I propose to state a few facts, and Mr. Townsend may work out the case either by argument, or through his "fulling mill," at his own convenience.

When you published the Genesee Farmer, say a dozen years ago, there was a long, and a very able controversy carried on for several months in that paper, by several of the most distinguished wheat growers in western New-York, *pro* and *con*, on the subject of transmutation. The result was a *drawn* battle; neither party convinced to the contrary of the opinion which he first advanced.* Scientific men were among those engaged on both sides, and all the *science* they possessed was brought to bear on the subject. After all, it was not settled that science, as it is called, was exactly *right* in its *first* principles, although no one has a more profound respect for that authority, apparently, than both parties engaged in the controversy. In it I took no part, being neither a wheat-grower nor a professor of any science. But to the facts in question:

It was proved, and it can be proved again, that a field of *new* ground just cleared from the forest and sown *well, uniformly* and *plentifully* in its first crop, with wheat, in which one kernel of chess could not be detected in a hundred of wheat, produced *chess* almost altogether, in the swails and low places, and under the fences, where the snow and water lay an uncommon length of time: so too, in places where geese had run over and fed on the early growth in the spring. The same with sheep, in some instances. Where the chess did not grow, the wheat was fine and clean, hardly a stalk of chess to be discovered. It was also proved, that different fields had been sowed with the same seed, where no chess had been seen for years before, and parts of some were chessy, and the others not at all. And these same facts, and others quite as strong, can be proved, in numerous instances and in different sections of the United States, any day, in a Court of Justice, by as intelligent, experienced, and "sensible" farmers and wheat-growers as can be found, although they never served apprenticeship at the "cloth-dressing business;" and I pledge myself ready to prove these facts, when this writer will agree to pay one half the expense of taking the testimony, which wo'nt at all events be much.†

The late Judge Buel—certainly no mean authority—in reply to a question I once asked him, what, after all the arguments on the subject, was the conclusion of his mind upon it? replied, "that after a long observation of the facts and theories which had been produced, he was forced to believe in the doctrine of *transmutation*."‡

This is all I have to say. I shall hold no argument with any one in this matter: but I certainly think that ridicule, and that not of the highest order, is not the way to put down this doctrine of transmutation.

L. F. A.

NOTES BY THE EDITOR.

* This may have been the case as regards the writers in the controversy alluded to; but not so with those who read it. We know many farmers who believed fully in the change of wheat into chess, who were converted to the truth by this discussion. They reasoned in this way: If, as is said, chess only grows from its own seed, the same as other weeds, we can eradicate it entirely from our farms. They tried the experiment—destroyed all the chess on their farms, and did not permit even a kernel of it to be sowed with their wheat. The consequence was, what might have been easily foretold—this pest was no longer found on their premises. For several reported instances of this kind, our correspondent is referred to the old Genesee Farmer, and to the first series of the Cultivator.

† Suppose the facts here stated, were sworn to in every Court of Justice in the country, would it afford any evidence that the wheat had turned to chess? That no wheat grew on the low wet places, or where it had been eaten off by geese or sheep, would prove, we should think, and that most conclusively, that the wheat in these places had been killed by the "snow and water," and "geese and sheep;" but it would no more prove that the wheat turned to chess, than that it turned to the other weeds and grasses which sprung up in those wet places where the wheat was killed.

‡ That Judge Buel came to this conclusion, upon hearsay evidence, is undoubtedly true. He once remarked to us, that the statements of Gideon Ramsdel, in our then paper, the Genesee Farmer, had gone farther than all other testimony, to convince him that the change of wheat to chess might take place. Now it so happens, that Mr. Ramsdel, long since, convinced himself that he was mistaken in a part of his statements; and we have little doubt that his experience has since convinced him that he was equally mistaken in supposing that wheat would, under any circumstances, turn to chess.

COMPOUND FOR SMEARING SHEEP, AND CURE FOR FOOT ROT.—SOLOMON HOXIE, Leonardsville, N. Y., sends the following recipes, which he says he has used for several years with advantage. "Immediately after shearing, I make the following compound, viz. 25 lbs. grease, one pint tar, boiled and well stirred together until nearly cold; then stir in two pounds sulphur, then rub the sheep with it, commencing at the head and follow along the back to the roots of the tail; this I have found to protect the sheep from the cold storms and also to kill ticks, &c.

"The following I have found an almost sure remedy for the foot rot, viz: 1 part Barbadoes tar, two parts spirits of turpentine, thickened with sulphur to the consistency of common paint; pair and clean the sheep's feet well, and rub in the compound, and one or two applications are almost a sure cure."

THE CULTIVATOR.

ALBANY, JUNE, 1845.

TO CORRESPONDENTS.

Since our last, communications have been received from T. Fountain, E. N. Horsford, A Farmer, T. J. Lewis, S. Hoxie, C. Waters, J. R. Blair, Solon Robinson, S. W. Jewett, H. Cooke, Experiment, Woodside, J. Plocker, J. Gotham, A Subscriber, A. H. Halleck, K., B. Wands, J. P. Norton, W. H. H. Taylor, W. Jennison.

We are indebted to Hon. **Wm. Young**, Halifax, for copies of the 3d and 4th Reports of the Central Agricultural Board of Nova Scotia for 1844 and 1845—To Rev. **A. Whyte**, for copy of Carolina Planter, containing his Address and other proceedings of the Indian Land Ag. Society, S. C.—To **Lea & Blanchard**, publishers, Philadelphia, for the 1st and 2d volumes of the "Narrative of the Exploring Expedition," and "Clater on Diseases of Horses," &c.—To **Greely & M'Elrath**, publishers, New-York, for Part II. of Lardner's Lectures—To **F. Knight**, publisher, Washington City, for a copy of "Fac Similes of Washington's Letters on Agriculture"—To (we presume) **W. W. W. Bowie**, Esq. for the Proceedings of the Prince George's Ag. Society, Md.—To **L. Durand**, Derby, Ct. for Pine Apple Melon Seeds—To **Benj. Brewster**, Montreal, for a cask of the Seed Corn, noticed in our Jan. number, which we have distributed to several counties, and which we have no doubt will be found a valuable acquisition to this section—To **Joseph Walton**, Esq. St. Andrews, New-Brunswick, for a barrel of Potatoes, including the "Howards," "White Blue Noses," "Black Apples," and "Red Apples." They are beautiful samples, and shall have a fair trial. All these gentlemen will please accept our thanks for their favors, which it will give us pleasure to reciprocate should an opportunity occur.

Trial of the Centre-Draft Plows.—The report of the Committee, under whose supervision this trial was made, was received too late for insertion in the present number, and we are therefore under the necessity of postponing it till our next.

MONTHLY NOTICES.

☞ We would remind our readers that Mr. **Prentice**'s great sale of pure bred Improved Short Horned Durhams, is to take place at Mount Hope, near this city, on Wednesday the 25th of this month. For Catalogue of Animals to be sold, see our May number.

Franklin College.—We are rejoiced to hear that this Agricultural Institution is in successful operation. Though opened only in January last, it has now upwards of eighty students. We make the following extract from a private letter from our friend **T. Fanning**, the originator and head of this Institution, and congratulate him upon the success with which his indefatigable and well-directed labors have been attended. Mr. F. says—"Our Agricultural College continues to flourish, and every day's experience confirms me in my long cherished opinion that mental culture can be connected with physical and moral education. We have eighty students, and enough applications to make one hundred. I will not trouble you with details; but I rejoice to have it in my power to inform you that the success in every department is better than I anticipated."

Cheviot Sheep, &c.—Col. **T. J. Carmichael**, recently of Westchester county, in this State, passed through this city last week on his way to Rock Lake, Jefferson county, Wiskonsan, where he is making preparations to enter into the wool-growing business on a large scale. He visited the western country last summer, and selected his lands, and made his preparations to receive his flocks this summer. He commences operations with about 2000, selected from the best flocks in Ohio, last year. Since his visit to the west, he has visited England and Scotland, for the purpose of ascertaining by personal observation, whether any of the foreign breeds of sheep there bred, would be likely to prove more profitable, in his situation, than those to be obtained in this country. After a careful examination into the matter, he made choice of the Cheviot sheep of Scotland, on account of their hardiness, the weight of their fleeces, and the value of the wool for combing purposes. He brought home with him thirteen of this breed of sheep, five shepherd's dogs, and a Scotch shepherd—all of whom are now on their way to Wiskonsan. We have no personal acquaintance with the Cheviot sheep, but from the fact of their occupying some of the bleakest and most exposed situations in Scotland, and being there admitted to be the most hardy of all the varieties belonging to the British islands, excepting the Black-faced mountain sheep, we have no doubt they will prove valuable in this country, particularly where hardiness and vigor of constitution are so requisite as they are in Wiskonsan. The mutton of these sheep is considered equal to any in the English market.

The Horse "Black Hawk."—A cut and description of this horse, to which we would call particular attention, will be found in another column of our present number. Since Mr. Jewett's description was written, we have seen the animal, and feel bound to say, that in our opinion, his excellencies are by no means exaggerated. Neither does our cut, which was taken from Mr. Jewett's delineation, give in any degree too flattering an idea of the original. It is in general, a faithful portrait, though it fails to give some of the prominent characteristics of the horse as strikingly as could be desired. For instance, the cut represents the head too large, and it does not show that beautiful contour, bold and intelligent expression, which cannot fail to impress every one who views this noble animal. It is impossible also, to show by any art of the pencil, the hard, bony, flat, and sinewy legs, which peculiarly distinguish Black-Hawk. It is not our province to favor personal interests in particular—we desire to encourage only what is or may be *generally* useful; and in speaking approvingly of this horse, we cannot but feel that we are doing the country good service. More particularly of his qualities, or of the stock to which he belongs, we have not now room to remark—we shall have occasion, however, to speak more fully on the subject of *horses* in our future notes of a late trip to Vermont.

Hon. **H. L. Ellsworth.**—This gentleman has resigned his place as Commissioner of Patents, and gone to farming in Indiana. We are glad to learn, however, that at the request of the President and the new Commissioner of Patents, Mr. Ellsworth will continue his labors on the subject of agriculture; and now that he has more leisure, he will undoubtedly make these Reports, which have excited so much attention, far more valuable than heretofore.

Cream Hill School.—This school, under the direction of Messrs. S. W. and T. S. **Gold** and T. R. **Dutton**, is located at West-Cornwall, Ct., near the Housatonic Rail-Road. One object of the institution, is to give both scientific and practical instruction in agriculture and horticulture, embracing the most approved method of tillage, rearing of stock, cultivation of trees, the laying out of grounds, &c. &c. A portion of each day will be alloted to these objects. The farm on which the school is situated, consists of 200 acres, with convenient buildings, surrounded by a picturesque country scenery, in a location unrivalled for healthfulness. We are glad to see such schools increasing, and shall be glad to learn that they are well sustained, as they certainly ought to be.

☞ Complete sets of "**The Cultivator**," well bound, can be obtained a J. W. **Cook**'s Agricultural Warehouse, Vicksburg, and of F. & J. **Beaumont**, booksellers, Natchez, Miss., by whom subscriptions for this paper will be received.

Early Peaches.—Col. **Summer**, Editor of the South Carolinian, Columbia, says that he received on the 5th May, some beautiful Nutmeg Peaches, perfectly ripe, from Capt. Henry Lyons.

FOREIGN ITEMS.

The latest accounts from England, represent the prospects for the grain crops as favorable. March was cold, and the fore part of April was dry, but timely showers came on the latter part of the month, and the weather the beginning of May was auspicious. Complaints are still made of the introduction of foreign live stock, "under Mr. Peel's famous tariff," and the British agriculturists are pronounced "as a body in a more depressed state, than has been the case for years past, showing the mischievous effects of the withdrawal of protection since 1842." A competition with the British farmers in the corn trade from abroad, particularly from the Baltic, is much feared, and it is said "there can be no doubt that during the summer, supplies to an extent seriously to injure the English grower, will reach them." Importations of bread-stuffs are not expected from Holland or France, as they are dearer than in England, neither are they looked for from the Mediterranean ports. Respecting the inducements for shipments of flour from this country to England, the Farmers' Magazine says—"comparing quotations there, with the prices here, the encouragement to make consignments to Great Britain is not very great." The receipts from Canada, it is anticipated will "increase from year to year, as a stimulus has been given to the cultivation of wheat by the Canada Bill, which, however favorable to the colony, must prove extremely injurious to the British grower."

Rotation—theory of vegetable excrements.—Dr. Playfair, in his late lecture before the Royal Agricultural Society, remarked that rotation was not a means of *improving* the soil. The soil remained in the same state, as far as the plant was concerned, and the great advantage of it consisted in the fact that one crop could be grown while the soil was preparing for another. The theory of De Candolle, with regard to plants throwing out excrementitious matter injurious to themselves, and beneficial to other plants, was now generally exploded, and many facts were entirely opposed to it. Thus in Hungary, there was never a poisonous effect produced on the wheat crops, although in some districts, wheat had been sown in succession for centuries.

Flour from Wheat.—The following table, interesting to farmers as well as to millers, shows the quantity of first, second, and third rate flour, produced from wheat of various weights per bushel, with the bran and waste. The numbers of parcels in the experiments tried, and the quantities of each, are given in the first and second columns.

Lots.	No. of bush.	Wt. per bu	FLOUR.				Bran.	Waste.	Total.
			Fine.	2ds.	3ds.	Total.			
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
4	480	56	......	45.8	......	45.8	9	1.2	56
5	760	58	40	5.5	2.3	47.8	9	1.2	58
8	1400	59	41	5.8	2.2	49	8.8	1.2	59
7	1600	60	42.5	5.5	2.0	50	8.8	1.2	60
15	2192	61	44	5.2	1.8	51	8.8	1.2	61
7	1088	62	48.5	2.5	1.5	52.5	8.5	1.0	62

Birds *vs.* Wire Worms.—A correspondent of the Sporting Magazine states that no fewer than 1225 of those destructive larvæ were taken from the crop of a hen pheasant in January last. This of course could have been only about one day's consumption. (That number could not have formed a mass much smaller than half a pint—said crop must have been closely packed. Could there have been a mistake of one figure ?)

Black Leg in Calves.—We noticed sometime since in a Scottish paper, an article on rearing calves, in which it was stated that feeding them with oil-cake and turneps or potatoes, in winter, was deemed a sure preventive of the dreaded disease called *Black leg*. At a late meeting of a farmers' club in England, several members spoke of this disease, one of them stating that a large and excellent breeder effectually prevents it by cutting down to the veins of the foot and dividing them just before they branch off to each hoof; he divides the vein in every foot of the calf. Another member stated that he had frequently lost calves by black leg, but believed that by proper precaution, the disease may be prevented. He puts a rowel in each calf, and gives each an ounce of saltpetre once in three weeks. Since adopting this course, he has not lost one. It seems that a healthy circulation of the blood is a great object aimed at, and this is much promoted by such kinds of food as keep the bowels properly open.

ANSWERS TO INQUIRIES.

"**Clock Pump.**"—*A Farmer.*—We know nothing of such a pump as is inquired for—should feel obliged to any one who would furnish information in regard to it—the fixtures, cost, &c. But would it not be better to work the pump by wind? especially as it is designed for the prairies. A notice of a wind-mill for this purpose was given in our last vol. page 202. It is made by George Parker, Corrina, Penobscot county, Maine—the cost for a well, said to be twelve dollars.

Kidney worm in Swine.—"*A Subscriber.*" (Greenville, S. C.) Lye of wood ashes, or soap-suds, given with food, generally counteracts the disease, if taken in season. Copperas is also recommended, together with slops strongly impregnated with salt and red pepper, at the same time rubbing the loins well with spirits of turpentine. Arsenic has been used in desperate cases, but we do not know the precise quantity proper for a dose, and as it is a dangerous remedy, should never be used but as a last resort.

Harvesting Machines.—*J. C. N.* (Lake C. H. Ind.) We have never seen the operation of either of the machines you mention. Both Hussey's and McCormick's are probably good, but we cannot say whether either of them is used for cutting grass.

Shepherds and Shepherd's Dogs.—*J. P. M.* Franklin, Tenn.—Shepherds could be had from this vicinity, and we presume dogs, also, might be had here. Those having them for sale, or knowing where they can be had, will confer a favor by stating the price, &c.

Cheese.—Mr. Thayer, (Aurora, O.) We are not certain what kind of cheese you allude to. If any of our friends in Connecticut, where you suppose the article is made, can inform us in regard to a kind of cheese of eight to ten pounds weight, of particular value for shipping, they will confer a favor.

Salt and Lye for fruit trees.—*L. H. M. (Bristol, Ct.)*—The quantity of salt which it will do to put round a fruit-tree, depends a good deal on the size of the tree. If the tree is a foot through, we should not suppose it would hurt it to put round a quart. But we have had no *experience* in the matter. As to the strength of lye for washing fruit trees, we have seen recommended a pound of potash to two gallons of water. A lye of the same strength as near as could be ascertained, made from wood ashes, would probably answer as well.

Tobacco.—"*A Subscriber,*" will find some information on the culture of this article on page 89 of our last volume.

A. N., *Westfield*, and others.—The person advertising, requires capital to the amount of some thousands of dollars.

Yale Literary Magazine.—This is a periodical published under the direction of the students of Yale College, New-Haven, Ct., which has now reached its tenth volume. Judging from the numbers which we have seen, it is an interesting work, managed with an ability and judgment which does honor to its youthful conductors. The number for January contains a well-written article on agriculture. The same number has a beautiful engraving of Yale College Library, and also a graphic picture of "Yale College, and the College Chapel in 1786." Published by A. H. Maltby, $2 per annum.

Indiana Farmer and Gardener.—Agricultural publications appear to be rapidly increasing in the west. A new one has just reached us from Indianapolis, the name of which we here give. Rev. H. W. Beecher, an able and interesting writer on horticulture, is to have the editorial charge of the paper, and it is published by S. V. B. Noel & Co., semi-monthly—16 pages 8 vo., at one dollar per annum.

CUTTING AND CURING HAY.

From our notes of the discussion, on "the proper stage for cutting grasses, and the best modes of making hay," at the seventh Agricultural meeting in this city, we give the following:

Mr. BEMENT said he had formerly been in the habit of cutting timothy grass quite late. It was easier cured after it got pretty ripe. But he found in using hay thus cut, that it wanted substance, and he had ascertained that the best time for cutting was while the grass was in blossom. In making clover hay, he had adopted Judge Buel's plan. He thought it best not to expose it much to the sun. His practice was to cut it in the morning, let it lay till noon, and then cock it, and let it sweat for two or three days according to the state of the weather. On putting the hay in the barn, he had used about four quarts of salt to the ton. Hay thus managed came out in the spring very bright and sweet. In the ordinary way of curing clover hay, the best parts are wasted.

Mr. HOWARD was aware that there were different opinions as to the proper stage for cutting grass; but he thought the observance of certain principles might afford a guide in the case. For example, the stems of grasses were filled just before the formation of the seed, with a starchy or saccharine substance. In perfecting the seed, the stems were exhausted of this substance, it being consumed in forming seed. Now if the herbage is the object, the plant should be cut before the nutriment has passed from the stems. If seed is the object, the plant must of course be allowed to attain a good degree of maturity. Hay made from ripe grass may "go farther," or "spend better," as the argument is; and it is admitted that this may be true, for animals are less inclined to eat it; but this is no proof that it is more nutritive. He spoke of the different modes of curing hay, with nearly all which, he said, he had been acquainted. Clover hay was altogether better when cured in cock, than by any other mode he knew practiced. All hay was better for undergoing to some extent, a sweating in the cock. Coarse timothy was thus rendered much softer, and was less strawy and stiff, and every description of hay was less likely to be "mow burned."

Mr. BETTS was not in favor of mowing a great deal of grass while the dew is on. He was in the habit of spreading the swaths as soon as the ground was dry, and he always had it well cocked up before night. The next day, if the weather was good, he opened it again if it did not dry enough he put it together again; but his object was to get it so that it would do to put it in the barn. He was in favor of using a little salt with it. He had sometimes found his hay heat too much in the mow. From being hurried, he had occasionally put a load in the barn too green. To stop the heat and fermentation which had ensued in such cases, he had made holes in the hay with a crow-bar, and scattered in salt. In this way he had stopped the fermentation and saved his hay in very good order.

Mr. GARRETSON, of the Assembly, from Dutchess county, said he generally cut from 150 to 200 tons of hay per year—chiefly timothy and red-top. He generally begun when the grass was in the blossom. His method was to cut in the morning, spread the swaths lightly, and in the afternoon put it in cocks. The next day, if the sun came out, it was again spread, and if made enough, put in the barn, with a little salt sprinkled on it. About three quarts of salt to the ton was as much as he used. There was danger of using too much. He had formerly used more salt, and was satisfied his animals, particularly sheep, had suffered by it. It occasioned scouring—and by keeping their bowels out of order for some time, they died. He usually got about two tons of hay to the acre. In the latter part of the season it would sometimes make enough in one day.

Mr. MACK always directed his men to make hay as rapidly as possible. He had often made it and put it in the barn in one day, and never had better hay. He was always particular to secure it from dew when it must be left over night. It is said by some who had much practice in making hay, that it is never injured from its own internal juice, but only from rain or dew.

Mr. SOTHAM did not like the plan of salting hay, neither did he like the hay that was made in one day. If it could be so made that it would take no hurt, in one day, it must have been too dry for good hay before it was cut, or else very light burden. He would as soon have good bright straw for cows or sheep, as timothy hay after it had gone to seed. He cuts clover when a part of it is in blossom and part in the head. Cuts all his grass early. It takes longer to make hay cut thus early, but for cows and sheep, especially, it was a great deal better. The objection to salting hay was, that animals were forced to eat salt whether they wanted it or not, and it made sheep scour. His hay came out of the barn of a bright green color, and his stock would fatten on it. There was another great advantage in cutting early—the roots retained their life and strength better, and the after feed and future crops were much more abundant. He did not like timothy for hay—he never saw it in England—the farmers there thought it was too coarse and wiry for stock. Rye grass made good hay—would yield in England two tons per acre. Pacey's was the best variety—red-top made good hay. He had tried sainfoin—it did not come up well—there was always a difficulty about it in this respect, because the seed was good only a short time—it could hardly be brought across the ocean and vegetate. If we could get it here, it would be very valuable, especially for dry lands. As to pasturing mowing lands, some land would not bear it—particularly if wet—but he fed his dry lands very close, in the fall, with cattle and sheep, and experienced no damage from it.

Judge CHEEVER said he would cut his clover in blossom, not sooner. He would let it it take the sun one day, but not enough to have the leaf break off, then put it in small cocks and cure it, until by a few hours drying, by turning over and breaking the cocks, the fluids would be so far out of it that it may be housed without hurting. The length of time necessary to cure it will depend upon the state of the weather, and the larger or smaller growth of the crop. Upon this the farmer must exercise his judgment.

He would not cut timothy until it had passed out of the blossom. Professor Davy, in his Agricultural Chemistry, says that 64 parts of clover hay cut in blossom, produced 10 parts of nutritive matter, and the same taken in seed. Timothy, 10 parts in blossom, and 23 in seed. This in the timothy is probably too much: but that the nutritive matter in timothy improved after the fall of the blossom, he had no doubt. Red-top comes to maturity later, and he did not think there was much difference whether cut in blossom or soon after. He believed timothy cut in blossom would, pound for pound, produce more milk when fed to cows or sheep, than it would cut afterwards; but for horses and other stock, he thought it more nutritious to stand a little longer. It certainly improved in weight.

He preferred mowing his hay, as far as he could, when free from dews or water. He let the swaths take the sun a few hours, until the top got a little wilted or seared, before turning. It thus held up the greener parts when turned over and spread, and permitted the air to circulate under it; it also gave the ground between the swaths, time to dry, which was important in hastening the curing. In this way he avoided the necessity of turning the hay after being spread, which was one of the most tedious processes through which the hay had to be passed, and of course the most expensive. He never permitted his hay to take a dew when it had sun enough to wilt it considerably, if he could help it. The dew discolored it, and he had never been able to restore the fine fresh color afterwards. He preferred letting his hay stand over night in the cock. He could then better tell of its fitness to be housed. It is very easy to break up the cocks and give it more sun if necessary; and the slight fermentation or sweating in the cock, which is checked and dried off in carting, is a great preventive against heating in the mow. Hay heated in the mow is sure to be discolored. Some people insist that it is not injured for feeding, especially to cattle. It may be so. I know that flour, corn or oats, which have been heated until they are musty, are thought not so good. I do not know why hay should be.

On the approach of rain, I always put all the hay that has had any sun of consequence, into the cock. If the storm is a long one, it may turn yellow, so that it cannot be restored, but it will retain most of its nutritiive matter and its weight, whereas if left spread out to take the rain, it loses both, and is much worse discolored. I never use salt upon my hay, but upon compulsion. When the weather is good, I dry my hay sufficiently to keep, and as soon as I can, I house it; but sooner than leave it out to take a storm, even in the cock, I would put it in a little short dried, and apply salt to save it, as I would sooner have it salted than musty.

Dr. Lee thought it the best way to mow grass after the dew was off—spread it, dry it as much as possible, and rake it into winrow. If it was dried enough, and it would frequently be so, he would load it from the winrow, and save the labor of cocking it up.

PASTURES.

Land which is best adapted to pasturage, we think should never be plowed. This rule is particularly applicable to moist grounds, and those situated on hill-sides and mountains. We have frequently noticed a great difference in the production of grass on hill-sides, owing entirely to one portion having been plowed, and the other portion not having been plowed. The grass on the unplowed part is always much the best. In many instances, it is almost impossible to use the plow on a hillside, without rendering the ground liable to be washed and gullied by rains; but if it is sown with grass-seed without plowing, the numerous fibrous roots of the trees and shrubs, will hold the soil together till it becomes thoroughly netted together by the grass-roots.

The natural condition of land as it is cleared of the forest, is generally favorable to the growth of grasses, as may be seen by the readiness with which they come in and flourish; and we believe that no mixture or reversion of the soil can be made with any advantage, for the production of grass. Drains may be made if needed, to make the ground sufficiently dry. The use of the harrow, after the growth has been properly cleared off by the axe and mattock, will put the surface in a good state for the reception of clover and grass-seeds, or for a crop of small grain, if it should be deemed advisable to sow one. Should young trees, bushes or sprouts, from the stumps, spring up, let them be cut out with the mattock; and should the grass die out, or mosses come in, a sharp-toothed harrow drawn over the ground, and seed sown in August or first of September, with a dressing of plaster, compost of muck and ashes, or rotted manure, will bring on a fine sward of good herbage. On lands naturally adapted to the growth of grass, the use of top-dressing, or a re-sowing of seeds, will seldom be necessary, for under a judicious course of feeding, the pasturage, instead of declining, will actually improve for several years. The occasional use of a light, sharp harrow, may however, increase the growth of grass, by preventing the sward from becoming "bound."

It is very important to obtain the best grasses and herbage plants for pastures. In making a selection, due regard should be had to the adaptation of the different species to climates and localities. Some of our indigenous kinds are excellent, and perhaps best, their hardiness and nutritive qualities being considered. For the middle and northern States, one of the most valuable sorts is the *Poa pratensis*, sometimes called "Kentucky blue grass," the "spear grass" and "June grass" of the northern and eastern States. On rich soils, not too dry, particularly those of a calcareous (limestone) nature, its produce is remarkable. It starts very early in spring, and grows late in the fall, but being effected more by drouth than some other kinds, does not always grow as much in the middle of the summer, though from the great tenacity of life in the roots, it seldom dies. It propagates itself by tillering, or by many lateral roots, as well as by seed, so that it spreads rapidly, and as other grasses die out, it soon covers the whole ground. Its nutritive qualities are comparatively but little destroyed by frost, and on this account it is highly esteemed for winter pasturage, in sections where but little snow falls. By keeping the stock from fields well set with this grass, so that it may make a good growth in the fall, excellent grazing is afforded to cattle and sheep during winter. Its leaves form a thick matted growth, the surface of which may be bleached a little by the frost, but the lower portion will be almost as fresh and green as corn, and will even in this condition fatten stock of any kind.

Another species of the same family as the above, and sometimes mistaken for it, is the *Poa compressa*, flat stalked meadow-grass, sometimes called "green-grass." It is more hardy, and is believed to be more nutritive than the Poa pratensis. It delights in warm loams, and is often very troublesome in the cultivation of wheat and other crops, and from the difficulty of killing it, it is generally considered a pest. Its produce is less than the before mentioned kind, but it is exceedingly nutritive, and much relished by cattle and sheep. Its stalk, even when the seed has ripened and fallen off, is quite green, and though it appears hard, animals always eat it greedily. It will grow in a colder atmosphere than any other grass we are acquainted with, is the first to start in the spring, the last to stop growing in the fall, and keeps greener than any other through the winter. For the advantage it affords as an early "bite" for sheep, particularly for nursing ewes, it might be an object to appropriate a suitable lot for it, which it would not be necessary to cultivate for other purposes.

Several species of the *Agrostis* family of grasses are indigenous to this country. The "red top," called in Pennsylvania and some other sections, "herds-grass," appears to be the *Agrostis vulgaris*, or "bent-grass" of the English books. In Massachusetts, there are cultivated two varieties generally known under the name of red top; one considerably larger and later in flowering than the other, and is better adapted to cold moist lands. The small kind is however held in great estimation for its nutritive qualities, especially for feeding working oxen, for which it is, in some districts, thought more valuable than any other grass. The large kind is generally most esteemed for pastures, as it is less affected by drouth and its growth is more constant through the whole season. On the whole, it is well worthy of cultivation as a grass for grazing.

Another species of Agrostis indigenous here, is closely allied to, if not identical with, the European "fiorin," *A. stolonifera*. It is a very nutritive grass, and is much relished by stock. It is, however, only adapted to particular locations. From its habit of extending itself by *stolones* or lateral roots, it is peculiarly valuable on loose spongy, or boggy soils, on which it forms a firm sod that may be trodden by sheep or light cattle with safety. It is also the best grass which can be used for sodding the sides of open ditches, or water-courses, which it does so effectually that the banks cannot wash, and are not liable to be broken; they presenting, when set with this grass, a beautiful smooth green turf, most agreeable to the eye.

Phleum pratense, "meadow cats-tail," "timothy," or the "herds-grass" of New-England, is much cultivated in this country for hay, of which it produces a great yield, and where the ground is rich and moist, it may be very profitably introduced with other grasses in pastures. In some sections it is pretty extensively used for this purpose. It is a native of this continent, and was brought into notice in England by Timothy Hudson about the year 1780, according to Loudon.

Of the clovers, there are two or more species indigenous to this country, viz., the white, or "Dutch clover," *Trifolium repens*, and a kind which we have not found in any botanical catalogue, called in the western part of the country, "buffalo clover." The latter is perennial, resembles the common white clover in the color of its blossoms and habit of growth, and in the height and size of its stem, is a medium between the white and the common red clover. The common white clover is usually much esteemed for pastures, combined with the grasses, but is thought not so valuable by itself, as it is deficient in quantity, and too much relaxes the bowels of animals when feeding on it.

There are a few grasses and herbage plants not commonly cultivated in this country, which it would be desirable to have introduced and fairly tried. The "orchard grass," *Dactylis glomerata*, is grown in a few sections, but is not generally known. As a pasture grass, it is worthy of more general culture. It produces abundance of leaves, starts very quick after being eaten off, and grows very rapidly. It should be sown thickly, (three bushels seed per acre, is recommended by English writers,) to prevent its growing up too much in bunches or tussocks.

The perennial rye-grass, *Lolium perenne*, is recommended for sheep pastures. We have tried this grass, and think highly of it for this purpose. The meadow fox-tail, *Alopecurus pratensis*, is well suited to moist pastures, and in England is esteemed one of the best of grasses both for grazing and hay.

The sainfoin, *Hedysarum onobrichis*, is considered one of the most valuable herbage plants known in England. It belongs to the leguminosæ family, but is in many respects quite different from any of the clovers. It is said to grow spontaneously on the calcareous mountains of the middle and south of Europe. It flourishes well on dry soils, and by means of its long fibrous roots, is said to find moisture even in the driest seasons. It is much esteemed both for pasturage and hay, and is said to afford on some soils a greater amount of nutriment per acre, than any other plant grown for those purposes. It is also recommended for keeping the sides of hills from washing. The roots will live in the soil, and retain their vigor many years.

A species of clover called in England, meadow-clover, cow-clover, or cow-grass, *Trifolium medium*, is perennial, and is much esteemed in pastures. It resembles in appearance, the common biennial red clover, *T. pratense*, but the leaves are narrower, and it grows to a less height. It is very desirable that this plant should be tried in this country. "A poor sandy soil it is said, will produce a good crop of cow-clover, that would not produce half a crop of the common red clover."—Loudon.

Several species of the Trifolium genus pass under the common name of *trefoil*. The most valuable of these is thought to be the French yellow trefoil, *Medicago lupulina*. It is perennial, or at least lives many years. It is well relished by stock, both in its green state, and when made into hay. It is thought of considerable consequence in pastures.

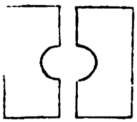
CUCUMBERS AND MELONS—PROTECTION AGAINST BUGS.

Cucumbers and melons for pickling, may be planted till the first of July. New land lately cleared from the forest, is best for vines, if it can be had; next to this, a piece which was the last year in sod and planted with corn or potatoes, is to be preferred. It should be of a medium state of richness and dryness, a better crop, so far as our experience goes, being more generally obtained from such land, than that which is extremely rich. Make the hills seven or eight feet apart. A very common error is to make them too close, so that the vines have not room enough, and they smother each other. Hog manure, that is pretty well rotted, or that which is in a green state, well mixed with muck and leached ashes, will do well. The manure of pigeons and hens is also excellent, but is very strong, and should be mixed with double its bulk of loam or muck. Dig the holes for the hills so deep that a peck at least of manure, may be put in without coming above the surface of the earth, level it off and plant the seed. To provide against the bugs and worms, it is best to plant a large quantity of seed. If there is twelve to fifteen plants to a hill while they are small, no injury will be done; but they should be thinned to no more than three, just before they begin to run, and have got well out of the way of insects. To keep off the bugs, millinet-boxes are the best preventives while the plants are small, and that is the time they are most likely to be injured. The boxes are cheap—made of pine boards six inches wide, merely nailed together square—the edge of the boards on two sides grooved—the millinet drawn over and fastened by tongues driven into the grooves. They should be large enough to fairly cover the hill without crowding. Plaster, coal ashes, or leached wood ashes, scattered over the plants while the dew is on, have some tendency to keep the bugs from eating them, but are not altogether effectual preventives.

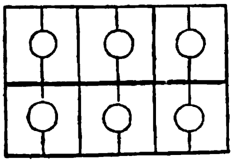
Several years ago we made trial of water in which hen dung had been soaked until the water fermented, for keeping off bugs from vines. An old hog-trough was carried to the piece, two or three shovels full of clean manure from the hen-roost thrown into it, with three or four gallons of water. It soon fermented, and the odor from it was very offensive. A half pint of this liquid was poured on each hill each alternate day. It kept off the bugs almost entirely, and made the vines grow astonishingly. They were melons, and produced the heaviest crop we ever saw.

CULTURE OF STRAWBERRIES.

The practice of placing flat stones under the branches of strawberries is frequently recommended. The object is to keep the fruit clean, and hasten the ripening and improve its flavor, by the radiation of heat from the stone. A writer in the Gardener's Chronicle recommends a very simple and cheap substitute for stones. He suggests that *tile* might be made of the form shown in the annexed cut, that would answer well, look neat, and cost but little. It is advised that they be made about 12 inches square, preserving room for the average size of the stems. After a season, in preparing new beds, the runners might be placed at equal distances, so that the bed would be entirely covered by the tiles, as shown in fig. 63. A bed 40 feet by 6, would require but 500, and their cost would be but little, as they could be made by any brick maker. We should think it hardly proper for the tiles to lie on the ground the whole season, as they might sometimes keep the heat too much from the ground; but we should suppose they would answer a good purpose if placed round the plants, after the ground had been worked and got well warmed in the spring—they would keep the soil from drying up, and entirely prevent the growth of weeds and grass.



[Fig. 62.]



[Fig. 63.]

AGRICULTURE IN NOVA SCOTIA.

We have received the third and fourth Reports of the Central Board of Agriculture for Nova Scotia. It appears to be the duty of this Board to receive the reports of the local societies, and to submit in a general report of its own, a view of the operations of all. It appears that the number of local societies in the Province, is no less than thirty-eight, some of which have been in operation for several years. The Provincial Government has placed liberal sums of money at the disposal of the Central Board which have been annually distributed among the societies of the different sections, for the encouragement of agriculture, and the result seems generally to have been highly flattering. A decided improvement is seen in their modes of cultivation, which has of course been followed by better crops. Improved implements of husbandry have been introduced from Massachusetts, and in some instances from England and Scotland, some of which, especially the Centre Draft Plow of Messrs. Prouty & Mears, are spoken of as being greatly superior to those which had been in common use. Bulls of the Durham, Hereford, and Ayrshire breeds, have been imported, and their progeny are said to be evidently superior to the former stock; those from the Durham and Hereford bulls, in particular, are said to winter better than the common stock, are much more thrifty and better shaped. Sheep of the Dishley or Leicester, the South Down, and the Chevoit breeds have also been introduced, and are every where spoken of as succeeding well, and all are much esteemed, being decidedly more profitable than the common stock. The Berkshire swine have been quite generally tried, and in most cases, are spoken of as superior to those formerly kept. Some stallions of the Morgan and Morgan and Bellfounder stock, have been introduced, and the foals by them are spoken of as being "precisely the stock which it is wished to rear." Upon the whole, the prospects are very favorable to the improvement of agriculture and the condition of the farmer throughout the Province.

PRODUCTS OF CALEDONIA COUNTY, VT.

Though located in the north-east corner of one of the coldest States in the Union, this county has long been noted for the independent condition of its inhabitants, and the large amount of its agricultural productions. If we mistake not, the census of 1840 indicated a larger amount of property, and a greater amount of produce, for each citizen of Caledonia county, than was exhibited for any other part of the country. We have received from Mr. J. P. FAIRBANKS, Secretary of the Agricultural Society of that county, a copy of the *Caledonian*, containing some valuable facts and statistics in relation to dairy products, from which we give the following summary:

"Dennis May, Waterford, kept 8 cows, and sold 750 lbs. of butter, and 900 lbs. of cheese. Robert Gilkerson, Barnet, kept 8 cows, and sold 840 lbs. butter, 120 lbs. cheese. Cloud Harvey, Barnet, kept 13 cows, and sold 1765 lbs. butter. The above was in addition to the amount consumed in their families. Lucius Freeman, Waterford, 7 cows, made 950 lbs. butter, 300 lbs. cheese. William Watson, Barnet, 21 cows, made 4000 lbs. butter. Johr Abbot, Barnet, 10 cows, made 2,198 lbs. butter. Francis E. Fuller, Hardwick, for 10 or 15 years has kept 10 or 12 cows, and made on an average 200 lbs. of butter from each cow. Mr. Watson's cows averaged 190½ lbs. of butter, and Mr. Abbott's averaged 220 lbs. to each cow. The latter was sold at 18 cents per lb. and $2 additional on the lot. Perhaps cases are not rare of single cows that have yielded 200 lbs. of butter in the season; but it is believed that instances are not common, where a stock of from 10 to 20 cows, with no other keeping than good pastures, have produced on an average so large a quantity."

AGRICULTURAL ADVANTAGES OF N. JERSEY.

We are indebted to H. W. S. C. of Oatlands, near Burlington, N. J., for some remarks on the facilities which are offered by that section of the country, to emigrants from New-England. Our correspondent seems well acquainted with different sections of the country—is a native of Massachusetts, but has passed several years in the west as a surveyor, and settled in his present location from a conviction that in no other situation he had seen, could a man with a small capital, commence farming under so favorable auspices, a conviction which has only been strengthened by three year's experience. Of the advantages of the neighborhood, the first mentioned is facilities for markets. Philadelphia is twenty miles below, with which there is communication by the Delaware river and by rail-road, and the competition for freight between boats and cars, affords cheap transportation. The market train of cars will top any where on the road to take freight. The farmer there is as near Philadelphia as the one within six miles, who hauls his own produce, and as the land is much cheaper than near the city, it follows that the farmer in the location mentioned has the advantage. The rail-road also connects with New-York, which city is reached in four hours, and there are at Burlington, plenty of purchasers of produce, always eager to buy any marketing that is rare and nice. The idea that New-Jersey is little better than a sand-bank, which is entertained by many who have only seen that portion of the State crossed by the rail-road from Amboy to Bordentown, our correspondent thinks would be no longer retained, if the section in which he is located could be seen during the season of crops and cultivation. He states that he cut last year upwards of two tons of timothy hay per acre on land which had received no manure for four years. But the region is peculiarly adapted to fruit and vegetables, which our friend thinks may be produced with great advantage and profit. As he had suffered severely from fever and ague in the west, he took care to satisfy himself of the perfect healthiness of his present location, before settling, and has had every reason to be satisfied on this account. All that is wanted, in his opinion, to render agriculture profitable in that region, is an enterprising class of farmers. They have, he says, already some good farmers, but more are wanted to give character to the neighborhood. The climate is in his estimation, a happy medium between north and south. During the past winter, farmers were engaged in plowing during a great portion of the month of January. In conclusion, he says he "would advise no man who has a farm on which he can support himself at the east, to sell out for the sake of doing better elsewhere, because, as a general rule, he must meet with some loss for an uncertain gain; but there are many shrewd men with a small capital, say from two to six, or ten thousand dollars, who might fix themselves here with a certainty of receiving a good interest on their investment, and an almost equal certainty of their property increasing in value, and it is for such men that this sketch is written."

NEW-YORK STATE AG. SOCIETY.

At the regular monthly meeting of the Executive Committee of the New-York State Agricultural Society, on the second Thursday of April, the Recording Secretary reported that he had received, since the last meeting, communications and books for the Society, as follows:

1. A Letter from ALEXANDER DJUNKOVSKY, Perpetual Secretary of the Royal Imperial Economical Society of Russia; accompanied by a volume of Extracts from the Reports of said Society, in the German language.
2. Two volumes of the "Transactions of the Royal Agricultural Society of Jamaica," from that Society.
3. A Letter from JOHN H. REDFIELD, Corresponding Secretary of the New-York Lyceum of Natural History, with three volumes of the Annals of the Lyceum.
4. A Letter from the Hon. WM. YOUNG, President of the Board of Agriculture of Nova Scotia, with the Annual Reports of the Board.
5. A Letter from THOMAS BRIDGMAN of New-York, with a copy of the new and beautiful edition of his "Young Gardener's Assistant."

A vote of thanks was passed for these several donations to the Society's Library, and copies of its Transactions ordered to be forwarded to the several Societies above named.

The following is a copy of the letter from the Imperial Economical Society of St. Petersburg:

RUSSIAN IMPERIAL ECONOMICAL SOCIETY,
Office of the Perpetual Secretary,
St. Petersburg, the 29th of January, 1845.

To the State Agricultural Society of the State of New-York, in the United States of America:

The Russian Imperial Economical Society, established in the year 1765, having for its object the improvement of different branches of rural economy, desires to enter into correspondence with your Honorable Society for mutual exchange of different experiments, observations and discoveries, in order to promote the national welfare of both countries. The Almighty having blessed the United States and Russia with immense tracts of fertile land, has pointed out to us that the principal occupations of both countries should consist in rural pursuits. Therefore we feel real sympathy towards your great nation, and the more so, because our Society has the honor of counting among its active and useful members, one of your distinguished citizens, the honorable Col. Todd, the Representative of your country in Russia.

Our Economical Society has for a long time expressed the wish of communicating with Agronomical Societies in other countries, but as our annual accounts of proceedings and the transactions of our Society are published in the Russian language, which is very little known abroad; so the Society commenced publishing extracts of the annual reports and of the transactions in the German language, which is generally understood in civilized countries, and the Society conceiving that these publications would be the means of communication between the two countries, has therefore charged me as its Perpetual Secretary, to forward to you a copy of the said publication;

and I take this opportunity to add, that I am very happy to be the organ of expressing the sentiments of the Society towards your great nation.

ALEXANDER DJUNKOVSKY,
Perpetual Secretary of the Society, Actual Councilor
of State of the Emperor of Russia, Knight, &c.

☞ Persons to whom Medals of the Society have been awarded, can obtain them on application to LUTHER TUCKER, Rec. Sec'y, Albany.

The Diplomas of the Society will not be ready for delivery, before September next.

All cash premiums remaining unpaid, will be paid on application either to T. HILLHOUSE, Treasurer, or to the Recording Secretary, Albany.

☞ The Transactions of the Society for 1844, are now ready for delivery. Each County in the State, is entitled to 20 copies, on paying for the binding, which costs $5, for the 20 copies. Orders for them, to be addressed to LUTHER TUCKER, Rec. Sec'y, Albany.

DESTRUCTION OF WEEDS.

The present month is one of the most rapidly growing seasons of the year. The farmer's crops not only make great progress, but weeds too are ever vigilant in thrusting up their heads and asserting *their* claims to the ascendancy. If they once get the upper hand for a week, the crop may feel the injurious influence for the whole season. Let them be attacked then at the very outset.

Weeds among root crops and corn, are destroyed with one-half, and often with one-fifth the labor otherwise required, if taken when about one inch in height. In a week or ten days they will be five or six inches high, will cost three or four times as much to destroy them, and will have exerted a seriously injurious effect on the crop. Hence it would be cheaper to hire a man at a dollar a day, at first, than at half a dollar afterwards.

By adopting this course the last year with ruta bagas, hoeing them well *before the rough leaves were an inch long*, the work was done with great ease and expedition: and although the land was hard, dry, and not rich, and so stony as to render broadcast sowing necessary, the whole cost per bushel was only about three cents and a half.

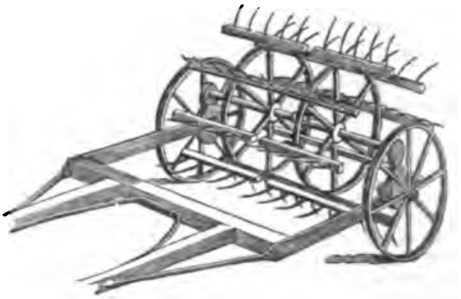
A large portion of the failures in raising ruta bagas, beets, and other root crops, have resulted from the heavy growth of weeds during the early part of the season, which are not unfrequently suffered to attain a foot in height before they are destroyed. The stunting effect on the crop, and the labor of weeding are obvious.

Repeated plowing and harrowing of the ground for some weeks before sowing roots, to clear it effectually of weeds, is a very economical operation, and saves much labor in weeding.

An excellent practice for keeping potatoes clean, where they are planted in drills, is to pass a fine-toothed harrow over the whole surface, just before they come up, to mellow the surface and destroy the weeds. When they are up, plow *from* the plants; then a light furrow towards them, thus leaving the hills or ridges *broad*. The hoe is only used for smoothing the surface and destroying what weeds escape.

It is well known that leaves are the *breathing* organs of plants; and that if a plant is kept constantly stripped of its leaves, or excluded from the air, during the growing season, the root soon dies. Hence all kinds of perennial rooted weeds, such as Canada thistles and milkweeds, are soon killed if kept smothered beneath by repeated deep plowing. As soon as the first appear at the surface, invert the soil upon them, and the roots soon perish. We have known many instances, and in every case completely successful where thoroughly performed, where the Canada thistle was destroyed totally by deep plowing once a month through the season, and which prepared the ground finely for wheat before mid-autumn.

BEET ROOT SUGAR.—The total amount of beet root sugar manufactured in Great Britain and Ireland in 1844, was 5,597½ cwt., an increase of 1,753¾ cwt. compared with 1843. Of this, 3,420 cwt. were manufactured at Startford, in Essex.



HAY-SPREADING MACHINE.—(Fig. 64.)

We believe American ingenuity has never yet been exercised in the manufacture of hay-spreading machines. While many farm implements have occupied a large share of attention, hundreds of patents having been granted for modifications only of single machines, the few hay-spreaders ever yet used here have been imported from Europe. These having been in many respects defective and not adapted to our country, have not been very strongly approved; but if those of American manufacture could be obtained, as much superior to the English, as our hay-rakes are to theirs, they would prove a most valuable acquisition. It is partly for the purpose of directing our mechanics to this subject, that we give the above view of the English hay-spreader.

It consists, chiefly of a frame and wheels, resembling a low, one-horse cart; between the wheels a set of horizontal *rakes* are made to revolve rapidly, their motion being in a direction opposite to that of the wheels. This motion is given from the wheels, through cog-wheels, to the axle on which these rakes turn. It is obvious that the wheels must be attached to the frame, without any axle passing between them, as that would interfere with the motion of the rakes, the axle of which is nearly a foot higher than the hubs of the wheels. The teeth of these rakes, by their rapid motion, strike the hay in the swath, lift it upwards and scatter it behind the machine.

The *rakes* consist of light pieces of timber, five and a half feet long, (so as to spread two swaths at once,) to which are attached the iron teeth, which are spikes seven inches long, fastened loosely so as to swing freely, and to fall back when they strike stones or other obstructions. Centrifugal force keeps them straight at other times. In long hay, a very thin, broad cylinder, incasing the frame-work which supports the rakes, is necessary to prevent clogging. As the hay frequently winds upon the hubs of the wheels, a covering upon them like the mud-protector of a carriage, would be of value.

Many years ago, a machine of this kind was introduced from Europe, by Gen. Wadsworth. W. W. Wadsworth of Geneseo, informs us, that after using it himself several years, he abandoned it, having become satisfied that hand-labor was more economical. The long heavy grass of the meadows on which it was used, rendered its successful operation more difficult than in light short grass.

A machine was also brought from England by Humphrey Howland of Cayuga county, and has been used for several years on his meadows. Though much heavier than necessary, with one hand and two horses it will perform the labor of about ten men. One horse goes before the other, and to clear the grass effectually and do the work well, they need to be driven on a trot, at the rate of about five miles per hour.

Machines of this kind are in much use in some parts of England, more particularly in the vicinity of London. Though somewhat varied in construction, they all appear to operate on a similar principle. The cost in London is about twelve guineas, amounting with freight and costs, when brought to this country, to nearly a hundred dollars. They could probably be made in this country for fifty dollars, perhaps for much less; and if of a lighter construction, and with a greater multiplying power in the cog-wheels, and such other improvements as yankee experience could introduce, would doubtless prove on large farms a decidedly labor-saving machine. This would be quite a desirable object at the busy season of haying.

Notices of New Publications.

AGRICULTURAL EDUCATION, &c.

European Agriculture and Rural Economy. From personal observation. By HENRY COLMAN. *Vol. I. Part III.* Boston, A. D. Phelps.

The Third Part of this work is devoted principally to the subject of Agricultural Education. The Second Part closed with some account of the Agricultural School at Glasnevin, in Ireland. In the number before us, he gives some further particulars of this institution, and four others of a similar character, on the same island; Ireland having in this respect, taken the lead of both England and Scotland. This fact is the more striking when we consider the distracted state of that Island, and the extreme destitution and misery of a considerable portion of its population. Mr. Colman, however, eloquently remarks, that "this beautiful and wretched country abounds with intelligent minds, glowing with the warmest philanthropy. They appear, indeed, like stars in a partially clouded night, pouring out of their own native fulness, rays of the purest splendor." He was indeed greatly surprised at the degree of intelligence evinced by the Irish peasantry of some districts, and observes that "strange as it may seem, even the common people are familiar with the ancient classics." On inquiring of the hotel-keeper concerning the state of education among the people, "he immediately called in a dirty, barefooted, ragged boy, and told him to 'bring his books and show the gentleman what he knew.' The boy was the son of a shoe-maker, and ten years old." He brought in his Greek testament, and as Mr. C. says, "recited with perfect correctness, and showed a very good knowledge of the language, generally. He further remarks that he found classical learning was by no means uncommon in Ireland, even among some of the poorest people. His readers are however cautioned against the inference "that education in Ireland is every where of this high character, or that it is universal."

In relation to the application of this subject to agriculture, he observes—"Every one will admit that the more intelligence, the more skill, the more knowledge a man has, the better is he qualified, other things being equal, for the management of a farm. It holds equally true that the more intelligence, the more skill, the more knowledge, a laborer has, the better is he qualified to assist in that management, and to perform that part which belongs to him in working of the whole machinery."

In regard to the quantity of work performed relatively by the English and American laborer, it is remarked that the latter "accomplishes more in the same time," though Mr. C. observes that he "cannot say the Americans always do their work so well. Certainly, in plowing and draining, our operations are altogether inferior to what is done in England, where, in the perfection with which these matters are executed, nothing more seems to me attainable or desirable." But it must be borne in mind that, as is well remarked, we are under the necessity of accomplishing more with the same number of hands.

At the Glasnevin school, the pupils are regular apprentices, and labor is compulsory. Three boys do the work of one man. The Institution is under the management of Mr. Thomas Skilling. The great object is to give boys such an education as will fit them for practical farmers. Mr. Skilling is also employed to give instruction at the Model School, where men are educated as schoolmasters at the expense of the government, of which there are two classes a year, of one hundred each. This Agricultural school appears prosperous, and were it not for losses of cattle which have been sustained from a prevailing epidemic, it would at least have paid its way, if not more. A statement given from Mr. Skilling, shows the general course of management pursued with the pupils, their dietary, &c. They seem to be well treated, and fed in a manner well calculated to promote health and activity, though their food is not so abundant, and perhaps would not be thought of so palatable a kind, as some of the pupils of our schools might desire. Mr. Skilling observes that it is his object to "treat them as respectable members of society, and they will not relapse into their former wretched condition, but will work and obtain for themselves the comforts of life."

The other Agricultural schools in Ireland, of which Mr. Colman speaks, are those of Templemoyle, near Londonderry, Brookfield, twelve miles from Belfast, under the direction of the Society of Friends, and that at Larne. We cannot afford space to notice all these in detail, nor do we deem it necessary, as they are similar to the one already described. The Brookfield school was originally designed for educating the children of indigent members of the society. The children, which are about equally divided in sex, are admitted between the ages of eleven and thirteen. The establishment is under the direction of a man and his wife, with a school-master and his female assistant. The boys are taught agriculture and its kindred arts; and the girls are taught domestic economy and house-work, in connection with all useful studies. Mr. Colman remarks that he "thought extremely well of this Brookfield school as a charitable institution." He was especially pleased with the training of the children to habits of industry.

It was from the Larne school, that a class of boys were exhibited at the Highland Society's Show at Glasgow, of which such flattering notices have been given in the English and Scotch papers. Mr. Colman expresses very great gratification at having witnessed this exhibition. "The agricultural studies at this institution," he remarks, "are not made compulsory but voluntary; and one hour per day is devoted to agricultural labor. The Board of Education in Ireland have now under their control three thousand teachers; and it is proposed, whenever it may be deemed useful, to make agriculture a standard branch of common school education. They have already seven agricultural training establishments, and it is in contemplation to have twenty-five, with which it is proposed shall be connected small model farms, so that every where, besides furnishing this most valuable instruction to the pupils of the schools, the farmers in the vicinity may be excited and instructed to improve their cultivation." In conclusion, he observes that "these institutions do certainly the highest honor and credit to the intelligence and philanthropy of Ireland, and their beneficent effects must presently be seen in alleviating the indescribable amount of wretchedness under which this beautiful country and fine spirited people have been so long crushed to the earth."

There is a school of a somewhat similar nature at Ealing, near London, supported by Lady Noel Byron, which accident has prevented Mr. Colman as yet from visiting. This school is also in a highly prosperous condition, and is deemed of the most useful character.

The proposed Agricultural College at Cirencester, in England, is briefly spoken of. The plans for this institution are not fully matured, but Mr. Colman thinks "the scientific qualifications of some, and the practical character of others of the gentlemen, concerned in its establishment, and standing as its sponsors, warrant the best efforts for its success."

Next follows a chapter under the head of "GENERAL VIEWS OF AGRICULTURAL EDUCATION." Mr. Colman here observes that as the subject of agricultural schools has been much discussed by his own countrymen, who have already a distinct proposition for the establishment of an institution of this nature, he deems it proper to extend his remarks on this subject. He thinks—"It is quite certain that the course of education pursued at most colleges and universities, is quite unsuited to qualify men for the common business and pursuits of life. Indeed, it would seem in many cases to operate as a positive disqualification, and men who may have distinguished themselves at our universities for their classical and scholastic attainments, are often thrown upon society as helpless and as incompetent to provide for themselves, or to serve the community, as children." He objects to the system of education pursued at our colleges and universities, that it "has undergone little substantial alteration for a century," and he thinks the time and expense devoted to what are called "classical attainments," should be given to other studies infinitely more valuable. He believes that an institution "of the practical arts and of those sciences which bear directly upon practice, must be greatly desired by that portion of the community whose education must be to them a means of subsistence, and who have but little time to cultivate the arts, but with a view to apply them at once to the purposes of practical life." Under every consideration, Mr. Colman thinks the importance of an institution where may be taught the practical arts, and such sciences as are applicable to agriculture, is fully demonstrated.

"The perfection of the art of agriculture," he remarks, "is that in which the largest amount of product is obtained at the least expense of labor and manure, and with the least exhaustion to the land. Indeed," he continues, "there is reason to hope that we may presently reach a system of cultivation in which, though the crops may be large, the land itself shall not be exhausted, but be in a continued course of amelioration. I know well there must be a limit, but that limit no one can yet define. We know already that crops with large leaves, and therefore large powers of absorption, are commonly improving crops; and we know equally well that the growth of a forest upon land, so far from exhausting, is, in fact, an improver of the soil. The system of nature every where, if man performs his duty, is a system of amelioration, and not of deterioration; it is every where a system of recuperative compensations if man does not controvert or pervert its laws."

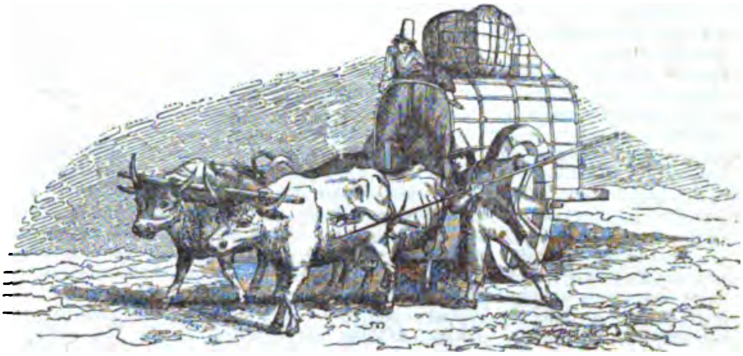
Chemical Science.—The high value of chemical knowledge in improving the condition of agriculture, Mr. Colman thinks "it is at least safe to presume." But he observes, that though he does "not mean to undervalue the science, nor to disparage what has already been done, nor to discourage the sanguine hopes which some entertain for the future; yet in the present state of agricultural chemistry, the extreme confidence of some persons may be at least pronounced premature. The application of sulphuric acid to bones, seems as yet to be the only well established case of the application of chemical science to the improvement of agriculture upon scientific principles. The operations of gypsum are still an insolvable mystery, and the explanations which have been given of its effects do not appear to be confirmed by facts. The application of lime to the soil, and its particular advantages and uses, are still among the vexed questions of agriculture. The same uncertainty of explanation is applicable to various manures, in regard to their mode of operation and their precise chemical effects. I do not hold this as a reason for rejecting the aid of chemistry, but only as a ground for moderating a too sanguine confidence in its power. As it offers the most probable means of solving many of the secrets of nature's operations, and as in many of the mechanical arts its triumphs are complete, there are strong reasons for pressing our inquiries by means of it, and for the best hopes of as much success as, in the present condition of the human mind, we have any right to expect."

Analysis of Soils.—Under this head, we are furnished with the results of many analyses of soils, in reference to the practical utility of which, Mr. Colman says—"I believe it may be of great utility in determining the general and predominant characteristics of the soil; but with great respect for science, and for the labors of those men who by their distinguished attainments have conferred the highest benefits on the community, I can come to no other conclusion than that any expectation of adapting our cultivation, upon any extended scale to these minute diversities of soil, is illusory; and that the most illustrious chemist living may be challenged in vain to prescribe any practicable culture adapted to meet, with any degree of exactness, the cases given, or to recognize in his applications or prescriptions, with any success, the minuter diversities of composition which are here presented."

Natural Science.—"Every possible facility," says Mr. Colman, "should be provided for the study of natural history, for every branch of natural history may be made subservient to agricultural improvement. There is, in my opinion, nothing which so invigorates and strengthens the mind, as earnest and deep inquiries into nature, the study of natural facts, the observation of natural phenomena. The man who goes himself to the original sources of knowledge, and draws water out of the very wells of life, acquires a force of inquiry, maintains a healthful freshness of mind, turns every object and occurrence with which he meets, into an instrument of instruction, and finds nature no longer a dull, desolate, inanimate chamber, but its walls all over radiant with lessons of wisdom, and every object with which it is crowded, vocal with the teachings of a Divine spirit."

Plan of an Agricultural Institution for the United States.—In organizing an institution of this nature in this country, Mr. Colman is opposed to an expensive plan. Ireland, he thinks, "has set us an excellent example in this respect. With us, they might be in a great measure self-supporting." He would not suffer the number of pupils to exceed one hundred. "Some good sized hall or building would be requisite for public meetings, lectures, or recitation-rooms, and for a museum, library, and chemical laboratory; but I would erect no college-building for the residence of the pupils." He proposes that they should either board with families in the neighborhood, or else that several farm-houses should be erected on the place, "sufficient to supply the needful accommodations," &c. One or two instructors should be employed constantly for teaching the main branches of education, and a competent farmer should be employed to manage the agricultural department, and to give the necessary practical instruction. Beyond this, no resident instructors would be required, but regular and full courses of lectures and experiments in geology, mineralogy, botany, comparative anatomy, and the veterinary art and chemistry, by competent professors of these sciences, who might be employed for these objects annually, without the necessity and expense of constant residence, as is now frequently done at our medical schools. In this way, the best talent in the community might be commanded, and at reasonable expense. I would require in the next place, that the pupils should be placed in a condition of perfect equality, and that a certain amount of labor should be made compulsory on all, at such a rate of wages as should be deemed just, according to the ability of the pupil, and the nature of the work done."

The first object at such an institution, Mr. Colman thinks should be "the thorough indoctrination of the pupils in natural science, and in mechanical philosophy, so far as it can be made to bear on agriculture." That in the second place, the pupils should be furnished with an opportunity of witnessing the best farm management, and the best practices in husbandry. "The management of live stock whether for work, for fatting, or for dairying, might in a small degree be exemplified on every well-managed farm. Such an appendage as this to a school of practical instruction, where the pupils might see and have explained to them the very best modes of husbandry, must be of the highest benefit. To these should be added an *experimental* farm. This need not be extensive, and it might be connected with the model farm; indeed, the model farm might itself be to some degree, an experimental farm. It may be said that the premiums offered by agrinultural societies for various experiments in husbandry, are sufficient to meet the public wants in this case. I admit that they have in this way rendered immense benefits to the public; but there are still wanted various trials and tests of soils, manures, grasses, plants, implements, modes of cultivation, modes of feeding, breeding, dairying, and on the effects of temperature, moisture, heat, frost, light, and electricity, which common farmers can scarcely be expected to undertake, or if undertaken, to follow out with that exactness which is most desirable, in order to render the results of such experiments worthy of confidence, and lessons for general application." He further recommends, that there should be connected with the establishment, gardens, "for purposes of botanical instruction, giving the pupils an opportunity of becoming acquainted with all the principal plants, grasses, forest trees, fruit trees, and weeds, which enter into their cultivation to the advantage or injury of the farmer; and for making the pupils thoroughly acquainted with the cultivation of all the varieties of vegetables and fruits which may be required for use, profit, or luxury." He says, "I throw out these hints to my countrymen, not with a view of dictating to their superior judgment, but to show that an institution for a practical and scientific education in agriculture may, without any hazardous expenditure, or any large investment, be made almost immediately attainable, and under every practicable advantage."



The Ox-Cart of Chili—(Fig. 65.)

Under the heads of RURAL MANNERS IN ENGLAND, A PENCIL SKETCH, and LIFE IN THE COUNTRY, we find beautiful, and indeed charming descriptions of the character of some of the higher class of farmers, and the nobility of England, but we are forced from the space allotted to this article, to pass over them without extracts.

The VETERINARY COLLEGE, near London, is spoken of; and is, in Mr. Colman's estimation, a highly useful as well as humane institution; and he earnestly recommends that similar establishments should be connected with medical schools in this country.

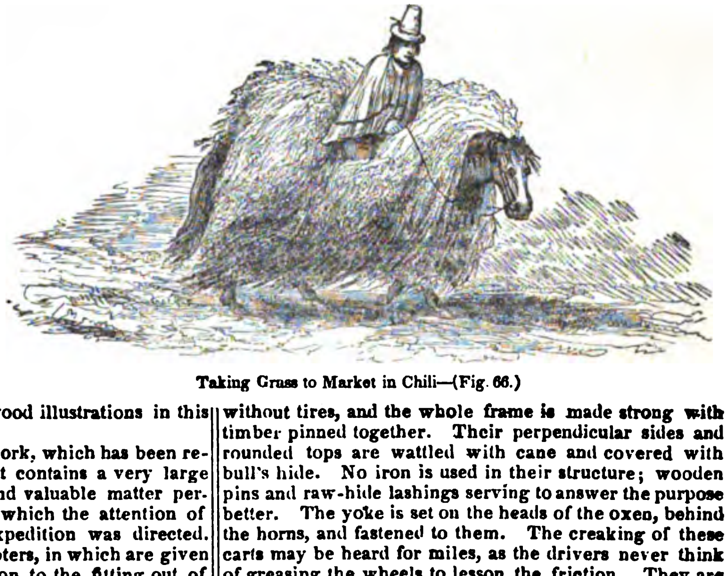
The chapters on the MUSEUM OF ECONOMIC GEOLOGY, CHEMICAL AGRICULTURAL ASSOCIATION IN SCOTLAND, CHEMICAL AGRICULTURAL LECTURES, and EMPLOYMENT OF AGRICULTURISTS, comprise the remainder of the Third Part.

The typographical execution of this, as of the former portions of the work, is beautiful, and certainly does much credit to Mr. Phelps, the publisher. We presume it is reasonable to expect that the remaining portions of Mr. Colman's work will be more particularly devoted to the details of husbandry as practiced in Great Britain.

THE EXPLORING EXPEDITION.

Narrative of the United States Exploring Expedition, during the years 1838, 1839, 1840, 1841, 1842; *by* CHAS. WILKES, U. S. N., *Commander of the Expedition.* Philadelphia: LEA & BLANCHARD.

This work was first published in five large imperial octavo volumes, with steel vignettes and line engravings of scenery, &c. together with finely executed maps and charts; making a magnificent, though expensive work. The publishers have now commenced the issue of a much cheaper edition, containing precisely the same matter as the first; the only difference is in quality and size of the paper, the substitution of wood-cuts for the steel vignettes, the omission of the line engravings and some of the maps. It is afforded at a price which will bring it within the reach of many from whom the other would have been debarred; the cost of the large edition being twenty-five, and that of the latter, only ten dollars. It will consist of five volumes, one of which will be issued about every two weeks till the work shall be completed. The publishers say the number of wood illustrations in this edition is nearly three hundred.



Taking Grass to Market in Chili—(Fig. 66.)

With the first volume of this work, which has been received, we are much pleased. It contains a very large amount of the most interesting and valuable matter pertaining to the various objects to which the attention of the officers belonging to the Expedition was directed. The volume numbers fifteen chapters, in which are given all the important details in relation to the fitting out of the Expedition, and its progress till its departure from Peru, on its course among the islands of the South Pacific. The only serious accident sustained by the squadron, was the loss of the Sea-Gull, one of the tenders, which, with all on board, it is supposed was sunk in a storm in the latter part of April, 1839. We cannot but express the gratification we have enjoyed in reading the accounts, which are no doubt truthfully, as they certainly are interestingly given, of the physical, civil, and social condition of the different countries and tribes of people, visited. We find much in reference to the agricultural and economical capacities, and rural management of those countries, which, did space allow, might be transferred to our pages, to the gratification of our readers, but our notice must necessarily be brief.

Having touched at Madeira, Rio Janeiro, and passed round Cape Horn, circumstances rendered it expedient for the squadron to put into Valparaiso for repairs, and while detained there, the officers made several excursions into the neighboring country. The city of Valparaiso, as well as the Province or State of Chili generally, is described as being much improved in its political relations, and in the morals and habits of the people, within the last twenty years. The agriculture, however, from the accounts given, must be still in a rather rude state. The plows are described as "nothing more than crooked sticks, with the share and point hardened by charring." The vehicles, the few that are used, for conveying produce to market, are almost equally rude and inconvenient. We are informed that "the heavy merchandise is for the most part transported in ox-carts of enormous dimensions. (See fig. 65.) Their wheels are clumsy, and without tires, and the whole frame is made strong with timber pinned together. Their perpendicular sides and rounded tops are wattled with cane and covered with bull's hide. No iron is used in their structure; wooden pins and raw-hide lashings serving to answer the purpose better. The yoke is set on the heads of the oxen, behind the horns, and fastened to them. The creaking of these carts may be heard for miles, as the drivers never think of greasing the wheels to lesson the friction. They are generally drawn by four or eight oxen."

Horses, mules, and sometimes lamas are used for the transportation of lighter articles. The lamas are used chiefly in the mountains, and carry from seventy to ninety pounds weight.

We are told that at Valparaiso there are no market gardens, and that "nearly all the vegetables are brought from the valley of Quillotta, about sixteen miles distant on the backs of mules, in panniers. The mode of bringing grass or clover to market, is peculiar; it sometimes almost covers both horse and rider." (See fig. 66.) The beef and mutton to be had in the market, is represented as proverbially fine—the prices of the former six, and the latter three cents per pound.

The account given of the condition of Peru, is much less favorable than that of Chili. The revolutions it has so often undergone, together with the late war with Chili, seem to have completely broken down the energies of the people. We are told by Lieut. Wilkes, that there is actually less soil now cultivated than was improved by the Indians, or the "children of the sun," before the Spanish conquest; and that every thing indicates the semi-barbarism of the inhabitants. The former accounts of their being no rain in Peru, are corroborated, so far at least as relates to an extent of the country of fifty to sixty miles wide along the coast. The records kept at Lima, show the occurrence of rain only four times during the eighteenth century. In other sections rain falls, and in some instances copiously. Irrigation is somewhat practiced in the districts which have not the benefits of rain. The soil and climate are favorable to many plants, and the irrigated land gives continued vegetation through the year. "Harvests are gathered in every season, and flowers and ripe fruits are seen at the same time."

Had we space, we should be glad to make further extracts from the work, especially in relation to the silver mines of Peru and Chili, which were visited by a detachment of officers and gentlemen, who collected much valuable matter in relation to them. We shall look with interest to the other volumes.

Since the above was written, we have been favored with the second volume, but have only time to say that the interest of the narrative, so far as we can judge from a partial glance, is well sustained. The work is for sale at Little's, in this city.

Transactions of the New-York State Agricultural Society, *together with an abstract of the Proceedings of the* County Agricultural Societies *and the* American Institute: vol. iv.—1844.

This volume numbers 524 pages, octavo, and may be pronounced not inferior in interest or value to any former one published by this Society. Besides the account of the doings of the State Society, condensed notices are given of thirty-seven County Societies; and one hundred and eleven pages are devoted to the report of the American Institute. The book contains many highly valuable papers—such as the prize essays on the different branches of husbandry, and several able papers communicated to the State Society by distinguished writers and practical farmers, from various parts of this country as well as Europe. Among the papers reported by the American Institute, will be found the Proceedings of the Silk Convention held in the city of New-York last fall, during the exhibition of the Institute. The latest improvements in conducting the silk business, and many important facts are here given to the public through the medium of reports of committees, and communications from upwards of twenty individuals more or less engaged in the culture and manufacture of silk, in different parts of the Union.

Every man his own Farrier: containing the Cures, Symptoms, and most approved methods of cure of the Diseases of Horses: *by* Francis Clater *and his Son* John Clater. *First American, from the twenty eighth London edition; with Notes and Additions, by* J. S. Skinner. Lea and Blanchard, Philadelphia.

No works on the veterinary art have been received with more confidence than Clater's; of this, the numerous editions through which they have passed in England, is good evidence. Mr. Skinner's editions of Youatt on the Horse, Every Man his own Cattle-Doctor, &c. which have met with considerable popular favor, are proof that the present publication is ably edited. The work is well got up, in a cheap form, is well calculated for daily reference, and we have no doubt ought to be found, as Mr. Skinner says, "in every stable, along with the curry-comb and brush."

Popular Lectures on Science and Art; delivered in the principal Cities and Towns of the United States, by Dionysus Lardner. Greely and McElrath, New-York.

We have received the two first parts or numbers of this work. It will be completed in not less than ten nor more than fourteen numbers, which will constitute two large octavo volumes, illustrated with numerous engravings. The price is 25 cents for each number. The work is an embodiment of the scientific Lectures delivered by Dr. Lardner in this country, which were received with universal satisfaction by all who listened to them. We take pleasure in recommending this excellent work to the public.

Elocution made Easy: containing Rules and Selections for Declamation and Reading, with Figures illustrative of Gesture. By R. Claggett, A. M. Paine & Burgess, New-York.

A useful work, well worthy of introduction into our schools. For sale by E. H. Pease, Albany.

CONDENSED CORRESPONDENCE.

Effects of chemical composts.—The articles accompanying the following letter were duly received. The sea-kale was decidedly superior to any we have ever seen:

Pelham, Ulster co., May 9, 1845.

Mr. Luther Tucker—To show you how much the growth of grass and grain may be accelerated by the use of chemical composts, I send you the following specimens, grown in the open field this spring, viz: Oats sown the 6th of March, 18 inches high; timothy grass 21 inches; clover 19 inches; and orchard grass 33; cu. on the 8th of May—the three last were sown last fall.

I also send you some sea-kale, a delicious vegetable, eatable from the 10th of April to the 10th of May—it is blanched under boxes. R. L. Pell.

Remarkable Fecundity.—"K." gives us the "history of what may be called a remarkable cow, in every particular. She was bred, and is at present owned by Hawthorn McCulloch, Esq. of Greenbush, Rensselaer county. She is 9 years old this spring, and was sired by an imported Durham bull, out of a cross Durham and Native cow. The spring she was three years old, (her first calving,) she had twins—the next year a single calf—the next year, twins—the next year a single calf—the next, three—the next, twins—the next, (the present year,) three calves—in all, 14 calves in 7 years, all fine healthy calves, except the last three. She gives at present from 56 to 60 pounds of very rich milk per day. She is a large handsome cow, and fatted, would weigh 1000 lbs."

To destroy cabbage lice.—Mr. Weller, of Brinkleyville, N. C. informs us that he has found sprinkling dry dirt on cabbage plants when the dew is on, will destroy or drive off the lice. We have tried dirt as is mentioned, as well as ashes and powdered gypsum, and have found ashes to do best.

To preserve vines from bugs.—Mr. Weller also informs us that a decoction of tobacco and red pepper, sprinkled on the leaves of cucumbers, melons, &c. "will drive off at once and for good, the little oblong striped bug which is sometimes so destructive to these plants." Mr. W. has been told, he says, that the pepper tea itself will answer the purpose.

Garden Tools.—Extract of a letter from Thomas Collins, Burlington, N. J.—"We have in use in this vicinity, two garden tools, invented here, and much approved; the principal one is a 'weeding hoe;' the other, a stout four pronged fork, for hand weeding in flower beds. The weeding hoe is a light tool, but very efficient for cutting off weeds when but a few inches high. Of the hoes, I have had manufactured many scores, and distributed in various parts of this country. Some were given away, others sold."

Improvement of worn out lands.—Extract of a letter from **E. Stabler**, Esq. of Maryland—"I have labored hard for some 20 years to improve a farm which was worn out by the 'old Maryland plan' of raising corn and tobacco. By the liberal use of lime, it is now prodvctive and profitable; having within the last 12 or 14 years covered the whole waste part (except 5 acres,) with from 60 to 100 bushels of lime to the acre. Twelve to fifteen years since, there were only 2 kilns within six miles of me; and only used to burn lime for building purposes; now there are within the same distance, not less than 35 to 40 lime kilns, and used almost exclusively for farming purposes."

Subsoil Plowing.—Extract of a letter from H. L. R. Sanford, of Volney, N. Y. The benefits of subsoiling should not be expected to be very great on loose gravelly land. "Last spring we procured one of Ruggles, Nourse & Mason's subsoil plows, and made some trials, but not with very good success. We plowed two acres for corn, in strips—a gravel ridge—one corner clay loam; could see no difference on the gravel, but think the subsoiled part on the clay, somewhat better. We tried also, another piece, clay loam, sowed to oats and planted with corn; could see no difference in the crop whatever; but notwithstanding this failure I mean to try it again."

Potatoe Rot.—J. R. Blair, Kent, Ct., is inclined to think the rot in potatoes last year, was caused by several weeks of wet weather in the summer, succeeded by excessive heat and drouth. He seconds the recommendations in the April number of the Cultivator to plant hardy varieties; says he "noticed white potatoes decayed more than the red ones." In regard to the suggestion about the use of lime, we will just remark that we have heard of several cases where it was put on the potatoes at planting time, without any apparent effect having been produced.

Charcoal Dust.—Extract of a letter from Mr. S. Camp, Plainville, Ct.—"I will mention an experiment made by myself about eighteen years ago. Having a piece of hill land, of about three acres ready plowed, I seeded it down to timothy. It produced about one ton to the acre. It has been mowed once, every year since, has had no manure, and has not been pastured at all. It has gained *one-third*, and remains the same kind of grass. About five years after sowing, I burnt coal near the place; I took from the bed, dry dust and fine coal in my cart, and with a shovel sowed twice through the piece which has increased the quantity of grass on those streaks ever since, nearly one-half."

Old Westchester awake.—Extract of a letter from T. Fountain, Esq. dated Peekskill, April 25.—"On the 17th inst. although a rainy day, about one hundred farmers met at the court house at White Plains, agreeable to previous notice, and formed a Society for the promotion of agriculture and horticulture in this county. The prospects now are encouraging, and we have the most cheering indications that old Westchester will do something worthy of herself, in the way of agriculture, horticulture, floriculture, &c."

Extraordinary Pig.—Harvey Ford, of Winchester Centre, Ct., informs us that Samuel Cook of Goshen, in that State, killed in November last, a pig, at the age of eight months and twenty-four days, which weighed, dressed, 472 pounds! "Being a gain," he says, "of more than a pound and twelve ounces per day, during the life of the pig, and a fraction less than two pounds a day from the time Mr. Cook bought it, April 12th, 1844, when it weighed twenty-five pounds. It was fed on corn-meal, uncooked, with the slops of the kitchen. It was worth at six cents per pound, (the price offered, but refused,) $28,32) from which deduct $16, the worth of the corn it consumed, and $2,50 the first cost of the pig, leaves $9,82 profit." Mr. Ford says he assisted in slaughtering the pig, and weighed it himself, and knows the weight above given to be correct. We believe the weight to be the most extraordinary for the age, that we ever heard of. Is there a *variety* or breed of swine in that neighborhood that can be brought to any thing like such a weight at eight or nine months old? How were the other pigs that belonged to the same litter with Mr. Cook's? Can any such account be given of them?

To destroy Alders.—A. H. Halleck, Esq. of Westmoreland, Oneida county, says—"Having a piece of low ground on my farm, with too many large bunches of alders upon it, I was induced to try an experiment to eradicate them. On the 23d and 24th days of August, 1843, I caused them to be cut off about twenty inches above the surface of the ground; the result was, that scarcely one sprouted the next year, (1844.) This season the old stubs are so tender and rotten, that they are easily knocked off level with the ground. I had a particular reason in causing them to be cut on those days. I am now so well satisfied that by taking a certain time in the month of August to cut Alders to exterminate them entirely, that if I had any more on my farm, I should cut them this summer, either on the 2d or 30th days of August next; I should however, prefer the last mentioned day."

Relief of choking in cattle.—Mr. Dunphey, of Fishkill Landing, N. Y., recommends the use of a piece of cable, four feet long and five inches in circumference, with one end made into a soft ball, to be pushed down the animal's gullet. We have generally known tarred rope used for this purpose. The size of the rope about *three* inches in circumference. A ball of tow, bound with soft leather, attached to one end, so that the end might be as large as an ordinary hen's egg. We have often seen cattle relieved from choking, by the piece of potatoe or turnep which occasioned the difficulty, being with this rope pushed into the stomach. From its flexibility, and the yielding of the ball of tow at the end, there is no danger of rupturing the gullet, as is often done in the barbarous practice of running down sticks, such as hoe handles, &c.

Remedy for "hoven," or "blown" cattle.—Mr. Dunphey informs us that he uses in this case, for "tapping" the animal, a knife which he describes as having a handle four inches long, a blade four inches long, and an inch and a quarter wide, and a hilt three inches long, and an inch wide. He says—"previous to using the above knife, an incision may be made with a small knife, one inch in length, downwards, on the left side of the animal, at five inches from the hip bone. Then the large knife may be plunged into the incision to the hilt, with safety, which allows the foul air to pass out, and gives immediate relief. Should the wound close so as to prevent the escape of the air, it may be kept open by inserting a small tube, and keeping the animal gently moving."

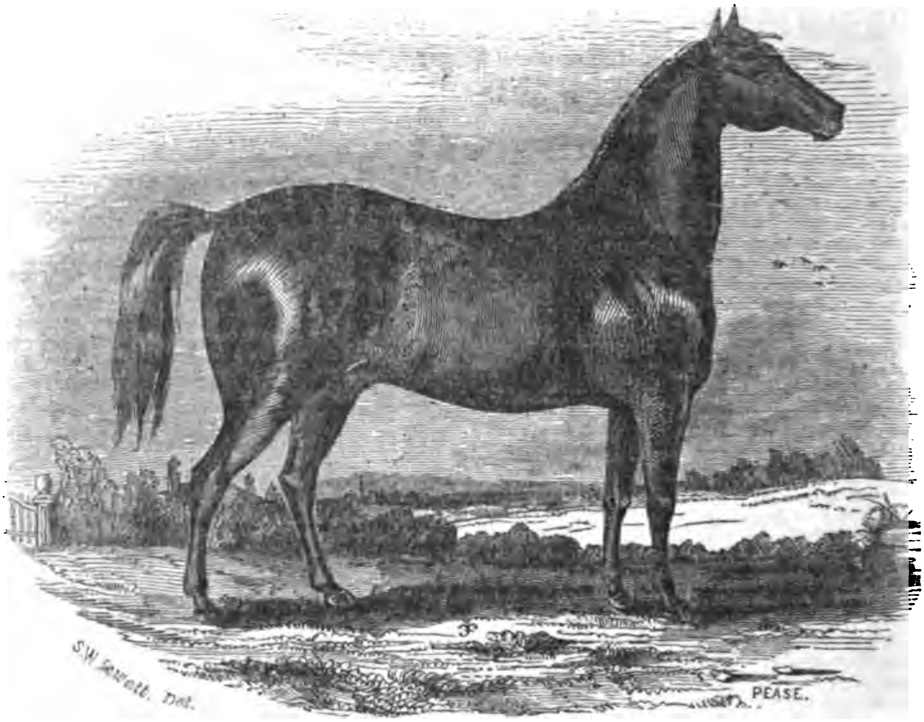
Use of Agricultural Papers.—Extract from the Corresponding Secretary of one of the County Agricultural Societies of this State:—"I have just returned from the meeting of our Executive Committee, and wish to repeat some of the conversation I heard.

"When on the subject of the plowing match, T. H. said, 'that plowing match, two years ago on Carpenter's place, did at least a hundred dollars worth of good to the neighborhood, by showing our farmers what some men could do. D—— —— would not believe there was a plow in the world equal to his; but he saw his mistake after receiving the fifth prize.'

"Speaking of cheese-making, it was remarked that A. L. had nearly always carried off the first prize; 'but do you know,' said B. 'how he managed to do that? He never was much of a dairyman, and his wife knowing nothing of cheese-making, learned how from reading the Cultivator—the directions in which she followed, and you see the result.'

'I don't question that at all,' said J. H., 'for I save every year at least four times the cost of subscription, by reading that paper.'"

Change of Seed.—I would like to ask the readers of the Cultivator if they are aware of the advantage to be derived from obtaining their seed, particularly wheat and oats from higher latitudes. Oats are much heavier here than in the south part of the State. Spring Wheat is also much improved by changing the seed. *Willets Keese, Clinton Co. N. Y.*



THE MORGAN HORSE "BLACK HAWK."—(Fig. 67.)

I believe the Morgan blood to be the best that was ever infused into the "Northern horse." They are well known, and are esteemed for activity, hardiness, gentleness and docility, throughout the New-England States; well adapted for all work; good in every spot, except for racers on the turf. They are lively and spirited, lofty and elegant in their action, carrying themselves gracefully in the harness. They have size in proportion to height; bone clean, sinewy legs, compactness, short strong backs, powerful lungs, strength and endurance. A mixture of the Morgan blood, though small, may be easily known from any other stock in the country. There is a remarkable similarity prevailing in all of this race. They are known by their short lean heads, wide across the face at the eyes; eyes lively and prominent; open and wide in the under jaws, large wind pipe, deep brisket, heavy and round in the body, broad in the back, short limbs in proportion to size, broad quarters, a lively quick action, indomitable spirit, move true and easy in a good round trot, fast on the walk. Color, dark bay, chestnut, brown or black, with dark flowing wavy mane and tail; head up, and moves without a whip; about fifteen hands high; action powerful and spirited.

They are highly celebrated for general usefulness, make the best of roadsters, and live to a great age. In fact they are the perfect "Yankee harness horse."

The Morgans are very like the noble Arab, with similar eyes, upright ears, high withers, powerful quarters, hocks well placed under their weight, vigorous arms and flat legs, short from the knee to the pastern, close jointed, possessing immense power for their size, with great fire and courage. But a few of the Morgans, however, evince extraordinary speed.

It is said that the best stock of horses in the New-England States, are found among the progeny and descendants of the Sherman Morgan, which was owned by Mr. Bellows of Vermont.

The figure above is a portrait of Black-Hawk, "a colt of the Sherman Morgan, which was got by the old Justin Morgan horse. The dam of Black-Hawk was a three quarter blooded English mare, raised in the Province of New-Brunswick. She could trot a mile in less than 3 minutes, and weighed 1025 pounds, and was in every respect a most perfect animal."

Black-Hawk was bred by Mr. Matthews of Durham, N. H. He is a jet black color; weighs, in good flesh, 1040 pounds; his height is 15 hands and one inch. A line drawn from the hip even with the ham, just below the setting on of the tail, is four inches longer than the back, or the distance from the hip to the withers. A line dropped perpendicular from the neck, parallel with the fore leg, is nineteen inches forward of the junction of the withers. The distance between the hip and the ribs, is only one and a half inch. He has a broad and vigorous arm, flat and clean leg, large muscles, short from the knee to the pastern, large wind pipe and nostril, well open when under motion. He is one of the best proportioned and most elegant moving horses that can be produced. His colts are very fine and in good demand; indeed, I have been credibly informed that his colts when offered in Boston market, would readily command an extra $100, if the purchaser could be assured that they were by Black-Hawk. "Mr. Bates of Boston has refused $600 for a filly by Black-Hawk. She can trot a mile in 2 minutes 48 seconds. For bottom and speed in trotting, Black-Hawk cannot be surpassed. When a colt, he trotted in harness on Cambridge Park, one mile in 2 minutes 42 seconds, without training. In a match for $1,000, that came off at the Cambridge trotting Park, 12th July, 1842, against Osceola, five miles and repeat, he won with ease, although very fat and not in train. The first heat was performed in 16 minutes 30 seconds. The second in 16 minutes. In the Oct. following, he won a sweepstakes of $200, beating Grey Tim and Dying Sergeant. Had previously won matches for $400 or $500, and in fact has never been beaten."

David Hill, Esq. of Bridport, Vermont, obtained this celebrated horse of Benjamin Thurston of Lowell, Mass. He was kept at his stand last season in Bridport, and he designs to use him at the same stand hereafter for the improvement of horses.

He took the first prize at the Addison County Show last October. Mr. Hill contemplates exhibiting him at the N. Y. State Show at Utica next Sept., where I think he must be admired by all connoisseurs of the horse. He is perfectly sound, a close jointed, clean limbed animal, and carries a beautiful waving head, mane and tail. His legs are flat and hard, clean from long hairs on the fetlock; his eyes stand out prominent; his disposition kind and playful. He keeps fat with very little feed, too fat at the time I took the drawing, to develope all his points successfully.

At my suggestion, his hay was accurately weighed for one week, and the feed consumed, stood as follows: of oats and bran three quarts of each daily, and he consumed between five and six pounds of timothy each day.

No fault can be found with the horse unless it be in his size; however, his stock are sufficiently large for roadsters and for general usefulness in this State.

The patronage Mr. Hill receives from breeders both far and near, is sufficient expression of the opinion of the public, without any other recommendation. Relative to the origin and stock of Morgan horses, your readers may hear from me again by and by. S. W. Jewett.

Weybridge, May 1, 1845.

MANUFACTURE OF BUTTER.

The committee on butter for the Addison County Agricultural Society, in an elaborate report which we find in the Boston Cultivator, strongly recommend the use of Turk's-Island or rock salt, for butter. A little less than one ounce of this salt, properly pulverized, is said to be sufficient for a pound of butter—or 14 ounces salt to 16 pounds butter. The committee say that this kind of salt has a tendency to harden the butter, and that by working, it will be rendered ripe and fit for the tub or table, with but little more than half the labor required for bag salt. It is also stated that the properties of rock salt may be destroyed by too much heat in drying, and it is recommended that it may be dried in a clean place, in the shade. The committee discourage the use of Liverpool bag salt, altogether, as it is thought to contain certain impurities which render it unfit for keeping butter.

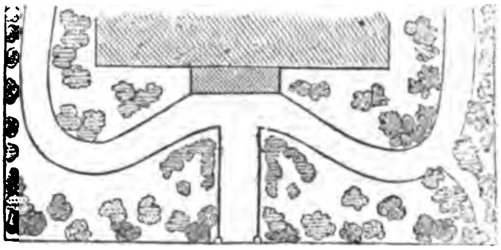
Dairy house.—The committee advise a well-ventilated cellar with a spring of cold water running through it, as the best place for keeping milk. They recommend that the pans be set in troughs and the cold water conducted around them till the animal heat of the milk has passed off—the water not to *stand* round the pans, but be constantly moving, and pass through a drain. After the milk is cooled, it is recommended to place the pans containing it into water, raised to the temperature of 170 degrees—but it should never boil or simmer. The pans of milk are then set back upon the troughs—(*not in the water,*) and stand for twenty-four hours, when the cream is taken off and churned. This process they say hastens the rising of the cream, so that it can be taken off in about half the time required in the ordinary way, improves the quality by preventing sourness, and greatly facilitates the operation of churning. The time occupied in heating the milk of a dairy of twenty cows, is from twenty-five to thirty minutes. The pans are made of tin, and handled when either cold or hot by tongs made for the purpose, which prevents any spilling or slopping of the milk. The churning is done every day except Sundays.

"In this way," say the committee, "good butter may be made at all seasons of the year. We prefer dog days, and the latter part of the season, before the frosts are so severe as to injure the quality of the grasses, on account of the many noxious weeds which find their way into the stomachs of some cows, while in their tender state in early parts of the season." The committee likewise remark, that the difference in the quality of the dairy products in different districts, is owing in part to the difference in the quality of the grasses on which the cows are fed. This principle they say is well settled in regard to tallow.

Working butter.—The committee say—"butter should be so made as to require but once working after the salt has been well incorporated—repeated workings expel more or less of the substances which constitute its good flavor, and should not be worked or washed off. If worked too much it will be gluey, and more tasteless than it should be in order to command the highest price." It is advised that the buttermilk, be worked out as thoroughly as possible at the first working—that it then stand in an even temperature from 58 to 62 degrees, for twenty-four hours—then be again thoroughly worked, when it is ready for the table, or to be laid down.

Washing butter in water.—This the committee say they "cannot recommend," and that "it is never done by the best dairyists in England." When butter is shipped for long voyages, it is sometimes washed in the strongest brine made of rock salt.

Kind of churn.—The committee highly recommend a churn which one of them has seen at Washington, so constructed as to carry many currents of air through the cream until the principle of separation is formed without any friction of oar or dasher. They say they are inclined to think this churn may take the place of all others in large dairies.



VILLAGE DOOR-YARDS.—(Fig. 68.)

The need of greater improvement in most of these is very commonly felt. To facilitate a better mode than the common practice, the annexed design is given. The plan is intended for such as do not have more than five or six yards width from the road to the front entrance.

Little description will be needed: the promiscuous mixture of large trees and small shrubs, so frequently practiced because all of them are small when planted, should be carefully avoided. In so small a space of ground, none but shrubs and the smallest size of trees can be admitted, except it be two or three of larger size at the front edge or corners. A suitable intermixture of evergreens gives cheerfulness to the expression in winter. Evergreen shrubs are indicated by those heavily shaded in the plan, and deciduous ones by those lightly shaded. If the house fronts the south, east or west, the flower beds at the corners of the gravel walk opposite the front entrance, may be introduced with great propriety; and even in case it fronts the north, provided those flowering plants are selected which flourish in the shade. A side gate at the right hand corner of the yard serves as an entrance to the kitchen, and is entirely concealed from the view at the front door by the shrubbery.

The selection of shrubs and plants must be at least partly left to the taste and convenience of the proprietor. Among the plants, however, for the beds, the following will make a fine show, succeeding each other nearly in the order named: Crocus, (various kinds,) hyacinths, Collinsia verna, Phlox stolonifera, Narcissus (the various species and varieties,) Iris pumela, tulips, Aquilegea canadensis, moss pink, Veronica spicata and gentianoides, Phlox ovata, the Pœnias, Dictamnus (white and purple,) Spiræ lobata, oriental poppy, upright clematis, common gladiolus, lillies (several species,) peach-leaved campanula (white and blue,) Liatris spicata and scariosa, Hibiscus palustris, New-England Aster, &c. Among the evergreen shrubs and small trees may be the red cedar, Chinese arbor-vitæ, Savin, English Juniper, tree box, white spruce, &c. Some of the finest deciduous shrubs are, Hibiscus syriacus, double-flowering almond, Tartarian honey-suckle, Mezereon, Japan quince, common white and purple, and Siberian lilacs, Philadelphus hirsutus, rose locust, purple fringe, laburnum, &c.; and among small trees, are the weeping and golden ash, the horse-chestnut, American and European mountain ash, the silver poplar, the spriped maple, the glutinous locust, &c. The smaller shrubs should be next the house; the larger at the sides and front line.

WINTER FOOD FOR STOCK.

Rich, loamy ground, will bear a good crop of English flat, or the Norfolk bullock turneps, after a crop of grass has been cut. Turn the sod over nicely, spread on some rotted manure, compost, or leached ashes, harrow well with a light sharp harrow, and sow the seed with a machine, or by hand, in rows eighteen or twenty inches apart, and when the plants are fairly out of the way of insects, thin them to eight or ten inches in the row, if intended for stock; if intended for the market, they should be thicker, to prevent their growing too large for the table. Four to five hundred bushels, and sometimes even twice that quantity, may be grown to the acre, and they are good food in connexion with straw, for cattle and sheep, till the middle of the winter, when they become so "corky" that the value is much lessened. The crop may be cultivated without much expense, if the weather only happens to be favorably moist at the time of sowing, and till the plants get into rough leaf. A very small harrow, with sharp knives so set as to cut the surface of the ground clean after the harrow-teeth, is the best tool we have seen for cultivating turneps on light land, and turneps can hardly be grown to advantage on any other.

Indian corn will give a good crop of *fodder* on rich land, sown or planted any time this month. Is not the kind called sweet corn, best for this purpose? We are inclined to think it is. It *suckers* a great deal, and the stalks are said to be as much sweeter than common corn-stalks, as its grain is sweeter than other kinds. Some varieties of it grow large also, and would probably yield as much weight as any. Another advantage about it, is the softness of the kernels—if it makes ears, the cattle eat them without waste, or at least with much *less* waste, than the kinds whose kernels are almost as hard as flint. It is the opinion of some farmers who have tried *it*, that this kind is best to raise for *fatting* cattle, where it is intended to feed stalk and ear all together.

With the exception of new land, or that which is free from weeds, we think it best to plant or sow corn for fodder in drills, rather than to scatter it on the ground broadcast. If it is in drills, a chance is afforded to work with a harrow and cultivator, and keep down the weeds. Mr. Newhall of Massachusetts, whose farm management was spoken of in our January number, prefers the drill mode —rows three feet apart, and two to three bushels of seed per acre. He has raised very large crops in this way—larger than we have known grown by any one else. Another advantage of the drill mode, is the convenient curing. It may be cut with common corn-cutters or stout sickles, laid evenly and regularly on the ground, and, when fairly wilted, bound close to the tops in small bundles and set them in small shocks, open at the bottom, and well protected against the weather at top, till dried enough to put in the barn or stack. It makes capital fodder in this way—better for cows than timothy hay, or indeed almost any other hay, excepting the best of clover.

Millet is a good crop for winter feed, on suitable land; that is, a light (or not heavy,) soil, of middling richness. There are several kinds of millet, but the German and the Italian are most commonly cultivated. We prefer the Italian. Some think half a bushel of seed is sufficient so the acre, sown broad-cast, but no more than that quantity gives too coarse a stem, which does not make so good hay. We would therefore sow a bushel of seed to the acre. We have raised this grass in times past, and found it to make very nutricious and palatable hay. It should be cut while the seed is in the milk, well cured; and when fed, it is best to cut it with a machine. It will yield from a ton to three tons per acre, according to the state of the ground, the season, &c.

CAST IRON ROLLERS WANTED.

MR. TUCKER—I have been for some time on the look-out for a *cast iron roller*, suitable for lawns, walks, roads, &c., and thus far, I have been unable to meet with any thing of the kind. I am rather surprised that this article is not made and kept for sale in all our principal agricultural warehouses.

No well kept, and well cultivated place, should be without one; and indeed, no gentleman's place, boasting of either a lawn, or graveled walks, *can* be well or properly kept, without the frequent use of an implement of this kind. In England, they are as common, and thought to be as indispensable, as plows or harrows. They are constructed in various ways; but the simplest and cheapest, is a cast iron cylinder, from two and a half to four feet in diameter, and from three to five feet in length, with a shaft passing through the center; at each end of which, is attached the fixture for moving it, either by hand or horse power, according to its size or use. Arrangements are made to attach weights to the shaft, in the center of the cylinder, to make the roller either heavy or light, as may be required.

I cannot doubt that these articles would meet with a ready sale; and I think you would do many of your readers an essential and very acceptable service, by calling the attention of our manufacturers to the subject.

VINDEX.

THE YELLOW LOCUST.—In relation to the cultivation of the locust tree, Mr. Proctor, in his Address before the Essex Ag. Society, says—"I am fully persuaded that in no way can our barren and gravelly pastures be so advantageously used, as by covering them with the locust, which may be readily done, either by planting the seed, or by here and there transplanting a tree, and allowing them to spread, as they are much inclined to do. Lands thus managed, I have known to yield posts and rail-road sleepers, that sold for more than one hundred dollars per acre, for ten acres together, within forty years from the first planting—which, during this period had been of more value for pasturing in consequence of the trees growing thereon; for it is a fact, that the feed, both in quantity and quality, under and about the locust tree, is better than where there are no trees. Take into view also, the increasing demand for this kind of timber, for rail-roads, fencing, trunnels for ships, and other purposes, and the rapidity of its growth, advancing so rapidly that those who plant may gather, and it will not be easy to find an object more worthy the attention of the owners of such unproductive lands."

MAPLE SUGAR.—Mr. John Gotham, Kingwood, Preston county, Va., informs us that twenty-two pounds of sugar were made from one tree in a single season. The tree belonged to David Potter, and stood in Allegany county, Maryland.

PRICES OF AGRICULTURAL PRODUCTS.

New York, May 21, 1845.

COTTON.—The exports of Cotton, from 1st to 20th of May, were 21,754 bales. Prices, 5¼a7¾.

BUTTER.—Orange County, in tubs or pails. 15a18—New Western dairy, 11a14.

CHEESE—New, sold readily at 7 cents.

FLOUR—$4.56a$4.68—Exports from 1st to 20th, 16,941 bbls.

GRAIN—Wheat per bushel, $1.04—Rye, 65a66—Oats, 28a29—Corn, 44a46. Exports, 4,907 bushels corn.

HEMP—Dew rotted, per ton, $95—Dressed, $145.

HOPS—per lb. 13a14 cents.

HAMS—Pickled, per lb. 5a7 cents.

BEEF—Exports 4,304 bbls.—prices not stated.

LARD—per lb. 7½a8. Exports, 6,664 kegs.

PORK—Mess per bbl. $12.50a$13—prime, $9.37a$9.50. Exports, 6,735 bbls.

TOBACCO—Kentucky, per lb. 3 cents—Connecticut seed leaf, 8a10.

WOOL—BOSTON, being the great wool-market, we give the prices of Wool in that city, as reported in the New-England Farmer of May 21:

Prime or Saxony fleeces, washed per lb.......	$0.42a0.48
American full blood fleeces,...................	38a0.40
" three-fourths blood fleeces,........	35a0.37
" half blood do	32a0.34
" one-fourth blood and common,....	30a0.31
Northern pulled Lamb's wool, superfine,....	36a0.37
do do No. 2,.......	23a0 25

ROME PLOW FACTORY.

THE DIAMOND PLOW which received the first premium at the State Fair at Poughkeepsie, as well as at every County Fair where it has been shown, is manufactured by the subscribers in the very best style, and for sale at wholesale or retail. Also, some eight or ten patterns of approved plans, as well as Scrapers, Cultivators, Cradles, Mott's Agricultural Furnaces, &c. Orders from abroad promptly filled, nad a liberal discount to dealers.

March 1, 1845 BRAINERD & COMSTOCK.
Rome, Oneida county.

AURORA AGRICULTURAL INSTITUTE.

THIS Institution, recently opened, is located on a farm of over 200 acres, lying in, and directly adjoining the village of Aurora, on the east bank of Cayuga lake, in Cayuga county, New-York, 16 miles from Auburn, by stage, and 12 miles south from Cayuga Bridge and the Auburn and Rochester Railroad, by steamboat direct, in summer.

Its design is to afford every facility for young men to make themselves thoroughly acquainted with the principles of Agricultural science, and their judicious application to practical husbandry; and particularly to afford young men from our large towns, the most favorable advantages for preparing themselves for Agricultural pursuits.

Terms $150 a year, payable quarterly in advance. No person under fourteen years of age will, as a general rule, be received.

Pupils will be received at any time, and the course of instruction continued through the year without vacations, but permission of absence will be granted if requested.

Applications may be made to B. R. McIlvaine, 44 Great Jones st. New-York, to Rev. W. Roosevelt, 413 Rroome-st., and Hon. B. R. Wood, or the Editor of the Cultivator. Albany.

CHARLES C. YOUNG, A. M., Proprietor and Principal.
Alexander Thompson, A. M., M. D., Lecturer on Botany, Geology, Agricultural Chemistry, &c.
David Thomas, Visitor and Adviser.
May 1, 1845—3t.

BOMMER'S METHOD AT REDUCED PRICES.

THE cheapness and expedition, by which manure may be manufactured with the Bommer process, and the various substances to which it may be successfully and advantageously applied, render it a valuable acquisition to every farmer that will adopt it. To facilitate its general introduction, it is proposed to sell the method uniformly at five dollars. Any individual shall be promptly furnished with a copy of the method without charge of postage, who shall remit the cash by mail to the general agent. It is intended to employ a competent travelling agent, as soon as practicable, in each county. My general agency includes the States of New-York, New Jersey, Virginia, Delaware, Connecticut, Rhode Island, Massachusetts, New Hampshire, Maine and Vermont.

ONE HUNDRED AGENTS WANTED.

Wanted immediately, 100 active, intelligent and enterprising men to engage as travelling agents in the above mentioned States. Unquestionable testimonials will be required; and responsible securities will be expected, as guarantees, for the faithful discharge of the duties of the appointment. Persons of suitable qualifications, will find this both a useful and lucrative employment. Applications, if by mail, should be post paid and directed to me, at Westville, New Haven Co. Connecticut.

ELI BARNETT, General Agent.
Westville, March 1, 1845.

FARMS FOR SALE.

THE farm in West Groton, known as 60 acres in the North East corner of Lot No. 63 Locke, consisting of a farm house nearly new, barn, and about 40 acres of improvement surrounded by a good fence, and now occupied by Robert Armstrong. Price, $1,500. One thousand dollars can remain on mortgage for ten years, at legal interest, half yearly.

Also—The farm known as the State 100 acres in the South East corner of Lot No. 2, Cicero, about a mile from the town of Brewerton, on the outlet of Oneida Lake, consisting of an improvement of 40 acres fenced, with log buildings, and sixty acres of woodlands.

Also—The farm known as the State 100 acres in the South East corner of Lot No. 54 Hannibal, a short distance from the town of Fulton, on the Oswego river, a good woodland, with a small clearing.

Also—The wood lot known as the State 100 acres in the South East corner of lot No. 5 Manlius, a few miles from Syracuse, and in a good neighborhood.

Also,

Wood lot known as the S. 100 ac. in the S. E. c. of lot No. 7 Solon

do	do	do	do	do		do	19	do
do	do	Survey	50	acres	do	do	25	do
do	do	do	50	do	do	do	29	do
do	do	do	50	do	N. W.	do	36	do
do	do	do	50	do	N. E.	do	39	do
do	do	do	50	do	S. E.	do	58	do
do	do	Sub 1	83	do		of lot	76	do
do	do	do 7	30	do		do	76	do
do	do	Survey	50	do	N. W	do	98	do
do	do	State	100	do	S. E.	do	65	Virgil
do	do	Survey	50	do	N. E.	do	68	do
do	do	Survey	50	do	N. W.	do	69	do

Apply to JAS. L. BRINCKERHOFF,
March 1, 1845—6t No. 32 Leight-street, New-York.

PLOWS.

AT the Syracuse Agricultural Warehouse and Seed Store, can be obtained Delano's celebrated Diamond Plow made by Mr Howard Delano, of Mottville, for the sale of which, we are sole agents for this town. Price, $6 for plain plow, and $10 for the wheel. coulter and clevey. Also, a full assortment of the well known Massachusetts Plow, made by Ruggles, Nourse & Mason of Worcester. 300 bushels seed barley, 300 do. pure Marrowfat Peas, 100 do. Clover seed, 150 do. Timothy, and a general assortment of all the varieties of seed sown by the tillers of the soil; Cultivators, corn plows, Wheel-barrows, Churns, Cheese Tubs, Cheese Cloth, Hoops and Presses, Hoes, Manure, Hay and Barley Forks, Shovels and Spades; and a very great variety of articles appertaining to the interest of the husbandman. Orders promptly executed.

Syracuse, April, 1845.—3t. FOSTER & NOTT.

AGRICULTURAL AND BUSINESS AGENCY.

KNOWING the convenience that such an Agency will be to his distant friends, the subscriber offers his services for the purchase of Match and Single Horses, Cattle, Sheep, &c.

Wagons, Carts, and Carriages.

Plows, Cultivators, Harrows, Rollers, Corn-Shellers, Corn and Cob Grinders, Threshing Machines, Grain-Reapers, Horse Power, and all other agricultural implements.

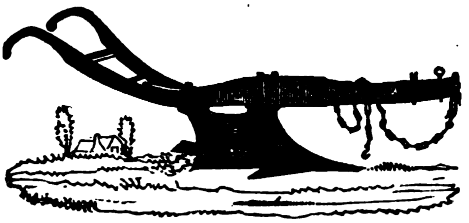
Seeds and Merchandise of every kind.

Manures.—Peruvian and African Guano, Ground Plaster, Ground Bones, Oyster Shell and Stone Lime.

Agricultural and other books.

From his long experience as a farmer and stock breeder, and general acquaintance with business, the subscriber trusts that he shall be able to give satisfaction. The commission charged for his services in purchasing or selling, will be moderate. Cash or produce must invariably be in hand, before orders can be executed.

Feb. 18, 1845—3t. A. B. ALLEN, 205 Broadway, New-York.



WORCESTER EAGLE AND SUB-SOIL PLOWS.

THE subscribers have now on hand a full assortment of the above superior Plows, manufactured by Ruggles. Nourse & Mason of Worcester, Mass. It is acknowledged by all who have made the experiment, that the "Improved Eagle," is the best Field Plow at present in use.

The advantage of Sub-soil plowing, is now very generally admitted, and the plows made for this purpose by Ruggles, Nourse & Mason, are constructed upon the most approved principles.

Side Hill Plows, Cultivators, Straw and Root Cutters, and a general assortment of farming implements, for sale at the Hardware store of PRUYN, WILSON & VOSBURGH,
Albany, April 1, 1845—2t. 39 State-street.

AGRICULTURAL CHEMISTRY AND GEOLOGY.

CATECHISM of Agricultural Chemistry and Geology, by James F. W. Johnston, M. A. F. R. S. S., L. & E. with an Introduction by John Pitkin Norton of Farmington, Ct., from the 8th English edition with notes and additions by the author, prepared expressly for this edition.

N. B.—The above work, first published a year ago, has already gone through eight large editions, and is now used in 3,000 schools in Ireland, and nearly all the schools in Scotland. The present edition, improved from the eighth, and adapted to this country, is now ready—price 18¾ cents. A liberal discount allowed to the trade. All orders promptly attended to.

ERASTUS H. PEASE,
Albany, March 1, 1845. Publisher, 82 State-street.

SEED STORE AND AGRICULTURAL WARE-HOUSE.

OUR Spring supply of seeds is now ready, and we shall be happy to receive orders for Field or Garden Seeds, of every description, Black Sea, Italian and Siberian Spring Wheat, Barley, Peas, Clover Seed, Timothy Seed, Seed Corn, Shaker and other Garden seeds, &c. Also, a full assortment of farming tools selected from the best manufacturers in the country. Hoes, Scythes, Forks, &c. cheap by the dozen.

E. COMSTOCK.
Rome, Oneida county, March 1, 1845.

QUINCY HALL

AGRICULTURAL WARE-HOUSE AND SEED STORE, BOSTON,

BY RUGGLES, NOURSE & MASON,

MANUFACTURERS of the distinguished Worcester Plows, among which, are a variety of patterns and sizes, adapted to all kinds and conditions of soil and modes of culture throughout the several States, and including the several sizes of their celebrated Eagle pattern, and the genuine Scotch Subsoil Plows.

They hazard nothing in saying that with large additions to their warehouse and stock, they now offer to the agricultural public and dealers, a much greater assortment of agricultural and horticultural implements, machines, and seeds, than can be found at any house in the Union; all of which are selected from the most approved kinds found in this country and Europe.

All communications and orders from a distance, will receive prompt attention, and goods safely packed.

March 20, 1845—2t*

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☞ **ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

NOTICE.

THE partnership formerly existing under the firm of THOMAS & SMITH in the Nursery business at Macedon, is dissolved by mutual consent.

Macedon, 5th mo 1845.—June 1—1t.

LETTERS ON AGRICULTURAL IMPROVEMENT.

JUST published, small 4to. 1s. 6d. sewed; or 3s. cloth. A series of Letters on Agricultural Improvement; with an Appendix. By John Joseph Mechi. With four plans of the Farm and Machinery.

London: Longman, Brown, Green, and Longmans.

June 1—1t

FOR SALE,

AT the New Commission Ware Rooms. No. 5, Burling Slip, viz: Premium Plows, universally approved, prices, $3,50 to $15. Premium Portable Burr Stone Mills, $35 to $100. Hussey's Premium Corn and Cob Crusher, $35 and $36. Dickey's Premium Fanning Mills, Corn Planters, Seed Sowers, Corn Shellers, Straw Cutters, and the "Warren's Portable Improved Horse Power and Threshing Machines," &c. &c.

Samples of the foregoing articles, with others most approved, may be seen at the rooms of the undersigned, and all orders filled promptly. Wholesale or retail. J. PLANT.

Successor to L. Bostwick & Co., 5 Burling Slip.

New-York, June 1, 1845—1t.

NORTH DEVON CALVES.

THE subscriber offers for sale 4 full blood North Devon Bulls and 2 heifer calves.

Two of the Bulls 5 and 6 months old, price each, ... $25
" " 11 " " 30
One of the Heifers, 12 months old, price, ... 30
" " 18 " " 40

They are beautiful animals, in fine condition, and of a suitable age to ship. Address JOHN P. E STANLEY,

46 South Calvert corner of Lombard-street.

Baltimore, Maryland, June 1—2t.

BOOKS FOR SALE.

AMERICAN Farmer's Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale at the office of "The Cultivator."

WOOL DEPOT.

THE subscriber will open a Wool Depot in the village of Kinderhook, and be prepared to receive from the farmers their wool in store, immediately after shearing, upon the following plan, which has been submitted to many of the most extensive Wool Growers in this county, and receives their cordial approbation. If the lots of wool brought by each farmer are not even in quality, the subscriber will assort the fleeces, designating each sort by numbers, and keep a true record of the whole. As soon as a sufficient quantity has been collected to offer inducements for manufacturers to purchase, they will be invited to examine it, and it will be offered for sale at what each separate sort may be worth. But if the lots of wool are even in quality, or if the owner wishes, they will be kept separate, and offered for sale entire. Liberal advances in cash will be made when the wool is delivered in store, on the usual terms of commission business. An insurance will be effected on the wool, a rateable proportion of which will be deducted from the sales. All the expenses will be paid by the subscriber, for which a commission of one and a half cents per pound will be charged.

Many of the most prominent wool manufacturers have engaged to visit the Depot for the purpose of buying.

Reference can be had to the following persons, viz: J. P. Beekman, Kinderhook; E. B. Pugsley, Ghent; J. J. Van Valkenburgh, Chatham; D. S. Curtis, Canaan; John Murdock, Lebanon; M. K. Beale, Austerlitz; John Martin, Claverack; J. C. Esselstyne, Claverack. H. BLANCHARD.

Kinderhook, May 15, 1845.—june 1t.

Mr. Blanchard proposes to establish a Depot for the reception of wool for sale according to the terms of his advertisement. His plan is, to my apprehension, the only feasible mode to enable the farmer to get the full value for his wool, as in most cases he is unacquainted with the market value of the article he sells, and thus prevents speculation by Agents; besides, it will be more satisfactory to manufacturers, as they can purchase a large quantity at once, and from their own inspection. I have the fullest confidence in Mr. Blanchard's capacity, integrity and judgment. J. P. BEEKMAN.

Kinderhook, May 17, 1845.

EXTENSIVE SALE OF IMPROVED SHORT HORNED CATTLE.

HAVING become over-stocked, I find myself under the necessity, for the first time, of publicly offering my cattle for sale; and that the opportunity to purchase fine animals may be made the more inviting, I propose to put in my Entire Herd—such a herd of improved Short Horns as has never before, perhaps, been offered by any individual in this country. The sale will embrace about fifty animals, Bulls, Cows and Heifers; all, either imported, or the immediate descendants of those which were so, and of perfect pedigree. Those imported, were from several of the best stocks in England, selected either by myself or my friends.

It is sometimes the practice at sales of this kind, where the interest involved is considerable, for the proprietor to protect himself by buy bidders, or some other kind of management, or for the owner to stop the sale if offers do not come up to his expectations or the requirements of his interest. Such practices have a tendency to lessen the interest in public sales of this character, especially with those who cannot attend without considerable personal inconvenience. But in this case, assurances are given that no disappointment shall arise to the company from either of the causes mentioned, and a good degree of confidence is felt that there will be no dissatisfaction from the character of the cattle themselves They shall all be submitted to the company, and sold at such prices as they choose to give, without any covert machinery, effort, or understanding with any persons; reserving to myself only the privilege of bidding openly on three or four animals, which shall first be designated. This reservation is made that I may not get entirely out of the stock of some particular families which I highly esteem, and that could not probably be replaced.

A full catalogue of the animals was inserted in the May number of the Cultivator.

The sale will take place at Mount Hope, one mile south of the city of Albany, on Wednesday, the 25th day of June next, at 10 o'clock A. M. E. P. PRENTICE.

Mount Hope, near Albany, May 15, 1845.

☞ Gentlemen from a distance, who wish to obtain stock at the above mentioned sale, and may find it inconvenient to attend in person, are informed that the subscriber will make purchases for those by whom he may be authorized. They can state the sum at which bids should be limited, and if convenient, designate the animals they would prefer; or give such general instructions as they may deem proper, under the assurance that they will be strictly adhered to.

SANFORD HOWARD.

Cultivator Office, Albany, March 15, 1845.

DURHAM BULL CALF AND HEIFERS.

THE subscriber will sell a Durham Bull Calf one year old 21st March 1844, a remarkable thrifty animal and good handler; when about 10 months old weighed 720 lbs. He was got by his prize bull Meteor. Also, a yearling and a two year old heifer, one got by Meteor, and one by the imported bull Duke of Wellington. Letters post-paid, will be answered. GEO. VAIL.

Troy, May 1, 1845—2t.

FARM IN ILLINOIS.

FOR SALE—A good farm, with valuable improvements. The subscriber being about changing his business, will sell a great bargain. Also has in immediate vicinity, 2,000 acres choice land, which he will sell at a discount from government price. Address ISAAC HINCKLEY, P. M., Audubon, Montgomery Co., Illinois.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. II. ALBANY, JULY, 1845. No. 7.

THE CULTIVATOR

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LUTHER TUCKER, EDITOR AND PROPRIETOR.

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Foreign Correspondence.

MR. MITCHELL'S LETTERS—No. VII.

Irish Peasantry—Culture of Potatoes in Ireland, &c.

London, 19th May, 1845.

LUTHER TUCKER, ESQ.: Dear Sir—Leaping from Jersey to the north-east coast of Ireland we find, in place of the bright green fields and high hedge rows, a succession of wild hills covered with a stinted furze, destitute of fencing and profitless save for pasturage. There are indeed little huts to be seen about their edges, and a meagre cultivation is creeping lazily round their skirts; and between them, here and there, are rich vales, in one of which lies, half-way up the north side of Carlingford bay, the beautiful village of Rosstrevor. The general character of the surface however, on a first approach to the shore, is uninteresting to an agricultural eye. The homes of the laborers are mere huts of mud and stone, possessing none of the rural charms belonging so eminently to those of England, but are slatternly without and filthy within. In fact, the Irish peasant, from my observation, is as peculiar for his want of taste and neatness, as is the English for its possession. I have indeed seen beautiful way-side cottages in Ireland, but not having a beauty that would bear examination in detail, and possessing more charms in the distance than when under the eye. This peculiarity is observable not only in their homes, but in every habit of their out-of-door life. Their implements are left scattered about the fields—their fences are stragling—their clothes ragged, and their habits of labor destitute of all system. Thus the ditcher will work like a madman for an hour—his coat in the ditch, and his hat on the fence, and then will throw his spade upon the ground and run to his cabin for a boiled potatoe, and if he have no line to direct his work, he will be as likely to trench in a circle as in a direct course.

Returning to the neighborhood of Newry, where I landed, I saw scattered about small lots of wheat, but most of the available soil was thrown into ridges for potatoes. The method employed, I found afterwards, to be almost universal throughout Ireland. The land was first plowed, then laid off by stakes or lines into strips of four or five feet wide—an interval of eighteen or twenty inches being left between each. The manure is spread carefully over the wider strips—the tubers (uniformly cut) placed at distances of five inches apart each way, upon the manure; all the soil is then dug from the narrower strips and thrown carefully and lightly over the seed.

As I approached the town, passing for some four or five miles under the high wall of the park of an Irish peer, the country spread out into a more level and richer surface. The houses, thickening into streets, were even more dirty than the scattered ones nearer the sea. The pavements, if indeed any belonged to the streets I first entered, were covered with all manner of filth, and the front of nearly every cabin was adorned with an unctuous pile of manure placed just outside and opposite the door, on which were gallopading, with tangled hair, half naked children of every degree; and I was agreeably surprised amid the general foulness, to see running out of one of the most pretending of the houses a nice pair of Berkshire pigs; and through several side entrances I had passing glimpses of fair looking cows quietly munching at a lock of hay.

It was market day, and the roads were crowded with booths and clumsily made carts, and the women scattered beside the way, with goods of all sorts, from old iron sauce pans to bunches of mint and radishes, were earnest that I should buy a ha'penny's worth—no inconsiderable sale for those whose whole stock was barely worth a shilling. The absence of all cleanliness in street—in shop—in dress—in person—was disgusting. The meats on show were excellent, and so were the vegetables, but cleaner salesmen would have made far less excellent provisions more tempting. Flaming advertisements were posted in every part of the town of the first ships bound for New-York—and I found them scattered throughout Ireland, and not on one occasion only, witnessed the parting of some youth from friends, for a trial of life in the west, and heard, not without emotion, the sighs, and farewells, and screams, in which that excitable nation are prone to indulge.

Immense numbers of cattle and swine are annually shipped from Newry to Liverpool—the steamers bringing over in turn manufactured goods—and not unfrequently, at present, guano and the patent manures. Indeed, I may say, from my observation, that the vaule of manure is more fully appreciated in Ireland than in most parts of England. And though Irish tillage has not yet availed itself of the latest scientific aids, and is slovenly in its operations, though drainage and irrigation are not yet generally adopted, yet have I nowhere in England—in travelling through twelve or fifteen of its principal counties—seen such scrupulous preservation of every substance that will enrich the soil, as in Ireland.

Travelling north and west from Newry, the country improves in richness and beauty. The roads, as they are everywhere in Great Britain, are excellent; the fences not so trimly built or clipped as in England—stiff, effective barriers against unruly cattle, and there are glimpses among the hills of the green valleys which nourish the thousands of herds that find their way across the channel. Women are in the field, not scorning the hardest of the labor, and as hard favored and as dirty as the men. The spade does more than half the office of the plow in all the potatoe fields—hence their great crops and the equally great crops of grass that follow. Though it was the 20th of April, when in the north of Ireland, I saw clover that would have turned a ton to the acre. Their course seemed to be—potatoes on a grass lay—next oats or flax with clover or rye grass—sometimes wheat intervening, or vetch and rye, followed by flax with small grass seeds. From my description of potatoe planting, you will see that the land has the appearance of a great number of high beds; these are plowed lengthwise for seeding; the consequence is—the fields present a succession of rounded barriers, not easily cropped under our method of mowing. They use, however, a short hook in place of a scythe—another reason for the fact notorious with us—that an Irishman is no mower, but a good reaper. The horses seen in the fields are far inferior to English horses in bone and flesh; the same is true of all seen in the curiously constructed Irish cars, and I note here an exception to the generous character of the people—the horses are most cruelly treated. I have nowhere seen so hard beatings given—nowhere seen them so well deserved—nowhere seen them so little cared for.

Large estates are not so frequent along the way as in the neighbor isle, and where existing, are much more scrupulously guarded against encroachments, being surrounded with walls of huge height and thickness.

Not the least attractive features in a day's ride northward, are the bleaching fields of several large flax weaving establishments. Hundreds of acres of green lawn are covered with white linen—the surface of a bright stream seen at intervals between, and the gentleman proprietor's cottage or mansion seated in a group of trees amid it all; in the distance the hills curiously checkered with fresh growing wheat and new tilled lands, and way pasture grounds.

Over three thousand cattle are at the Smithfield fair to-day, and thousands and tens of thousands of slaughtered sheep and swine come up weekly from ever part of the country. Butchers even go to Lancashire to buy. Every hotel is full, and the consumption is immense. Rhubarb, asparagus, new potatoes, radishes, &c., abound in the market. Strawberries, cherries, and peaches, may also be had for money. Cucumbers have also been in the market since the first of April; they are a foot or more long, but no larger round than ordinary. The price varies from 25 cents to $2 each. Greater luxuries are by no means so cheap. Weather continues cold—colder than with you, I doubt not. Lilac and apple trees are just in bloom.

Truly yours,
D. G. Mitchell.

LETTERS FROM MR. HORSFORD—No. V.

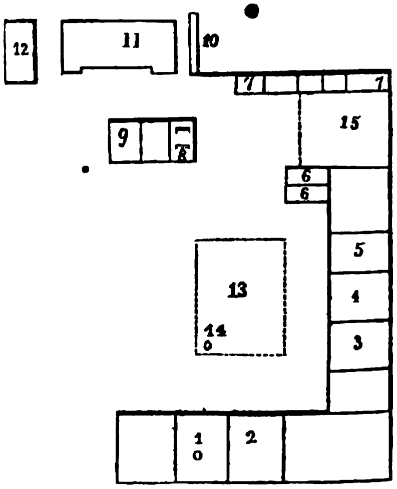
German Farming—Farm Buildings—Stock, Rotation of Crops, &c.

Giessen, March 14, 1845.

L. Tucker, Esq.—Yesterday I visited, for the first time, in Germany, a—so called—*Econom.** I have some hesitation in the employment of language to explain what I here observe and hear; first, because I may convey incorrect information; and second, because I may do injustice to the general land, in a very small state of which I happen to reside. What is quite true of Livingston county, in New-York, for example, might fail if applied to lands upon the Aroostook or in the Accomack district. And again, it is by no means grateful to hear the United States charged with being a repudiating, duelling, slaveholding nation, as I not unfrequently do. Distance, in lending enchantment to some views, draws a veil of indefiniteness and generalism over others. Englishmen and Europeans generally, know nothing of Mason and Dixon's line, and judging others by myself, a statement of what is observed in Hessia Darmstadt might be thought applicable to each of the remaining thirty-seven Germanic states—an application against which I here caution the reader of my communications.

An *Econom,* claims to be a scientific farmer; claims to employ the best practical methods for making a given number of acres, taking all his wants and relations into consideration, produce the largest amount of money. He has capital enough to take advantage of markets, to some extent, and proceeds upon something of a wholesale system. He has, however, no tenants, all his employè sleeping either in his own residence or in his barns. His daughters are eligible to presentation at the prince's court, and his sons to posts under government. He labors with his sons and his men, and has no stewards or other intermediate agents between himself and those with whom exchange of crops or products are made. Thus much have I concluded from an interview of a couple of hours yesterday, during which an econom conducted me through his suite of barns, folds, &c.

His residence was, earlier, the summer palace of the Prince of Brownfels, and may have an interest to some American readers, from having been the birth place of the heroine Charlotte, in the "Sorrows of Werter." It is beautifully situated at the head of a valley, closed in throughout a distance of nearly a mile, with a varied forest of evergreen, oak and maple. Like all the old houses, it is a frame work of wood, the interstices between the timbers of which are filled in with unburned bricks, and plastered or whitewashed without. The roof is of tile, and all the windows present in the sash the never changing form of the cross. Immediately about the dwelling were some hedges, but over the entire farm, as far as I could see, were no walls of separation, either of hedge, wood or stone. This is usual. The barns, sheep folds, swinery, kennels, ice house, wagon house, &c. surround a quadrangle about two hundred and eighty or three hundred feet in diameter, in the centre of which is a paved basin of about sixty feet by forty, for the reception of manure. The barns were of brick and wood, and roofed like the house. I will number in their order the several apartments and objects that I saw, and the following diagram will give their arrangement:



German Farmery.—(Fig. 69.)

1. A stable for cows, calves and yearlings, each secured by itself to a rack and manger, without intervening partitions. In the centre of the stall is a half hogshead for the preparation of food, which consists of chopped straw, pounded beets, and boiled potatoes. They are kept in the stable throughout the entire year. The calves have all the milk for the first six weeks, and are then fed with diluted milk, and gradually come to live upon the food given to the cows. The cows were rather small—not sleek, spiritless, varying dun brown and tawny colored creatures. 2. A similar stable occupied by about twenty-five large fine looking cows, and a bull, that would have shown well at Poughkeepsie last autumn. The cattle were long, with great depth, and like many fine bodied animals I have seen, had generally any thing but good horns. They were too long and slender, and curved irregularly. Among them all, the dun was the prevailing tint. 3. A stable for working cattle. Of these the number was not large—about a dozen. They looked well. The same apartment lodges two workmen. 4. A stable for breeding mares and colts. Of these no-

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* Every man is titled in Hessia. Here are some illustrations: Mr. Prof. Dr. Bischoff, Merchant Labroise, Baker Berkman, Hair dresser so and so, Boot black so and so, Peasant, &c.

thing particularly interesting was noticed. They are decidedly inferior to all horses in New-York, of any pretensions to blood. 5. A stable for work horses. This and the last are paved, in common with the yard, with round small stone. All the horses were in fine condition, clean, well shod, with their tails tied up in what I suppose is fancied to be a pretty knot, to guard them from the mud of the roads at this season. Two workmen sleep here also. A little incident occurred here that diverted attention for a while from stalls and fodder. A "whiffet" that came to greet us at the entrance to the stable, had been entrusted, in the course of nature, with a beautiful second edition of herself, and the econom, to gratify us, took the little creature from the kennel, and held it awhile to look upon. The mother was no terrier, she could not growl; she was not of St. Bernard or Newfoundland stock—she could not trust; she was a cur—she could not be indifferent; she was a gentle little whiffet, blindly devoted to her offspring. Climbing to the top of a box near, she presented her petition with such eloquence as nature gave. She bowed, and crouched, and licked the coat of her master, and when he lowered the little charge so that she could assure herself of its safety, her eyes took on an expression, of which those who have only known curs and hounds in their rough sports can believe nothing. It is, perhaps, a trifling thing to notice, but what student of nature would deny himself such a volume of entertainment. Another was in store for me. On leaving the stable, the econom whistled as for a dog. In a moment the air above was filled with doves, and the fowls came trooping from all parts of the yard. Not receiving any grain, the doves returned. I thought they must have numbered some two hundred. I whistled a second time, and all flew down again. Opening one of the doors in the range 7. 7, out bounded a large dog, resembling a hyena more than an ordinary bull dog. He seemed to be overjoyed to see his master, but treated me as if I belonged somewhere else. He and two or three others are given the range of the yard and grounds at night. 6.6, and portions of 7.7, are swineries. I remember once seeing a picture in the *Cultivator* of what was called the "landshark." Here are the originals. I inquired if they were not bred from the wild swine which are still in some of the preserves in this vicinity. He assured me they were not. But, in truth, they are as widely contrasted with the Berkshire, the China, and what were once denominated the "grass breed pigs" of the Genesee Valley, almost as widely as the wild boar himself. 8. One of three sheep folds. It is a room with high ceiling, having straw on the bottom, and supplied with racks. The econom purchases wethers to fatten, and does not breed them. They are pastured when the ground is bare, and accompanied always by a shepherd and dog. The flock, of about two hundred, was all of young sheep, a year and a little more. Both lambs and calves generally are dropped a little before this date. Upon inquiry whether he thought it so well, he presumed the mortality among the ewes and lambs might be greater, though there were some advantages that I did not precisely comprehend. Their wool is coarse and long, though the bodies are finely formed, and still in the possession each of a long tail. I could not see any thing much above the common breed among us. 9. A carriage and wagon house. 10. A bee house. Little "cottages of straw" mounted upon other box hives of small dimensions, are the substitutes for the patent, most convenient hives, coming into use in New-York and Vermont. He says they are never annoyed by millers and worms. 11. The residence, with all its quaint antiquities, and its magazine of pipes and tobacco. 12. The distillery. Here alcohol is made from potatoes. First, the potatoes are fitted for mashing in a steam tub, then passed through a crushing apparatus into large tubs. Then comes the series of fermentations, gummy, sugar, and alcoholic. The alcohol condensed in a still yields a profit of about a dollar and a half, above the duties to the Prussian government. These are positively enormous, amounting to nearly sixty-three dollars a month. Naturally enough the closest surveillance is necessary in order to the collection of this revenue, and a *gens d'arme* visits the distillery at regular intervals, night and day, and requires a record of each hour's work. 13. The manure depôt, so arranged as to receive the entire drainage of the stables. 14. A pump for elevating the urine to a hogshead, arranged something like our street watering carts, for the distribution of the fluid upon the fields. 15. A depot of straw. Heaped upon 13, is the litter of the stables, and all the sources of manure.

It is interesting to observe the connections which link the different parts of this econom's establishment together, and the profits which he compels all parts to yield. The cows he keeps for their manure principally, and therefore stables them. The potatoes he grows to feed his cows. Cheese, butter, milk and alcohol, are incidentals. The manure enriches the soils for the growth of wheat, rye, barley, beets, peas and beans, as well as potatoes. A portion of these support the stock, fatten the beeves and swine, and the remainder, after deducting the expenditures for the farm and the household, goes to swell the little store laid by for advanced age, for younger sons, or for luxuries. The econom attempted to explain his system of rotation, but so many of the terms employed were unintelligible to me that I have forgotten much of what he said. I think this is the plan he tries to carry out: First, potatoes; second, spring wheat; third, barley, or rye and clover; fourth, summer fallow and fall wheat; fifth, peas and lentils; then a year of repose, and then potatoes and the series again.

I hope to walk there again in the summer, and learn more definitely about the treatment of the crops.

Liebig's winter course of lectures is closed. The semi-annual dinner has been given, and the laboratory is shut for a month; at the termination of which the lectures will be resumed. More than half the students leave, and among them the first of the class. Spring seems close at hand, though we have several inches of snow on the ground, and the air is still cold.

E. N. Horsford.

MR. NORTON'S LETTERS—No. XIII.

Prof. Johnston's Lectures—Scotch Farming—Great Crops of Wheat, Oats and Turneps—Suhphuric Acid, Bones, &c.

Laboratory of Ag. Chem. Association,
Edinburgh, April 25th, 1845.

L. Tucker, Esq.—As I promised in my last a report of the second monthly meeting of the Association, I was happy to find that the subjects touched upon were such as are likely to be profitable to farmers in our own country. The meeting took place on the 9th of April, and was attended by a large number of gentlemen from various parts of the country.

After the usual preliminary business, Prof. Johnston made some remarks, suggested by a visit he had lately made to the farm of Mr. Aitchison, of Drummore, near Musselburgh, about ten miles south of this city. The farm consists of at least 800 acres, and lies upon the coal measures, the soil produced by the decomposition of which is generally considered very poor. In this instance however, art has overcome nature. Nearly the whole farm is now drained, and sub-soiled to the depth of 14 to 15 inches. Manure is added judiciously but most liberally, and the crops are remarkable. The cultivation of this farm has been so admirable in the hands of Mr. Aitchison's predecessors that it has alway yielded large crops. The records of these are shown in a book like a merchant's ledger, which has been kept with the greatest minuteness for more than 30 years. In it may be seen the produce of each field, the time of sowing, of harvesting, and finally the market at which each sample of grain was sold, with its price, and the average price of each year.

One six acre field produced an average of 42½ tons of white globe turneps, per Scotch acre, every load being actually weighed. In 1844, 13 acres averaged 31 tons of yellow Swedes. The Scotch acre is one-fifth more than the English imperial acre. But this same land produced equally good crops twenty years ago. The wheat crop of 1820 averaged, over 150 acres, 54 bushels. In 1832, 140 acres of oats averaged 85½ bushels per acre.

On land cultivated as this has long been, said Prof.

Johnston, all we can do is to keep up its fertility; even modern science can scarcely hope to increase the crops; but one thing it may do, it may raise them more economically and with greater certainty.

After this notice of Mr. Aitchison's farm, a variety of substances lately sent to the Laboratory for examination, were mentioned. Among them were a number of limestones from different parts of the country: some of these were found very pure and remarkably well fitted for agricultural purposes; others would make admirable cements. The economical value of some ironstones was also noticed. The sprouts broken off during the malting of barley, on analysis have been found to be well adapted for manure, and to especially abound in phosphates. Large quantities are obtained in the extensive breweries, and in some instances they have been advatageously used as food for pigs.

The remainder of the remarks by Prof. Johnston were devoted to explaining the action of sulphuric acid upon bones. The nature of bone was first considered, it consisting of an earthly and a gelatinous part. Each of these has been found valuable where applied singly; burned bones especially, have been found to produce excellent crops of turneps. The sulphuric acid acts upon both these parts of the bone, and forms with the gelatinous part certain compounds soluble in water and capable of entering directly into the circulation of plants. In its action upon the earthy part much gypsum is produced, and bi-phosphate or super-phosphate of lime.

Thus many substances necessary to the healthy growth of the crop, are presented to it in a soluble state ready to supply its wants. Experiments in top dressing wheat and clover, have shown in several instances the great efficacy of the bi-phosphate.

The action of the acid is speedy, and soon reduces the bones to a soft pulpy mass; they may then either be applied in a liquid state after very large dilution with water, or they may be dried and sown in the drill, or used as a top dressing. The latter way is most convenient, but some trials have seemed to indicate that the liquid application is best. It probably ensures a more complete dissemination of the manure through the soil. Water should be added, even until the acid taste is not perceptible. Prof. Johnston, in conclusion said, he had been thus particular upon the subject of bones, because the supply of guano could not always last. When that was gone the farmers must have something to supply its place, and bones will then stand forth more prominently. He recommended the trial with preliminary experiments with them immediately, so that they might not in any way expose themselves to loss when compelled to find a substitute for guano.

After a few words upon some samples of guano, the meeting came to a close. Prof. Johnston will be at Durham during the months of May and June, and consequently there will not be another meeting until July.

I am yours very truly,

John P. Norton.

Preservation of Wood.—Kyan's celebrated patent, it is well known, consists of impregnating the pores of wood with corrosive sublimate. Bennett's Antiseptic Solution, for the same purpose, is a solution of one pound of chloride of zinc in five gallons of water, and has been found superior to Kyan's patent solution. Another simple process consists in the application of *creosote*, along with coal tar, and other bituminous matter. The wood is thoroughly saturated to the centre of the log with great rapidity. A load of fir timber will absorb forty gallons; close grained timber less. The price of the creosote is 3 pence [sterling] per gallon; in some places not more than 2¼ pence. Preserved timber, by this process, is supplied for rail-roads at 15 shillings a load more than the common price. Wood treated in this way is said to become nearly water-proof, and requires no painting. [It will of course be understood that the "creosote" spoken of is not the article sold in the drug shops, which is very costly, but a much cruder substance, similar to the substance sold many years ago, for smoking hams, under the name of *pyroligneous acid.*]

Domestic Correspondence.

MARYLAND FARMING.

Mr. Editor—In one of your last letters you requested me to give you a sketch of any farms I might visit in Maryland. Last summer I made a short visit to my friend Thomas J. Dorsett, at "Roedown," in Anne Arundel county, West River settlement, Western Shore of Maryland. Mr. Dorsett has 400 acres, 100 wood and 300 arable land, divided into four fields; and he farms on the four course system. First, wheat after clover. Second, corn and tobacco—the latter always on the lightest and driest soil. Third, wheat on the tobacco stubble, and oats on the corn stubble. Fourth, clover. Product, 15 to 20 bushels wheat, 35 to 50 bushels corn, one hogshead tobacco, 40 bushels oats, per acre. Clover is the principal fertilizer. The land is remarkably adapted to clover, and since its introduction, some ten years or more, the land in this region has been progressively improving.

Mr. Dorsett drove me a circuit of twenty-five miles, between South and West river, over a fine undulating country, well farmed; and, with one or two exceptions, the land all laid down in clover, looking almost as well as the western lands of good quality, (for it is not all good, you know.) There are no lanes here, but gates on the public road. We passed through sixty-six of them in a drive of twenty-five miles.

Mr. Dorsett has some good stock. I saw two fine blooded brood mares, one of them, a Naragansett, a picture. Her colts are good, and sell for high prices. Also some good grade Durhams, a flock of mixed sheep, cross of the common, Merino, South-Down, and Leicester—forty-eight ewes and two rams. The clip averaged eight pounds and fourteen ounces, unwashed. One ewe that bore lambs for two years, gave a fleece which weighed twelve pounds. Finer mutton I have never tasted than at his table, from this flock.

Mr. Dorsett manages his own farm, and has made it very productive. His sales have amounted to $3,300 per annum. Baltimore is the principal market. Butter, and small marketing, is sold at Annapolis. He observes system in all of his farming operations, care of tools, implements, &c.

Doct. Stewart, whose farm adjoins, was from home, which deprived me of the pleasure of seeing him and his large farm of some two thousand acres. It is highly cultivated, as I saw in passing through it. I have made the Doctor a promise to visit him some future time. Slave labor is used in this neighborhood altogether.

Yesterday I returned from a visit to George Patterson, Esq. who resides at "Springfield," twenty-two miles west of this, in Carrol county. He is a wealthy gentleman, and is extensively known for his fine stock, and enterprising character. His farm contains 1735 acres, about 1200 under cultivation, and 500 in woodland. It is rolling land, and well watered—a branch of the Petapsco running through it, supplies water for a grist mill, on the farm, where all the grain raised on the farm is ground for the family and stock. The woodland is admirably located to shelter the many fields from the northwest winds, and presented a beautiful and diversified landscape. The timber was formerly oak, but as it is removed, is supplanted by a spontaneous growth of hickory and chestnut, principally the latter. Mr. Patterson has cut out much of the old timber to burn lime, and also with a view to get rid of it to admit the young growth of chestnut.

When Mr. P. took possession of this farm, twenty years since, the land was poor, much of it *very* poor, and barren of vegetation, except *briars,*—with scarcely any buildings. Since then he has put upwards of one hundred and sixty thousand bushels of lime on the land, and erected fifty buildings of various kinds, all permanently and neatly built, and now all yellow washed, presenting in contrast with the green fields and woods, a picturesque appearance. His plan is, whenever a field is brought into cultivation, and made to produce clover for mowing, to erect as many barracks as will hold the hay. These barracks, or barns, are made of frame, some 20 by 30 feet square, 12 or 14 high, weather boarded, and covered with cypress shingles.

Mr. Patterson commences on the poor worn out land by spreading two hundred bushels of lime per acre, (measured at the kiln unslacked,) on the surface, and lets it remain two or three years. Then breaks it up and puts whatever dung he can muster, and plants in corn. The following is his system of rotation:—First year, corn; second year, oats, rye or wheat, and clover sowed in the spring; third year, clover, first year mowed, second crop left on the ground; fourth year, clover either left on the ground or moderately grazed; fifth year, wheat, timothy sowed with the wheat; sixth year, timothy mowed; seventh year, timothy mowed; eighth year, grazed; ninth year, grazed, and top dressed the last four years. Top dressing he prefers to plowing in the manure of any kind. Lime, he thinks, acts slowly, and does not show much the first year or two, and should be always applied to *grass*, and not on fallow. Much of this land is now in a high state of cultivation—producing 20 to 30 bushels wheat, 60 to 80 bushels corn, and two to three tons hay, per acre. The contrast between this farm and some of the adjoining land is wonderful! The one green, and luxuriant in crops; the other barren, and devoid of vegetation, having no green thing except a few low running briars.

This land was also very stony. With the stones Mr. P. has turnpiked several roads across his farm, which enables him to haul wood, lime, and manure in wet weather. He has also applied a portion of these stone to making drains. He makes drains by cutting a ditch four feet deep, and filling two feet with fine broken stones. Swamps and swails heretofore useless, are now made dry, and are among the most productive parts of his land. The fences are in prime order—the few worm fences that he has, are eleven rails high, staked and ridered, and six feet worm. The greater part are post and post and rails—upwards of ten thousand pannel—posts of mountain locust. A few chestnut posts he has been compelled to use, and these he protects from decay by filling round with stone, which drain the water rapidly off.

His barns, where the greater part of the cattle and hogs are fed in the winter, are situated on two opposite knolls, and drains are so arranged as to convey the wash from both to permanent meadows adjoining.

His stock is all of the most approved kind, and pure in blood. Of horses, there are several full blood mares, of high pedigree and beauty. "Mary Randolph," a superb mare of rare good points, a gray, has a filly one year old, the handsomest creature I ever saw. He has in all some twenty-five or thirty fine horses of various ages. At present, he is about crossing these mares with a large well formed horse, a cross of the Canadian—similar to the Morgan horse—with the view of increasing the size more suitable for carriage or draft horses. His herd of Devon cattle, about sixty in number, are a rare lot. I had heard of the Devon cattle, and seen the prints representing them; but I had *no idea* of their beauty. The prints, or some of them, are *carricatures*, at least of Mr. Patterson's best cattle. His bull "Eclipse," imported two or three years since, now five years old, is a perfect gem, the best bull of *any* stock, not excepting my old favorites, the Durhams, that I have ever seen. The cows have fine shaped and well developed udders, and must be good milkers. Mr. Patterson says they give rich milk, and a good deal of it. He has bred his stock with that object, and selected the best milking families. They have size enough—the bull would weigh 1000 lbs. nett beef—the cows are also large enough. They have fine shaped yellow noses, with a ring of the same round the eye—all uniform as so many peas. What will you think if I tell you that this will become the favorite stock before many years? The beef, you know, is celebrated for its fine quality, being so evenly mixed, fat and lean, instead of laying the fat on the surface.

Here I also saw upwards of seventy Berkshire store hogs—*hog fat*, in the clover field—and as many sucking pigs, intended for next year. The sows are allowed but one litter each year, and they all have pigs in May. Mr. P. has a fine flock of sheep—some full blood Downs from the flocks of Mr. Rotch, N. Y., and Cope, of Pennsylvania.

Every thing is done here in the best manner, and all the stock is of the *best*, without regard to price. The whole establishment is well worth one hundred thousand dollars. I have not done credit in the description. Mr. Patterson manages the farm himself—has no white man on the place but himself, and is a pattern in industry and frugality, even to Pennsylvania farmers. His neighbors are beginning to follow his example in the use of lime. A few years hence will have completed Mr. Patterson's plans of improvement, and then he will have the best farm in Maryland.

ISAAC DILLON.

Eutaw House, Baltimore, 20th May, 1845.

THE LAKE COUNTY SAND WASHED OUT OF SOLON ROBINSON'S EYES.

MR. EDITOR—My object in writing is, to correct some remarks in the April No. of the Cultivator, page 125, by Solon Robinson, touching this place, which, from the known character of your correspondent, as well as that of the Cultivator, we in this place feel is calculated to do us much injustice. We do not charge Mr. R. with intentional misrepresentation; but this does not alter the effect his remarks are calculated to have upon many of your readers to the injury of this place. We would say, however, that he must have been misinformed, or have formed his opinion of the people without knowing their character; and as to some other remarks of his, we think he must have had his eyes shut, or filled with Lake county sand, for had his vision been clear he would have received other impressions. He says "this place is located upon good prairie;" which is correct; but how he could say "inconvenient to mills," we suckers think mighty strange. A steam saw mill, also a flouring mill, has been in full operation for some four years within fifty rods of where Mr. R. lodged.

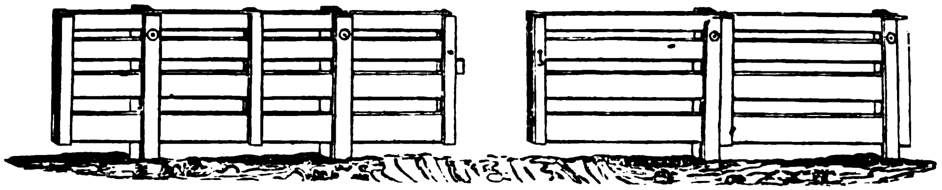
Mr. R. seems wonderfully taken up with the yankees, but just tell him we are all suckers here, although we came, some from old, some from New England, some from New Jersey, and some from old Kaintuck, forming a compound that finds it may be equal, yet not superior in industry, intelligence and virtue. Your correspondent says we never read agricultural papers here. For his information I will state that there are 28 copies of the Cultivator and Prairie Farmer taken at this office, and as money does not grow on bushes even in this productive land, it is not reasonable to suppose that we take these merely for waste paper.

This place was first settled about the same time as Bunker Hill; and I will say that "in this eight year old settlement" we now have three public schools in this village, one of from forty to fifty scholars three-fourth's of a mile distant, two Sabbath schools, two meeting houses and worship in each every Sabbath; a temperance society, with 147 signatures to the pledge; a Bible society which has sold and distributed nearly 350 copies of the New and Old Testament, since January, '44. We have two public houses where the weary can find rest. Intoxicating liquor is not sold in the village, nor nearer than Bunker Hill, that I am aware of. There are seventy-five subscribers to newspapers and periodicals at this office. These are facts, Mr. R.; but not the half that might be said. You did not observe those shade trees by the road side and around our dwellings—eh? and those fruit trees in our gardens and orchards? did not notice our Durham cattle—our flocks of sheep; call on us next time, and let us take you by the hand, and let us show you some of *our* orchards, grass lots, barns, good horses; more scholars at school, and more readers of agricultural papers than there is in some of the oldest settlements in the state where the population is double.

I will close this epistle, Mr. Editor, after calling your attention and that of the public to a review by a subscriber, in the April No. of the Prairie Farmer, of remarks made in the March No., same paper, by Mr. Robinson.

JONA. HUGGINS, P. M.

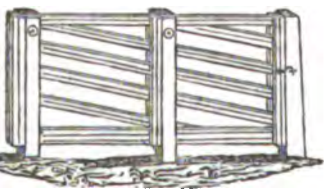
Woodburn, Macoupin county, Ill., May 12, 1845.



BAKER'S PATENT FARM GATE.—(*Fig.* 70.)

MR. TUCKER—I take the liberty of forwarding to you for insertion in the *Cultivator* a cut of a gate invented and patented by Mr. ANSON BAKER, of Western. This gate was first constructed by Mr. B. about a year ago, since which time several of them have been used by farmers in Western and the adjoining towns. The above cut (fig. 70) is a tolerably fair representation of the gate with one of the posts partially open. The construction is simple, being in fact nothing more than two lengths of board fence placed on rollers in such manner as to open right and left with the application of very little force. These gates may be made of inch boards, either planed and painted neatly, or rough, like the common fence, at a trifling expense compared with the cost of almost any other gate now in use. The posts should be firmly and perpendicularly set, but they will retain their position far better than when the gate swings in the ordinary way. The posts may be in one piece, with a tongue or piece sawed out even with the ground, or a batten may be placed on one side and fastened by pins or bolts through the post, one of which may pass through the roller. The rollers may be of wood or iron, but wooden rollers, which cost by the quantity from four to six cents for each gate, have been found quite durable, and answer a good purpose. The diameter of the roller should be such as to correspond with the size of the post, and the space between the boards be just the diameter of the roller, to prevent the gate from raising at the back end when weight happens to be applied to the other. When in its natural position it is self balancing, and always in order.

Mr. Baker claims for this gate several important advantages, among which may be named cheapness of construction, costing no more than half the price of any other good gate; and convenience of opening, particularly in winter, as they are always in place, and do not have to be *carried* open by main strength, and are not troubled by snow.



Self-shutting Gate.—(*Fig.* 71.)

The cut (fig. 71) represents a self-shutting gate, very convenient for yards, gardens, &c.; answering, in fact, all purposes where a small gate is wanted. The engraving will readily show its form, and enable any one to understand its principles. When opened, the inclination of the boards or slats on the rollers causes it at once to resume its proper position.

It is proper to add, that the above named gates have been used by many of the best farmers in Western, among whom Mr. Baker refers to George Brayton, Esq., Hon. Arnon Comstock, David Utley, Esq., and others, who have had them in use, for evidence of their utility. Of the importance of having a gate which combines cheapness, convenience and durability, it is not necessary for me to speak, as these things are fully understood by all good farmers. If on trial this gate shall answer the expectation of its inventor, the public will not be slow to adopt it. E. COMSTOCK.

Rome, N. Y., June 6th, 1845.

ECONOMICAL WAY OF MAKING MANURE, &c.

LUTHER TUCKER, ESQ.—The writer, agreeably with his promise, will now give you the simple method by which, during the past winter, he collected a much larger quantity of manure than he has heretofore done; and which, his present crops are showing the advantage of.

He will premise, by saying, that his stock were well fed, housed and bedded with leaves; and gave evident proof of the value of proper care.

Immediately behind each row of dairy cows, is a wood gutter, 12 inches wide, 4 inches deep, and running the length of the stable, which receives the droppings from the cattle; and as the gutter is laid a little sloping, the liquor passes, and (with the use of a scraper) the dung is readily removed into a pit on the outside of the stable, which is thus kept clean.

The pits are 2 feet deep at each end, and rather more in the centre, where an old oil cask, containing about 200 gallons, is sunk into the ground, so that one-half the cask is below the bottom of the pit; here augur holes are made in the cask, by which the pits can be drained at pleasure.

The pits are half filled with muck from the adjoining woods, (mostly old decayed leaves or vegetable mould,) and over it is spread a good coat of plaster: on this layer of muck, the gutters empty themselves.

About once a week, a man occupies half an hour in leveling the heaps, and thoroughly soaking them with the liquor from the casks; at the same time sprinkling over a little plaster to prevent any offensive smell.

As soon as the muck is sufficiently covered with manure, a fresh layer is laid on, and in this way the pits are filled with alternate layers of muck and manure.

There is no waste of liquor, as what is not absorbed by the heap passes through it to the bottom of the pit, and again into the cask. During the past winter, we had not only sufficient to saturate all the materials we had leisure to collect, but were able to haul out several hundred gallons to the grass lands.

On the pits requiring emptying, their contents were *compactly* stacked where wanted for spring use, and on being opened contained a mass of rich manure, collected as you will see at a very trifling outlay; a few bushels of plaster being the only ingredient not furnished by the farm.

The writer, at leisure, proposes giving you his plan for winter feeding—a subject to which he has directed his attention, with a view to economy in food—producing good milk and butter; and the saving of cost in exchanging dry for fresh cows; at the same time he desires not to occupy your columns to the exclusion of more interesting matter. WOODSIDE.

N. B. Crops of Grass very short from the limited rain the last three months; cutting generally commenced round the city, (Balt.) The crops of broad-cast corn referred to in my last, although checked for want of moisture, now 18 inches high; the ground well covered, and the corn and oats in a fine healthy state.

On 3 acres of ground, laid out in furrows (north and south) 3 feet apart and well manured, the writer has planted 2 rows of corn, with hills 2 feet 6 apart, giving 5,808 hills to the acre; then 2 rows of potatoes, and so on alternately; there being 9 feet between each double row of corn; it is presumed it will have as much sun and air as though planted as usual, 4 feet by 4 feet (2,722 hills to the acre) and that the opening of 9 feet will prevent injury to the potatoes—both crops have been well cultivated and plastered, and appear in a very thriving state. If the plan succeeds, the 3 acres of land would give one and a half acre of potatoes and equal to 3 acres of corn planted 4 feet by 4 feet—whether it succeeds or not, I propose giving you the result. In the one case, it may induce others to try it for themselves; in the other, spare them the trouble of doing so.

Maryland, June 7th, 1845.

GESTATION OF COWS.

Mr. Editor—While living on my farm, I found it not only useful, but very necessary, to keep a record of the time my cows were put to the bull, as well as the time of calving. By the means of keeping a record, I was enabled to make a calculation on the probable period parturition would take place, and be prepared for the event, and avoid accidents which might occur, when no attention was paid to the subject.

The experiments and facts which I am about to state, may not be considered of much importance to farmers generally, but to the breeders of cattle, and the inquiring mind, they may, I trust, be interesting; and some good may possibly result from their publicity.

Earl Spencer, in a paper communicated to the "Journal of the Royal Agricultural Society of England," says the shortest period of gestation, which a live calf was produced, was 220 days; and the longest 313—difference 93 days.

M. Tessier, in a memoir read to the Royal Academy of Sciences at Paris, says that in 1,131 cows, which he had the opportunity of observing, the shortest period of gestation was 240 days; and the longest 321—difference 81 days.

Both of the foregoing statements differ from my experience. Among my cows, though numbering only 62, the shortest period of gestation was 213 days, and the longest period was 336—difference 123 days. But as regards the shortest period of 213 days, I must confess I have had my doubts as to the correctness, though I kept the record myself, for in no other instance have they fallen below 260 days.

It would appear from the Earl's statements, that a calf produced at an earlier period than 260 days, must be considered decidedly premature; and any calf produced at any period of gestation exceeding 300 days must also be considered irregular, but in this latter case the health of the produced is not affected.

There are some facts presented in my record which differ from any statements which have fallen under my observation. For instance, in 1839 I had fourteen cows, three of which produced heifer calves; and the period of gestation averaging 284 days, while the other seven produced males, and averaged 280 days. This, in regard to the time allowed for males and females, is contrary to the prevalent belief among farmers, and differs very materially from the result of the following year, 1840. I had that year thirteen cows, six of which produced heifer calves, whose period of gestation averaged 278 days; and seven produced bull calves, averaging 299 days; the shortest period of the heifer calves was 213 days, and the longest 336 days; being the greatest extremes of either year. The shortest period of the bulls was 278, and the longest period was 289 days. In this year the number of males and females were nearly balanced.

The next year, 1841, eleven cows produced eight heifer and three bull calves. The shortest period of gestation for the heifer calves, was 277 and the longest 292 days—averaging 286 days. For the bull calves the shortest period of gestation was 284, and the longest 299 days—averaging 293 days.

In 1842, the order seemed to be reversed; for out of thirteen cows, nine produced males, and four females. The shortest for the males was 281, and the longest 294, averaging 287 days. There was but very little difference in the time for the females; the shortest period being 280, and the longest 286—averaging 284 days.

In 1843, the proportion of males to females, was, as in 1840, nearly balanced. From eleven cows, six male and five female calves were produced. The shortest period for the males was 277, and the longest 290—averaging 282 days; and the shortest period for the females was 276, the longest 286—averaging 282 days.

In the five years, which embraced my experiments, sixty-two cows produced twenty-six females, and thirty-six male calves; the period of gestation for the bull calves, averaging 288 days, while the heifers averaged nearly 283 days.

In the experiments of Earl Spencer, those cows whose period exceeded 286 days, the number of females was only 90, while the number of males was 150. Now, in my experiments, those cows that exceeded 286 days, the number of females was 7, while that of the males was 12. The number of female calves produced under 283 days was 24, while that of the males was 31. In most cases, therefore, 283 or 288 days may be assumed as the usual period for gestation, and not 270 days, as stated in Youatt's work on cattle.

My experiments were not confined to any particular breed or variety of cattle—they consisted of Durham, Devon, Herefords, Ayrshires and grades; and I think these results, though derived from the observation of one person only, will be found equally applicable; at any rate, we should be pleased to hear the results of others.

C. N. Bement.

American Hotel, Albany, July, 1845.

CULTIVATION OF FRUIT.

Mr. Tucker—Among the various objects that engage the attention of the agriculturist, few have higher claims upon his care than the cultivation of fruit. When man was fresh from the hands of his maker, the fruits of his garden became the sole objects of his culture, as they constituted his entire, yet ample means of subsistence. Health, vigor and longevity resulted from this simple fare; and there can hardly be a doubt that even at this day, a nearer approach to this primitive simplicity of diet would contribute much to the preservation of health and happiness among mankind. When we consider the great and constantly increasing varieties of fruit that are capable of being cultivated in our climate; their wonderful capacity for improvement; the elegance of form and beauty of color displayed by many of them; and above all their delightful fragrance and exquisite flavor; it may well be asked, what objects demand our more constant and fostering care? Nor is the value of fruit at all lessened when we view it as a means of increasing our wealth. If our farmers, with their present very meagre and imperfect collections of fruit, have often found the produce of the orchard among the most valuable of crops, what may they not expect when the best and most profitable varieties come to be the objects of their culture? In this region we can boast of but few apples of decided value, and until a recent period we had but one superior and some half dozen tolerable pears. Of the best of apples, and of those exquisite productions of the pear kind, with which the science and skill of a few individuals have enriched the world within the last half century, we are yet to become partakers. The peach and the plum had almost become extinct among us for want of a sufficient knowledge in their culture to counteract their diseases, and to protect them from the depredations of insects. Their best varieties have never been seen here at all. These defects in our system of rural economy cannot fail of being amended when the attention of the public can be sufficiently awakened to their existence; since it is not so much the remedy, as the determination and skill to use it, that is wanting.

But the principal design of this communication is to lay before the public some observations that have lately been made in the culture of a few particular varieties of fruit. In the contiguous counties of Westchester and Fairfield, and probably over a considerably wider extent of surface, the Newtown Pippin tree has never worn the healthy and flourishing appearance of the other cultivated sorts. It is slow of growth, and the bark of even young trees has a peculiarly rough and perforated appearance, as if often traversed by the woodpecker. For many years its fruit has been gradually deteriorating until it has become in many orchards nearly worthless. So generally indeed is this the case that cultivators are about abandoning it as one of the wornout varieties, considering it stricken with the incurable degeneracy of age. That such an opinion however is not well founded, may be inferred from the fact that this fruit, when grown in the new and more virgin soils of the interior, is to this day fairer and larger than we have ever been accustomed to see it here. This fact would seem to indicate, not the degeneracy of the tree itself, but the want of something in the soil to enable it to bring out its fruit in full perfection. Some other of the older varieties of apples have degenerated much within the last twenty or thirty years. The same thing has happened to some of the choicest pears. The White Doyenne, or Virgalieu, until recently the only superior variety ever cultivated here, has for twenty years ceased to ripen its fruit. The tree itself seems healthy, but its fruit commences cracking when half grown; becomes woody, and scarcely a pear has ripened on these trees for nearly a quarter of a century, with the exception of the last two years. Year before last a few, and last year a greater proportion of these pears came to perfection. Here again the soil has lacked something that this tree required in ripening its fruit; and the favorable change observed last year would seem to indicate that this material, whatever it is, which after a long period had been exhausted by the annual fructification, has, after a lapse of twenty years, accumulated again in quantity sufficient to bring some of its fruit to perfection. The Seckel pear, a most delicious fruit, having but recently been introduced here, ripens with us in great perfection; but at Philadelphia, where the tree originated about a century ago, probably from a seed of the Rousselet de Rheims, which it greatly resembles, the Seckel has begun to suffer from exhaustion of its appropriate food, and requires an artificial supply to restore it to its wonted perfection. This fact I learn from Mr. L. C. Ford, of Olney Park, accompanied with the valuable information that the material wanted in this case was some ferruginous compound, as by giving a liberal supply of slag from the iron foundry to the roots of his trees, he has restored its fruit to more than its pristine excellence.

With regard to the Newtown pippin, I am in possession of facts showing that our soil requires only some compound of lime, probably the phosphate, to enable it to bring this apple to full perfection. The details of this discovery would extend this article to an inconvenient length, but they will cheerfully be given to any gentleman requiring them. One of the facts upon which this opinion is based, goes to show that an old and decaying Newtown pippin tree, which in 1840, bore chiefly small, rusted and valueless fruit, in 1842 presented a healthy and flourishing appearance, and commenced bearing large, fair and beautiful apples, and has done the same every year since; under no other treatment than that of having the clam and oyster shells from the table of the family deposited under it, which has been done from the date first mentioned up to the present time. This spring the tree has a very fine appearance, and is preparing for a heavy crop. It is worthy of notice that the very next tree in the row is likewise a Newtown pippin, which still continues to bear very inferior fruit, fit only for cider.

Most of the fruit trees will grow and bear fruit in any tolerable soil, but to produce it in full perfection, many of the choicer kinds probably require materials with which the earth in this region is but sparingly provided. If every different species of vegetation requires its own appropriate food; if corn, wheat, rye, &c., in two or three successive crops exhaust the silicate of potash, or some other sparingly provided material, essential to their growth, and can no longer be cultivated in the same fields until time, or the hand of man, has restored what is wanting; it surely need not excite our wonder that a tree, fixed to the same locality, and drawing all the materials of its subsistence from a few feet of ground, should, in the lapse of fifty or a hundred years, exhaust those sparse and delicate materials essential to the perfection of its fruit; and struggling with adverse circumstances, continue for a long period afterwards to bring forth only fruit of a very inferior kind. To this cause, rather than to antiquity of origin, we may probably ascribe the failure of some of our favorite fruits. The Rousselet, for instance, long so highly prized by the confectioners in France, is now said to be rapidly failing in that country; but having been introduced into this town about fourteen years since, in mistake for the Seckel, is found to be a vigorous and rapid growing tree, producing excellent fruit. This is certainly an important subject, and deserves further investigation. May we not hope that a series of well directed experiments, with careful observation, will eventually yield the agriculturist that intimate knowledge of the requirments of the plants and trees he cultivates, that shall enable him, by supplying their individual wants, not only to recover, but to exceed the former perfection of the now deteriorated fruits?

THOMAS CLOSE.

Portchester, Westchester county, N. Y.

THE SHEPHERD'S DOG.

MR. TUCKER—SIR—You may inform your correspondent "J. P. M.," that Isaac Hardy, Esq. of Lasalle, Lasalle Co., Illinois, owns a flock of some fifteen hundred or two thousand sheep, which are under the entire management of a Scotch shepherd and his dogs, who imported a pair from Scotland, thorough bred animals: from these he has now, I think, twenty or thirty in train, and for sale. Your Feburary number for 1844, contains a faithful picture of an animal that Mr. Hardy sent me last year. We have proved his skill among our flocks in driving on the road, and must say he is worth two men. There is no need of bawling, whipping or running; you may ride in your carriage, and the dog will, very dexterously and quietly, conduct them along fifteen miles one hour earlier than they can be driven by two boys or men.

Nathan Hardy, of Monkton, (Vt.,) has a slut of this stock, and may be able to furnish them.

In a state containing so many sheep as Vermont, I am surprised that we have not bred the shepherd's dog, more especially when we find so many worthless dogs among us. Yours truly, SOLO. W. JEWETT.

WOOL DEPOT AT KINDERHOOK.

MR. TUCKER—I wish to call the attention of wool growers to the advertisement of H. BLANCHARD, of Kinderhook, in the last No. of the Cultivator, and to recommend it to their particular attention. The disadvantages of having to sell our wool to agents and speculators, have long been a subject of general complaint; but no plan has heretofore been devised, that promises any satisfactory improvement. Mr. Blanchard's plan will enable the farmer to place his wool where a large number of manufacturers will examine it personally, and many of them are pleged to give that depot the preference; and nothing will intervene between what the manufacturer is willing to pay, and what the farmer receives, but the commission paid the agent.

The establishment is to be conducted upon strictly fair and honorable principles, in order to give it character among the manufacturers; the interest of the agent as well as the grower being equally concerned in such a course. The larger the amount of wool deposited, the greater the inducement for manufacturers to visit it; and I think wool from other counties would find a much better and readier market there, than in the wool houses of the grower. The principal objection of persons from a distance will probably be, the responsibility, capability, and integrity of the agent; to such, I have to say, all is right on those points; and as evidence of its truth, will state that about ten thousand fleeces are pleged to Mr. Blanchard, from the single town of Canaan.

There can be no doubt that many advantages will be derived, not only to the wool grower, but to the manufacturer, which I have not time to mention, but which will readily occur to intelligent minds. Any farther particulars in regard to the plan, may be obtained by addressing H. Blanchard, Kinderhook, Columbia County, N. Y. DANIEL S. CURTIS.

Canaan, June 12th, 1845.

RUST IN WHEAT.

Mr. Tucker—In my peregrinations, I often meet with practical men, who still believe that rust in wheat is occasioned by the fungus tribe, whose minute seeds are wafted abroad by a moist and foggy atmosphere from Barberry and bramble bushes, where they are grown on their native pastures, as it would appear for the very purpose of destroying the hopes of the husbandman. But since the doctrine of cause and effect is beginning to be better understood, it may be hoped that this, one of the most pernicious errors ever entertained, may also become extinct. That the rust and every other disease in wheat, as in everything else, is the *effect* of a *cause*, is a grand discovery, and must lead to the most important results, as man will no longer grovel in the dark, but feel himself competent to cope with the evil on plain ground, and the mastery will be his.

I was, the last week, spending an evening with a very intelligent farmer, who had lately embraced this doctrine, and he does indeed rejoice in the light afforded him. He no longer trembles at the sight of a barberry bush, but when a blight takes place, looks back for the cause, and is pretty sure to find it in his diary, where is kept a daily account of the weather and its prognostics, and on turning to it to show me how truly the *cause* always precedes the *effect*, I saw, often repeated, the following entry: "A sharp wind from the north-east this morning; look out for blight in some shape or other," and if, at the time of blossoming or ripening of the grain, foggy and damp weather prevailed, I more than once observed the remark, "the value of grain has risen about five per cent. to-night," and my friend has grown so confident as to believe he can, by care and fore-sight, prevent about one-half the evil that he has hitherto encountered in this way, and is enabled to account for the other half in a rational and satisfactory manner, and this to him is equal to the value of the whole. I found also, that he had made some very interesting observations on a popular work that treats expressly on this subject, exactly in keeping with this new view of cause and effect, which I have prevailed upon him to allow me to copy, and present, with your permission, for publication in the pages of the Cultivator.

In Vancouver's Survey of Devonshire, England, there is a letter from a clergyman, addressed to the Surveyor, in which the rust in wheat is uniformly ascribed to the influence of the barberry, bramble, and about half a dozen other shrubs and trees, and even grasses, on which fungi are produced; the seeds of which are scattered for miles by the first spring breezes, provided they are accompanied with moisture or fog. He says: "The fungus having arrived at maturity in the spring on certain shrubs, bushes and plants, is taken up by the first humid atmosphere and wafted into the adjoining fields where the wheat under the *western* hedge is sure to suffer the most; the seeds being so minute and exceedingly light as to be wafted by every breeze, when accompanied by moisture or fogs." Now how curious! that these minute seeds should be scattered by the very winds that are most unfavorable to their flight; for a moist breeze would assuredly deposit them instantly on the earth; and why is it, that the wheat under the *western* hedge is most likely to suffer? are there more barberry bushes in western hedges than any other? rather is it not because of its eastern exposure, to that quarter from whence the blighting blast proceeds? We all know that some years have no blight or rust, and yet these obnoxious bushes retain their positions, whether in the western or other hedges, which in those seasons when rust prevails the most, the early sown wheat is always least affected; this being universally the case, as shown by the Surveyor himself, for in the chapter on wheat he uniformly ascribes the rust and mildew to weakness or tenderness in consequence of late sowing and bad situations; and this throughout the whole seven districts which he is surveying. He says, "District No. 1. The mildew or rust is but little known, except in small enclosures and low situations, where the crop is excluded from a free circulation of air in the higher parts of the country, where the fields are large and the division-mounds are covered only with dwarf hazel or willow and creeping brambles, the evil is by no means such as to require particular notice. District No. 2. Wheat has frequently been sown after turneps, but on account of its being so very liable to the rust when sown at that late season, barley is becoming its more valuable substitute. District No. 3. The rust or mildew is a disease seldom known in this district, except on wheat sown after potatoes, (late sown.) District No. 4. Late sown wheat is found to be peculiarly subject to rust or mildew, and is much complained of. District No. 5. Wheat sown late is always more or less injured by rust or mildew. District No. 6. When turneps fail, the land is sown with wheat, the early sown crops of which are the best sample, and by far the freer from rust or mildew. District No. 7. The late sown wheat is always very liable to rust or mildew."

Now, after this, who would go and thrust his head into barberry or bramble bushes to seek for the cause of rust or mildew? while it is particularly worthy of remark, that the willow and bramble grow harmlessly on the "division-mounds of large enclosures," although these are amongst the accursed fungi-bearing tribes, enumerated by the surveyor's reverend correspondent; and who himself adds, "In low situations and small enclosures, where there is a want of due circulation of air, the rust has been noticed to make a sudden appearance after foggy weather;" and how is it, if the rust is occasioned by the seeds of fungi, which sail against wind and weather, that the late sown wheat is always sure to catch them? The reverend gentleman says, "In damp weather its seeds are more immediately received into the leaves of trees and shrubs, together with their barks and fruits, through the medium of those valves and *mouths* with which nature has endowed them for the admission of moisture." Then it would appear, either that the young wheat plants have larger mouths than the older ones, or that they are so inexperienced as not to know when to keep them shut, but, like children, must always be tasting! Unhappy urchins! see what comes of indulging the appetite! The rust, unlike the tempter of man, who goes roaring about seeking whom he may devour, prowls out on the first humid breezes of spring, tantalizing the little tender plants to take a sip at pleasure's fount, and down they go to perdition.

See here now, the effects of ignorance and superstition. Instead of viewing things in a rational way, we are seeking for the most improbable modes of accounting for the commonest occurrences; and if a cold wind in the spring nips vegetation, causing the young and tender plants and the most exposed, to feel it the worst, the mischief, forsooth, must be done by fungi, which have been sitting on some barberry or bramble bush, "to sally forth on the first humid breezes of the spring, to be the destroyers of thousands of acres of those golden sheaves, which are the husbandman's hope, and the staff of life."

Charles Hamilton.

Chester county, Pa., March, 1845.

SETTING POSTS—FENCES—HARROWS.

Mr. Tucker—Posts for fences or other purposes, set into the ground, will last double the length of time by being put into the middle of the hole. The space around the post filled with small stones instead of earth, the earth does not come in contact with the post, and air is also admitted into the hole, both of which probably tend to prevent decay. In constructing fences, the earth taken from the hole is placed directly under the line of the fence, thus forming a ridge which is a saving equal to twelve feet of boards in four lengths of fence. The stones should be raised three or four inches around the post above the surface of the ground. The posts will not be very firm at first, but after standing through one winter their firmness will be much increased, and will continue to increase for several years.

A post and rail fence constructed in this way forty-five years since, in the vicinity of Boston, is now standing, with the exception of one post, and will probably stand a dozen years more.

The common zig zag rail fence is much more durable with upright stakes than with cross stakes. My method is, to connect the stakes before the top rail is put in, with iron wire, say one-fourth of an inch in diameter, which is done after the stakes are set by bringing the tops of the stakes as near together as the fence will admit; then take the measurement with a cord, which will show the length to cut the wire, which is easily done with a cold chisel; the ends of the wire are then hooked around each stake; the top rail being then put in, completes the fence. With an iron a foot or more in length, with a hole near one end to admit the end of the wire, the operation is quickly performed. This is a much cheaper method of securing upright stakes than the usual way with a piece of scantling.

The Harrow, whether square or triangle, should be constructed entirely of iron, (except the points of the teeth, which are steel); bars of iron of proper thickness, width and weight, are selected and welded together so as to form the desired shape for the frame; the tops of the teeth being rounded about an inch down, pass through the iron plate or frame, and are made fast on the upper side by a nut. The teeth in this way are always kept tight, which is very difficult in a wood framed harrow. With the exception of the teeth, a harrow thus constructed will endure a century without being housed.

A Farmer.

GRASSES FOR THE SOUTH.

Editor of the Cultivator—Your correspondents frequently inquire respecting the grasses suitable to the south. If each would communicate what he has observed, it would be a sufficient answer to such inquiries, and might prove the most important benefit to the agriculture of the south. During this winter I have seen bundles of *northern hay* brought to the stables of my neighbor, which had paid for carriage many hundred miles round the capes of Florida, through the Gulf of Mexico, and five hundred miles (by the course of the river) into the interior. This is a *standing reproach* to the agriculture of the south.

Lucerne.—This is found to grow well here. Sow it in drills, in the early part of the fall, 24 to 27 inches apart; it flourishes, yields four to five cuttings in the course of the year; and on soil which would bring 20 bushels of corn to the acre, grows one foot and a half high. This season, some was cut on the 12th of March, for soiling; and was then from a foot to knee high. The most of it has been cut twice over, since the first cutting, to this day, May 13. Cattle and horses eat it greedily; a cow, fed on it chiefly, is yielding at this time between five and six gallons of milk daily; when as yet there is no grass in the woods or on the common, sufficient to change the poverty-stricken appearance of the cattle in "the range." I have made no hay from it; but have no doubt it will make good hay.

Guinea Grass.—The root is similar to that of the cane or reed, and is perennial. The stem and blade are like those of the Egyptian Millet. On rich soil it is very luxuriant, yielding many cuttings in the course of the year. It is good for soiling—horses and cattle eat it readily, and, if cut when in flower, it makes a hay most abundantly, of which cattle feed greedily in winter. Horses do not seem to like the hay. It is most readily propagated by the root. A small root, two inches long, with one or more joints to it, will vegetate; and, if the ground is made loose by plowing once or twice during the season after planting, roots placed in checks of four feet will take *complete possession of the soil the first season;* so that the next spring it will start up evenly over the soil everywhere. Hogs root after them with great eagerness; and as the tendency of this plant is to fill the ground with roots in so thick a mat that the grass does not grow tall in consequence, the idea suggests itself of pasturing cattle on this grass in the spring and summer, and giving the hogs the benefit of the roots in the winter. They cannot destroy it; the smallest fibre left in the ground will grow. It might be a great pest in a *garden;* but if land is to be used for stock it will take and maintain entire possession to the exclusion of any competitor which we have in middle Alabama.

Clover and Herd's Grass.—I have now a beautiful lot of these grasses in conjunction, on high land; the whole about knee high, and the clover in flower. Mr. Kirby, one of my neighbors, cut the wood from a piece of low, pipe clay, crawfish land, last winter; and when the brush, &c., lying on the ground, had become sufficiently dry, he set fire to it and burnt it all off; thus giving it a top dressing of ashes. He then sowed Herd's grass on the top of the ground, without plow, harrow, or any thing of the kind. He now has a most rich and beautiful crop of this grass growing. If desired, your readers may obtain further particulars of this crop.

Leersia Orizoides, (rice grass.)—This plant so much resembles *rice* that only a practiced eye can distinguish them. The negroes on the rice plantations in Carolina call it "*the rice's cousin.*" It will grow wherever rice will—*in the water*, or in any damp situation. It is found wild in all the southern country; grows tall, seeds in a panicle not unlike a head of oats, and will yield two crops a year of *choice hay*. Roots perennial. B. M.

Tuskaloosa, Ala., May 13, 1845.

TREATMENT OF SHEEP AFTER SHEARING.

Mr. Tucker—The directions for a "compound for smearing sheep," that is given in your last number, leads me to make the following remarks respecting the treatment of sheep generally after shearing. There is nothing conduces to the general health and comfort of sheep at this season more than a clean skin; any application that has that tendency will be of service; any thing to the contrary must injure them, and the growth and quality of their wool, in a greater or less degree. Smearing of any kind is injurious at any season, but particularly so after shearing, when the wool is short; it stops the pores, checks the growth of the wool, and leaves it dry and brittle, far into the season. If when sheep are shearing, there is a large hogshead of *very strong* brine made, and as the sheep are shorn they are taken to it, and while one man holds the sheep, another takes a strong *scrubbing brush*, such as floors are scrubbed with, and after pouring some of the brine along the back and shoulders, he scrubs the sheep well all over, until he raises a lather as with soap; nothing more is necessary. The skin will be left bright, and red, and clean. Every tick and sheep louse instantly disappears, and if the skin had any tendency to itch, it is entirely cured; perspiration is promoted, and the growth of the wool improved. In this way I think that the general strength of the sheep, to withstand the effects of any storm, will be better promoted than by smearing of any kind, which is never admissible. Whenever this simple and cheap plan is once adopted, its effects are so obvious that it will never be neglected by the good shepherd every season after, at shearing time.

Grazier

BLACK LEG IN CALVES.

Mr. Tucker—The remarks on "the black leg in calves," in your last number, taken from a Scottish paper, remind me of my own sufferings, and those of my father, from that dreadful disease for many years, and never occurring but on the one farm, and when the calves were in the highest condition. The inhabitants of the island of Araumore, on the western coast of Ireland, are famed for raising the finest calves in the kingdom. In one of my visits there, to purchase their heifer calves for spaying, in talking over the several diseases that stock are subject to, I named the *black leg* in calves, and to my surprise I learned that they had for a century before, in that primitive spot, been aware of not only a cure, but a preventive for that disease, as effective as it was simple and easy to administer. At six weeks or two months old, they took the calf, and under the tail near the butt, where the skin is free from hair, a small incision is made, and pea of garlic about the size of half a hazle-nut is inserted into the incision, the skin being loosened a little *downwards*, so as to retain the pea, which is left in. The effect is surprising. As quick as the person performing the operation can step from the tail to the mouth of the calf, the smell of the garlic is perceptible on the breath of the animal! On my return home, I had the operation performed on all my calves, and every year afterwards when about two months old, and from that time to the present I never lost one from the "black leg." I will here add, that I never heard as yet of a case of the "black leg" in calves in this country; but if such a disease ever makes its appearance, you may rest satisfied that the above is a sovereign remedy. GRAZIER.

Louisville, Ky., 10th June, 1845.

WASTE MANURES.

The Economy of Waste Manures; a treatise on the nature and use of neglected fertilizers. By JOHN HANNAM, 8vo., pp. 114. London, 1844.

This is a valuable practical treatise on manures that are generally neglected, or suffered to go to waste. Although its application is intended for the farmers of England, it may nevertheless be read with advantage in this country. The essay was written for the Yorkshire Agricultural Society, by Mr. John Hannam, who is the author of two prize essays, "On the use of hand tillages," and "On the effects of special manures."

The work before us on "Waste Manures," may be had of Wiley & Putnam, in New-York. It has less of scientific detail, and more of practical utility, than most of the late chemico-agricultural publications, and is accordingly better adapted for perusal by the plain homespun farmer.

That the reader may judge for himself of its value, and of the subjects treated, we will state its contents. It is divided into three chapters. Chapter 1, Introductory—the importance of an inquiry into the economy of waste manures. Chapter 2, The general nature of waste manures, and the source from which they may be obtained. Chapter 3, The particular nature, value, and economy of waste manures.

The third chapter is divided into three parts—the first designating the waste manures of the farm; the second, waste manures of towns; the third, local waste. By enumerating these the American farmer will see at once what part is applicable to this country.

"1. Waste manures of the farm.

"Draining from cattle sheds, draining from manure heaps, drainings from houses and offices—gaseous waste from manure heaps—refuse, and vegetable."

"2. Waste manures of towns.

"Sewerage waste—waste of manufactures, viz: shaddy, croppings, sweepings, singeing dust—flax waste, soap liquid, gas waste, viz: coal tar, gas lime, ammoniacal liquid—sugar waste, soap boiler's refuse, tanner's bark."

"3. Local waste.

"Peat, sea-weed, ashes, fish, clay, marl, chalk, sand, water."

The neglected and waste manures of the farm, as above stated, are applicable to this country as well as to Great Britain. The drainings from cattle sheds, and barn yards are very common here. We often see a barn-yard on a slope, permitting all the liquid portions of the manure to run to waste, and the remainder to be soaked and leached by the rains so as to render it of little value. Nay, some old fashioned farmers among us are so averse to wet and moisture, that they dig trenches that their barn-yards may be perfectly dry.

Drainings from manure heaps are also to be avoided. Hannam recommends trenches to be dug around a compost or manure heap, and a pit at one end to receive the liquid, which is to be returned upon the heap. This may be rendered unnecessary with us by heaping the compost on one side of the barn-yard, which, if hollowed, will receive the liquid, or soakings from rain, and will not be lost. It has been my practice to remove the manure from the stable, hog pens, and barn-yards, spring and fall, and to make a compost with these and other materials, on the side of the yard, or in the field where they were to be applied. After fermentation, the heap was turned, the materials broken and well mixed before application. In two instances my heaps had begun to ferment, when the fermentation was arrested by repeated and soaking rains, one instance in the spring and one in the fall. The manure was consequently cold and heavy, and depreciated when carted out. To remedy this inconvenience, a shed was built adjoining the barn-yard capable of holding 150 to 200 ox-cart loads of manure. Under this shed it is now heaped and fermented, free from exposure to the weather, and two trials of its utility have been very satisfactory. Some farmers, particularly those among the *Friends*, in the western part of New-Jersey, protect their compost heaps by the same method.

The drainings from houses and offices are universally neglected, and in some cases might be easily preserved and conveyed to the compost heaps or barn-yards, to add to their fertilizing properties; but in this country it is difficult to recommend a course that would be universally applicable.

Gaseous waste from manure heaps should by all means be avoided, as a mass of compost in a state of fermentation, exposed and unprotected, loses a rich and valuable portion of its substance. The author of the work under consideration says, (p. 26)—

"The loss of *gaseous manure* arises from the escape of the carbonic acid, and the ammonia of the vegetable and animal matters in the manure heap, during the process of fermentation and putrefaction; both of which gases are essential in the nutrition of vegetables."

To prevent the loss of those gases which escape into the air, Mr. Hannum recommends what he calls a *fixer*. He informs us (p. 41) as follows:

"There are many kinds of fixers—oil of vitrol, green vitrol, blue vitrol, salt and lime, gypsum, &c., may be used; but some of them at all times, and in some cases all of them, have the fault of costing money. A substitute which costs nothing except labor, is therefore to be sought for. Such exists in cinder siftings, charcoal dust, good black earth, peat or bog mould, rotten saw dust, leaf mould, black mud from ponds, bottoms of wood stacks, soot, brick dust, burnt clay, &c. Some or all of these may be had in most places."

Under the head of *Waste manures of towns*, there is very little applicable to this country. The waste from sugar-houses has not been collected as far as I know for manure, but the spent ashes of soap boilers in the city of New-York, is a saleable article, and is sought for by farmers of the surrounding country. Tanner's bark is abundant in some parts of the country, and is generally neglected, because by itself it will not decompose or rot. But when mixed with animal and vegetable substances which will ferment, tanners' bark will undergo the same process and become soluble, and be converted into a fertilizer.

Under the head of *Local waste*, Mr. Hannam treats of peat, sea-weed, ashes, fish, clay, marl, chalk, sand, &c. None of these are entirely neglected in this country, though some of them might be used more extensively, or to more advantage. Peat has been sparingly used, but its application as a fertilizer in compost is becoming more general. The value of sea-weed, ashes, and fish, is well known on the sea-coast, and these articles are by no means neglected. Clay also is used to render sandy soils more retentive, and sand to make stiff clays more friable. We have marl, but no chalk to add to soils deficient in lime. The shell marl of the Southern States has been neglected, but the experiments of Mr. Ruffin have brought it into notice, and it is producing utility in restoring some of the worn out lands of Virginia. The marl of New-Jersey, found in the green-sand formation of that State, is extensively used there, and has been the means of greatly increasing the value of land. The white calcareous marl found in Ulster and Orange counties, of New-York, has not been brought into use, probably from the difficulty of raising it from the places of deposit in low and wet bogs; or because fertility in those grazing counties was so much easier and so much more cheaply produced by gypsum. A substance called marl has recently been employed in Rockland county, of this State, derived from the debris of the sand-stone rock at Nyac, (geologically the old red sand-stone.) What the ingredient is, which in this sandy marl causes fertility, has not been chemically ascertained. But in the green-sand or Jersey marl it arises from potash, which exists in it to the amount of ten and twelve per cent.

There is much in this treatise on waste manures, to make farmers think and act for themselves. Further details would burthen the reader, and trespass upon the pages of the *Cultivator*, but we cannot refrain from giving the concluding paragraph, in which Mr. Hannam recommends to his countrymen to husband their own resources, in which we cordially agree, and think the advice would be useful to American farmers.

"It has been shown that, by a proper economy of manures which are now wasted or neglected, we may *increase the production, and decrease the cost of food; that our farms, our towns, and particular localities*, are sources from which an abundance of these manures may be obtained; and that they have been made use of, in some cases, with eminent success, and may, by the use of proper means, be employed in other cases with equally beneficial results. It remains, therefore, for us to hope, that the suggestions which have now been offered on their economy, may not be altogether fruitless; but that the same energy of spirit which induces the agriculturist to explore the caves of India, and the battle-fields of Europe, the *coasts of Africa, and the islands of the Pacific*, for the elements of fertility, and which carries the manufacturer to the plains of Saxony and Australia for the materials of our garments, will lead us to cultivate *our own resources*, and make use of the vast stores which we possess, of the *raw material* of the bread of the people." (p. 113.) A PRACTICAL FARMER.

☞ The above work has been republished by Cary & Hart, booksellers, Philadelphia, and may be had at the bookstores. Price 25 cents.

NOTES OF A BOTANICAL TOUR—No. II.

Mr. TUCKER—In my last, after ascending the Cumberland Mountains, Tennessee, which are at that point (on the road between Nashville and Knoxville,) thirty miles across, I made some remarks on their fitness for sheep. In continuation I will give you some extracts from my journal:

April 15.—Frost last night. Continued on the mountain, going up and down hills and along ridges, having occasionally a glorious view of distant mountains, until I arrived at the Crab Orchard, at the foot of Spencer's Hill, or rather mountain. This is one of the highest points of the Cumberland range, a mountain raised on a mountain. It was about 3, P. M.; a clear fine day—went on the highest peak where, seated on a rock, I had a fine view of mountain, plain, and river. The *Rhododendron*—laurel of the south—and *Kalmia latifolia*—ivy and calico bush of the south and laurel of the north, grew in the clefts of rocks at the summit, accompanied with several vacciniums, (huckleberries.) Here also, were the showy flowers of the Ladies' Slipper, *Cypripedium acaule*. Growing on the loose rocks at the foot of the hill, was the true *Phacelia bipinnatifida* of Michaux. Its bright blue flowers are quite pretty, but when handled the plant emits a rather disagreeable odor. On the western part of the Cumberland mountains, met *Robinia hispida* (honey locust) in flower, and afterwards saw it frequently on the Allegheny mountains, near the Warm Springs, and other places. I should have mentioned that beneath a ledge of rocks near the summit of the hill I found a new species, the *Streptopus maculatus* (nobis.)

16th.—Left my kind host about 10, A. M., and at the distance of five or six miles called to see a fine waterfall of about 90 feet perpendicular. After the water falls it descends along a deep gorge among the mountains. At the distance of 11 miles from the Crab Orchard, arrived at the eastern foot of the mountain, and soon drove into a fine farming section, and stopped at a house kept by an old revolutionary soldier, who was the first person I met in the state, who understood wherefore I was collecting plants. He informed me that about 20 years or more before a botanist, an elderly man, had spent several days at his house, from which he made several excursions to collect the plants of that neighborhood. It was probably Lyon, an English botanist, who made his headquarters at Ashville, North Carolina, who is said to have made an excursion of some weeks to the Cumberland mountains, shortly after which he died, as was supposed, from a cold taken in his excursion. He was buried at Ashville, and his collections and papers fell into the hands of those who valued them not and were lost. I met with but few before or afterwards, who had the least idea of the object of collecting specimens. The chief end and aim of most persons is to obtain property, and they are puzzled to contrive how money can be made from a dried plant, a shell, an insect, or a mineral. "What is the use of a dried plant or flower?" "It must be to make medicine!" How often I have been told—"You are getting these to take to the north and make medicine to send back and sell to us." "You must be well paid for being to so much trouble and taking so much pains." Another quite common opinion was, that I was collecting them "to print calico."

17th.—Passed through the village of Kingston to Mrs. Lucy's, 20 miles from Knoxville. Roads muddy from a heavy rain last night. People have just finished or are still engaged in planting corn. Shortly after my arrival, four young men, travellers on horseback, came in who, according to the usual southern custom, ride all day without stopping to dine or feed their horses. Horses will do well, and keep in good condition, under such treatment, as I can testify from experience. At Knoxville the landlord told me that I would find a German botanist at Dandridge on my route to the Warm Springs in North Carolina; and on the 19th, through mud, rain, and cold, over hills and rocks, I came to Dandridge, a little village among hills and rocks of limestone, on the French Broad river. Dr. Rugel, the botanist, was not at home nor did he arrive until next day towards night, when he came in loaded with plants. We were soon well acquainted and exchanged specimens. He was a real German student, careless of his appearance, very industrious, and the best prepared and equipped for collecting and preserving specimens of any person I ever met. Still his knowledge of American plants was very limited. I soon agreed to spend several days at Dandridge, and then we would make an excursion to the Smoky mountains, whose summits were in full view about forty miles distant. On the rocky lands of the French Broad, found *Philadelphus hirsutus*, (syringa,) *Viola tricolor*, *Arabis*, a species lately described by Mr. Sullivant; *Sisymbrium canescens*, *Chærophyllum taintureii*, *Hydrophyllum macrophyllum*, *Meconopsis dephylla*. I went about five miles from Dandridge down the river, and obtained an Indian plate of limestone (about the size of an ordinary dining plate) with scollop edges. It was found a short time before in a small mound beneath the head of an Indian skeleton about six feet long. The back of the skull rested on the plate with a very rich square piece of lead ore by its side. The field containing the mounds had just been planted with corn and was part of a rich alluvion at an elevation sufficient to prevent its being overflowed by the river. Yet time was, within a comparatively modern period, when it was all beneath the water, since the ground was strewn with as well as contained, beds of numerous shells mostly of one species, the *Io spinosa*, which is now found living in the French Broad, but is by no means as common in a living state as it must have been at a former period. Not far distant from the small mound containing the skeleton, is a large conical mound, hollowed out at the top, apparently for the purpose of containing warriors, from which they could fight with greater security, or as a place to which they might retreat. At the distance of a few rods, is a large excavation in the ground, from which the earth to form the mound was taken. I saw the remains of several sketetons, male and female, which had been plowed up, and the person who tilled the field told us that more or less of them were plowed up every year. They are contained in small mounds which were scattered in every direction over the field. Fragments of Indian pottery were also common. Extending across both the upper and lower end of the field, are the remains of ancient ditches. The afternoon that I visited this interesting spot, was warm and sultry, and the person who accompanied me (Dr. Hill) was in a state of ill health, so that we were unable to give the place a very thorough examination.

S. B. BUCKLEY.

West Dresden, Yates county, N. Y, 1845.

NOTES OF CONNECTICUT FARMING.

Mr. L. Durand, of Derby, Ct., informs us that he made, during the past winter, a short tour of observation through some of the towns of his section. From his notes, with which he has favored us, we give the following extract:

"In the westerly part of the town of Watertown, is the residence of Stephen Atwood. His farm lies on high ground, is somewhat rough; but is dry, and very healthy for sheep, of which he keeps a flock. His sheep are pure Merinos, and have been kept so from the commencement of his wool-growing. The consequence is, his sheep command a ready sale at large prices. He exhibited some of his flock at your State Fair, at Poughkeepsie, one of which, a buck, he sold to the Messrs. Morrell, and another to some Vermont men—obtaining for the latter, the price, (I think,) of $50.

"Mr. Atwood's wool is not as fine as some I have seen, but it is very compact on the sheep and of good length. I was struck with the perfect evenness of the wool on the sheep—it had the appearance of having been evenly shorn. On making inquiry of Mr. Atwood as to the quantity per head his sheep would shear, he said the flock would avarage six pounds of clean washed wool. He further said he had not used a buck for the last ten years, that would not shear annually, eight pounds. This shows what can be done in the way of wool-growing, if the right system is pursued. Mr. Atwood has one buck among a lot of others, which is the handsomest sheep I ever saw. His body is heavy and compact, legs short, neck short and well set on, so that every time he stepped, I noticed he drove the wool on the shoulder up against the horn.

"In the easterly part of this town, (Watertown,) I called on Jacob N. Blakeslee, another noted wool-grower. His flock consists, I believe, of about 350, and produces perhaps the finest wool in the state. His sheep are not so large as Mr. Atwood's, but yield finer wool, which commands a more ready sale in market. His farm is not as healthy for sheep as Mr. A.'s, but his sheep will grow, he says, till they are five years old, and will then shear five pounds of clean washed wool, very fine and clear from gum, and of course will not waste as much as other wool in manufacturing. Mr. Blakeslee sends his wool to Lowell every year, and gets such prices as enable him to persevere in raising fine wool; and indeed I believe that the only course which the eastern wool-grower can take for profit is to grow the finest wool possible, and at the same time increase the weight of the fleece. Mr. Blakeslee also exhibited some of his sheep at the Poughkeepsie Fair, and sold some to the Messes. Morrell and other wool-growers at good prices. He too, I think, has kept his sheep quite pure in the Merino blood. I hope the example of Mr. Atwood and Mr. Blakeslee will induce many other farmers in our state to persevere in raising good sheep and fine wool.

"The farmers here raise good cattle. At Mr. Atwood's, I saw a splendid red bull, one of the finest I ever saw—his blood Devon and native.

"In Watertown, particularly on Mr. Atwood's farm, I noticed a plan of building fences which answers well, and the farmers say it prevents sheep from getting out of the fields. It consists of a wall about three feet high, in the same shape of a worm fence, a heavy stone being placed on each corner, and on the top of this four heavy rails. It makes a heavy, stiff fence. But I noticed that in building this kind of fence, not more than half the stones were cleared from the fields. My plan, I think, would be to make heavy, whole walls; say four feet wide at the bottom, and four or five feet high. By making fences of this kind, the fields might be well cleared of the surplus stones and the ground left in a good state for cultivation.

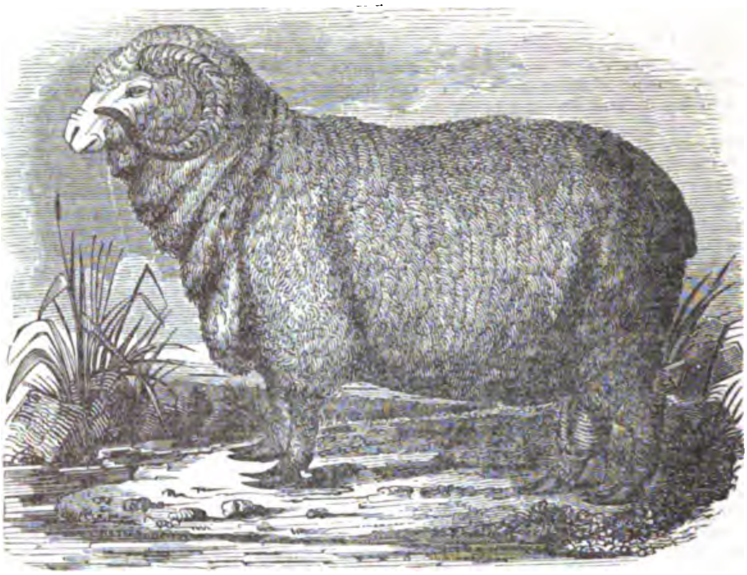
"I also visited the towns of Waterbury and Naugatuc. Waterbury is a large manufacturing town, and here almost every kind of article is made which yankee minds can conjecture. It is the largest manufacturing town in the valley of the Naugatuc, and the most thriving, with the exception of Birmingham, in Derby, which lies at the junction of the Nangatuc and Housatonic rivers, and at the head of water navigation. I do not know where farming can be made more profitable, than in the vicinity of these flourishing manufacturing villages. A home market is what the farmer wants, which is always better than one at a distance. In these villages he can always find a ready market for his produce, and generally good prices. Thus, pork in Waterbury, the past winter, has brought a better price, and had a more ready sale, than in New Haven, one of the capitals of the State; though a smaller amount would furnish the market every day. Naugatuc is also a flourishing manufacturing town; with some spirited farmers. The towns of Prospect and Cheshire, are devoted to farming. The former, is a small, hilly town, situate on high land, and the farmers to correspond, take several copies of the Monthly Visitor, and Cultivator. In Cheshire, some twenty copies of the Cultivator are taken, and the farmers have a good soil to cultivate, and are quite spirited. I am aware that the winter season is not as good a time for taking notes on farming, yet there is always something new to be learned, if people are willing to learn."

BE DEFINITE.

Mr. Tucker—I have, from the impulse of the moment, decided to send you a *little lay* sermon, upon the importance of the brief words that compose my caption. You are indebted for this favor, to the vexation I have this minute experienced, while engaged in reading, for my gratification, on a favorite subject, viz: *good cookery.* I may as well say, here, that I am particularly fond of choice corn bread, or as the yankees call it *johnny cake;* and I desire also to have it "twice alike," or in other words, always the same, and that same *very good;* but it has been my fortune to occupy quarters for many years, where the mistress of the house presides both at her pantry and her table, and she scouts the idea of being *definite*, or of doing things *exactly* by rule; hence her *johnnys* are *never* twice alike—the *good* are "very good," the *bad* "too poor to give the pigs." I was reading, as I have premised of gastronomy, in one of the daily newspapers, and an article headed "choice corn bread," "directions for making, &c.," met my eye,—"Ah ha! thought I, now will we have a touch of the delicious *all* the time, hot corn bread, every day quintescently light, and always the same. So I began to read—"Take as much corn meal as you wish to cook, scald it well, stir it thoroughly, mix it to the consistence of batter, with milk; the more you mix it the better; add an egg, one teaspoonful of saleratus, a tablespoonful or *more* of lard, mix thoroughly, and bake." On a second reading, I looked as I am wont, to the *practical* part, prefacing it with "is this just the thing, let us see:" "Take as much corn meal as *you wish*"—ah, the jackanapes, I could pommel you with right good will,—"as much as *you wish*"—suppose I wish 1 quart, or up to 10, or any other number; all the same, eh? 1 teaspoonful of saleratus and 1 egg—all right for 1 qt. 2, 3 or 10!! I'm done up—the Rale Thing has vanished. Why was'nt you *definite*, you ninny? "Then mix it with milk to the consistency of batter." Are there no *degrees* in the "consistency of batter." Would one qt. or 3 qts., make some *one* of these degrees? Why did you not say how *much* meal and how *much* milk, that some benefit might have come of your knowledge? Now, Mr. Editor, I have a vast many times had trouble with these "point no point" writers, and lost the good I love to enjoy, just because they do things by *halves;* they will tell you something as particular as a "teaspoonful of saleratus," and others, perhaps of vital importance, are left for conjecture, and that too, in cases where they profess to be giving you a *receipt,* that is, special direction for preparing the compound.

How much, sir, every where, and even in your own excellent paper, is left undone, in this particular; how many mistakes would be avoided while attempting to pursue directions,—how much disappointment prevented,—how much positive good be wrought and success insured, if writers were *definite,* where now occurs a dispiriting failure, consequent upon pursuing, *half informed,* the various plans of benefit and improvement concocted by your correspondents and offered in your colums.

Oneida.



MERINO BUCK "VERMONT HERO," *owned by Mr.* A. L. Bingham, *of Cornwall, Vt.*—(Fig. 72.)

MR. A. L. BINGHAM'S SHEEP.

As we have remarked in another place, we had not an opportunity of seeing this animal; we are, however, assured that the cut is a good likeness. Mr. Bingham says "the portrait is no flattery." He was bred by Tyler Stickney, of Shoreham, Vt., and is brother to Mr. Jewett's *Fortune*. The sire was bred by Hon. William Jarvis, and the dam was from the flock of Andrew Cock, Esq., Flushing, Long-Island. She was owned by Mr. Stickney, and it is said was an extraordinary sheep, both for constitution and wool—"the weight of her fleece," (says Mr. Bingham,) "running from five to seven pounds." We are informed that she died in 1843, at the age of fourteen. Mr. Bingham states that the weight of this buck on the 11th of April last, was 150 pounds; that "the weight of his first fleece was 4 pounds 15 ounces, the second 8 pounds 12 ounces, the third 12 pounds 8 ounces, the fourth 13 pounds." The fleece of the present year was not shorn when this statement was written. He will be, as is stated, five years old on the 22d day of July, 1845.

Mr. Bingham informs us that he has lately purchased of Joseph I. Baily, of Rhode-Island, "forty-four sheep, all ewes but two," for which he paid $661, having his "entire selection from the whole flock, consisting of 250 full blood Spanish Merinos." This stock, he says, "were imported by James D'Wolf and Paul Cuff, in 1812 or '13. They were bought," continues Mr. Bingham, "by his [Mr. Baily's] father, at the wharf, and he tells me they have been bred pure ever since—always breeding from bucks of his own raising. His flock is the most uniform of any I ever saw; remarkable for size, low on the leg, heavy boned, wide chested, large and thick necked, considerably ruffled, heavy fleeced and dark colored on the outside, the wool fine, thick, and long in the staple." The weight of the fleeces of Mr. Baily's breeding ewes, over a hundred in number, Mr. Bingham says, "averaged five and three-quarter pounds per head. His lambs from these ewes," says Mr. B., "averaged six pounds five ounces per head, all well washed wool."

Mr. Bingham thinks the weight of wool was much increased by Mr. Baily's somewhat peculiar mode of management. "He selects his sheep in the first place into small flocks, of equal size and strength, taking special care to keep them fat the year round. He told me that he never allowed any snow or rain to fall on them from the middle of November till they are turned out to grass in the spring. I believe a sheep will shear from a quarter to half a pound more wool by being kept sheltered from the storms, than they will by being exposed to all kinds of weather. Many persons will keep them out at a stack all winter, with nothing to shelter them from the storm; and they not only sustain a great loss of wool and flesh, but not unfrequently a great loss of life. Mr. Baily tells me he feeds grain to his sheep, but two months in the year—a month when they are first put to hay, and the last month before they go to grass. His lambs are dropped between the 15th of April and the first of June. To avoid the danger of the sheep running over the lambs when housed, they are kept in very small lots."

DURABLE FENCE—BARNS.

Mr. L. Tucker—Every farmer should have his lands well fenced. All will admit this, and yet how few have fences that can be trusted. In this climate, where frosts prevail, fences will need repairs every spring if built in the ordinary way; and it is one of the greatest vexations that farmers have to encounter, the inefficiency of their frost-shaken fences. The experience I possess in relation to the erection of permanent farm fences, has been considerable. A stone wall, which, for some farms, is the cheapest and most durable fence, should be constructed by first digging a trench eighteen inches deep by two feet in width. This should be paved with oak or yellow pine boards; and upon this commence laying the foundation, not with small stones that will work out, but with large flat stones that will lay well. It is likewise necessary to lay the stones lengthwise across the wall, which will bind and strengthen it. A wall put up in this manner will stand the heaving influences of frost much longer, and maintain its even and straight appearance, in which consists the beauty and efficiency of a wall, to amply repay the extra expense. Every wall should be made five feet high, which is a reasonable security for an enclosure against the depredations of most animals. It is my opinion that the cheapest fence for farms where stones cannot be had, and lumber is scarce and high, would be a fence constructed of cast-iron pickets, the pattern for the construction of which should not exceed one-eighth of an inch for the most part, increasing to one-quarter where the holes are placed for securing them to the iron bars. The bars should be twelve feet in length, cast very light, with holes in them at proper distances for riveting. The riveting process is simple, and soon done, any blacksmith being able to rivet from ten to twelve pannels a day. To make the pickets as light as possible it is necessary to groove the pattern through in the middle three-fourths of an inch, leaving three inches at the top and bottom solid, excepting the holes where they are secured to the bars. Three feet is length enough for a picket. The expense of construction would be lessened by the use of wooden posts instead of iron; the latter, however, would be preferable. A farm provided with a fence of this material, if kept thoroughly painted, would be fenced, not for a day, but for all time.

I have found the most durable way to set posts and prevent them from being thrown out by frost, is to dig the holes large enough to admit of their being filled up with small stones and lime mortar; the lime prevents decay, and the stones prevent in a great measure the action of frost. It is of the utmost importance for farmers who wish contentment of mind, good neighbors, the enjoyment of their own property, and to be free from vexatious litigation, to put up good and sufficient fences both inside and out.

A few Hints on Barns intended for Hay.—The The site for these buildings is of the first importance. It should be in the vicinity of the hay field, for in the hot and sultry season it is a saving of time and labor to have them thus located. It should be, if possible, dug into the side of a hill, which will enable you to draw the load near the roof, which elevation will likewise enable you to pitch the hay down. All will admit it is easier. If you have no side hill on which to build, the posts of the barn should be at least fourteen feet high, which will secure ample bay-room, which is very much needed in all hay barns. The opening for putting in the hay should be at the east, as it will be shaded in the afternoon, the time in which most hay is put in. To construct barns for this purpose in the most economical way, I would recommend placing the posts upon the sills at the distance of twelve feet asunder, gird parallel with the sills half way up the posts, then board up by placing the boards lengthwise from plate to sill. For a roof, match the boards close and lay two thicknesses, taking care to break joints. Every barn should be provided with a conductor or lightening rod. An easy method is to put them up in the form of a half circle, stretching along the roof, supported by non-conductors. The fluid coming in contact with either end of the conductor will travel to the opposite end, where it will explode into the air. Yours respectfully,

H. Cooke.

Tivoli, Dutchess county, N. Y., 1845.

SPECIMENS OF SOILS FROM WISCONSIN.

The samples of soil alluded to in the following letter, were handed to Prof. Emmons, by whom they were subjected to an analysis, the results of which, with accompanying remarks, will be seen in the subjoined article. The Professor's remark that "it would be easier to make suggestions on the spot than at a distance," is obviously correct, and should always be borne in mind in soliciting information on such subjects.

Geneva, Wis. Ter., May 27, 1845.

Mr. Tucker—I take the liberty to send you a sample of marl found in this vicinity, and also a small quantity of the soil taken from my farm, both of which I wish to have analysed.

My object is to ascertain in the first place the nature of my soil, that I may be able to apply such manures, if they are within my reach, as will be most likely to facilitate the growth of wheat; and I wish also to know whether this marl will probably be valuable as a manure on such soils as mine; and will charcoal be likely to increase the wheat crop here; and you will confer a great favor by suggesting any thing that would be of service in the cultivation of our great staple.

Such lands as mine in their present state, will yield about twenty-five bushels to the acre, with good cultivation, without manure; but I suppose the average is not over fifteen bushels, under our present poor management. I wish to see what can be done on our new lands in increasing our yield of wheat, and intend to make my experiments with care, and keep an exact account of expense, that I may determine how well we may cultivate our new lands and make it pay.

You will oblige me much by assisting me to obtain such information as will enable me to start right in this matter. C. M. Goodsell.

To C. M. Goodsell—I hereby acknowledge the receipt of two specimens, one of soil, and the other what was supposed to be marl. I have analyzed both, and below I give you the results. The soil is extremely fine, and very different in this respect from any of the soils of New-York or of New-England; as the latter are always coarse, or at least when compared with that from your farm. It is of the color and appearance of ground emery; it will all pass through the finest sieve. When examined under the microscope, a few white grains of quartz may be seen, the largest of which are about the size of mustard seed. If this is a sample which represents the soil of your farm, its fineness is its most characteristic property. It will lie too compactly after it has been cultivated for a few years longer, or when its vegetable matter is expended, and will require more strength of team to plow it than coarse soils. It is evidently silicious, and seems to be a fine sediment which was deposited far from land and in a deep sea.

Analysis—100 grains gave the following result:

Water, ...	5·00
Vegetable matter, ...	9·50
Silex, ...	80·21
Carbonate of lime, ...	1·00
Phosphate of alumine and lime, ..	0·50
Protoxide of iron and alumine, ...	3·62
	99·83

The so called marl is really *tufa*, and is composed of 97 per cent. of carbonate of lime. Some parts of it are entirely soluble in warm muriatic acid; in others, there is a sediment of silicious matter. It is to all intents and purposes a pure carbonate of lime, and may be used for quick lime for mortar, water or agricultural purposes.

The questions which are put in your letter are not easy to answer, inasmuch as the composition of the soil is not defective. The way to improve it, as it appears to me, is to add coarser materials to it, that is, improve it mechanically—as fragments of old brick, pottery, plaster, broken stone, etc.; also coarse charcoal, bones—a good plan would be to add the broken tufa without burning. I feel that it would be easier to make suggestions on the spot than at a distance, for after all local circumstance must greatly modify the treatment in any given case.

E. Emmons.

GRADE CATTLE.

Mr. Tucker—I noticed in the May No. of your paper, a communication relative to cross breeds of cattle. Presuming that my experience in that important branch would be interesting to some of your readers, I have taken the liberty to address you on that subject.

In the year 1840, I possessed a cow of the old fashion breed; (I am unacquainted with the technical name,) and desiring to improve it, I drove her to a neighbor who possessed a full blood short-horned Durham bull. In the spring of 1841, she had a fine female calf. This calf grew up, and at three years old had a calf of about three-quarters Durham. Last fall, or early in the winter, this half bred had another calf. About four weeks after, we commenced milking her: the first week she made 8 lbs. of butter; the second 7; the third 9; the fourth 8—making in all 32 lbs. in four weeks. She was fed on common hay, and about three pints of wheat bran a day. She had no particular care taken of her, as to currying, &c. She is a kind gentle beast, not very particular as to what she eats; and every way calculated to leave the impression as being a good and profitable breed to the farmer. A Subscriber.

Coyemans, May 13, 1845.

Farmers' Motto.—Contrive to collect cash—and keep it.

THE CULTIVATOR.

ALBANY, JULY. 1845

TO CORRESPONDENTS.

Communications have been received, during the past month, from John Clark, Alex. M'Donald, A Farmer's Wife, S. Tillotson, D. G. Mitchell, C. N. Bement, E. Comstock, Thomas Close, Isaac Dillon, S. B. Buckley, Woodside, Grazier, C. Butler, A. F. W., O. P., J. P. Norton, J. Girdwood, Barclay White, J. R. A., J. P.

We are under obligations to **Greely & M'Elrath**, publishers, New-York, for Part III. of Dr. Lardner's Lectures on Science and Art—To Messrs. **Valk** & Co. Flushing, for Catalogues of Roses, Pelargoniums, &c. cultivated at their Exotic Nursery and Horticultural Gardens; (see advertisement)—To **Lea & Blanchard**, publishers, Philadelphia, for vols. 3 and 4 of the "Exploring Expedition"—To **Lewis Gompertz**, Esq. London, for nine numbers of the "Animal's Friend," and a vol. entitled "Moral Enquiries"—To L. **Durand**, for Premium List of New-Haven Co. Ag. and Hort. Societies.

☞ The continuation of Mr. **Robinson**'s Notes of his Tour, were forgotten till too late for this month.

☞ We have received a letter *unpaid* from Jonathan Morgan, Portland, Me., accompanied by diagrams, designed to show that Lawrence's Improved Buckle, spoken of in our May number, is "no new thing, but has been in use for a great length of years." He is informed that there is no similarity between *his* buckle and Mr. Lawrence's.

Egyptian Barley.—A correspondent at Laurens, S. C. (Dr. W. R. we believe,) wishes to know where this variety of barley can be obtained. Who will furnish the information? We shall be glad to hear from our correspondent, on the subject he mentions, or on any other of interest to our readers.

Quackery.—**John Clark**, of "Flat Rock, Shelby county, Indiana, Noble township," sends us *unpaid*, a long and almost unreadable letter; the purport of which, so far as we can make it out, is to inform the public that he thinks he has found a cure for milk-sickness, and is *willing* to "sell a knowledge of it to all that wish to purchase, who appear in *person*." In a postcript he informs those who wish to have any communication with him, to be sure and *pay their postage*.

☞ "**A Farmer's Son**," (Watertown, N. Y.,) will accept our thanks for his good wishes. We should be glad to receive any agricultural facts from the county of Jefferson, which we know can boast of some as good farmers as any other section. The "first attempt" of our young friend, certainly needs no apology. His opinion in regard to the usefulness of well-conducted agricultural papers is undoubtedly correct.

Transmutation.—We have not room for the well-written communication of our respected correspondent, C. W. of Maryland. He has not probably read the able discussions which took place on this subject, some years ago in the Virginia Farmers' Register, American Farmer, Genesee Farmer, and The Cultivator, or he would not suppose that the disbelievers in the transmutation of wheat into chess, "mostly rely upon ridicule," to support their side of the question. On the contrary, they rely on the unchangeable laws which govern the growth of plants, from which there never has been, to our knowledge, a well-authenticated instance of departure, and that there never will be such an instance, we have the assurance of Him who provides "the seed-time and harvest," for He informs us that "what a man soweth, that shall he also reap." Our correspondent thinks "with Prof. Lindley, that further observations are required to settle this question;" and "that if one kind of grain could be made to produce another by experiments so performed as to be free from fallacy, the question would be at once settled." No doubt of it. "But we may not be able to succeed in this experimentally without a vast deal of time, labor and expense." If our correspondent is disposed to experiment in this matter, we will agree to pay all expenses incurred, and pay him a premium of $50, if he succeeds in showing that chess can be produced from pure wheat—with this single proviso, that he shall report his experiments for the benefit of the public, in case of his failure to demonstrate the doctrine of transmutation.

Ribbon Houses.—In our Feburary number we spoke of this kind of houses. We have received a letter from Mr. **Thomas J. Lewis**, in which we are informed that the plan is coming into use in Massachusetts, with considerable approbation. That "two men can build a two story-and-a-half house, twenty by thirty-five feet, in five days; and by men too, who have but little knowledge of the carpentering business,—making a house much handsomer, stronger, warmer, and above all, at one-half the usual expense."

MONTHLY NOTICES.

Imported Blood Horse.—Mr. C. T. **Albot**, of Westernville, Oneida county, N. Y., who has lately returned from a visit to England, brought with him a fine English blood horse, called *Consternation*. This horse was bred by Matthew Hornsy, Stiltenham, Yorkshire, England, and is said to be of the best racing blood. In 1844, being then four years old, he won a purse of 100 sovereigns over the York course, beating the noted horse Phœnician. From an accident to one of his legs, he has not since been run. Consternation is a large horse, for one of his age and breed, with good bone, clean limbs, and muscular quarters. When we saw him he was in low condition from the effect of the voyage, so that his appearance was of course less favorable than it will be after he shall have had an opportunity to recruit. From the pedigree of this horse, it appears that he inherits the blood of some of the most celebrated stock ever produced in England—such as Hap-Hazard, Highflyer, King-Herod and Flying-Childers. We are no advocate for *racing* horses, but we believe an occasional dash of the pure blood of the race-horse is of advantage to our stock for the carriage and road. Practice, we think, has fully proved this, both in England and this country. We invite the attention of connoisseurs to Mr. Albot's horse.

Novel Rat-trap.—We saw it stated in a newspaper several years ago, that a rat had been caught by an *oyster*. We hardly gave credit to the story then, but have lately seen proof that similar things are sometimes done. A man brought us a rat caught by a *clam*. We were shown the rat, *trap and all*, so that there is no doubt about it. We were told it was the second rat which had been so caught in the course of a few days. The *operation* of the trap is this—the clams lay in a cellar—occasionally one would die, and when the shell opened, afforded the rats, we suppose, a delicious morsel. The *live* clams would also sometimes open their shells, and into these, as they were searching over the heap, the unwary rats dropped a foot, which was at once grasped and held firmly in this animal vice.

Mistake Corrected.—A mistake occurs in the last or fourth volume of the Transactions of the New-York State Agricultural Society, which may lead to a serious error if not corrected. In speaking of the use of *whale oil soap* on page 310, for "*half a pint* of soap added to *half a pint* of water," read, *half a pint of soap to half a* PAIL of water. Unless the degree of dilution approaches the latter, vegetation may be destroyed by the acridity of the soap.

Agricultural Address of Col. A. McDonald, before the Agricultural Society of Barbour county, Alabama.—In the *Southern Shield* we find a copy of this production, which is highly creditable to the author, and, we should think, well calculated to stir up the people of that section to the improvement of agriculture. Besides many other matters, Col. McDonald compares the present state of agriculture at the south with what it was forty years ago, by which it is seen that within that time many improvements have taken place at the south, though, as is remarked, there is probably room for greater advancement. The great improvement in the construction of the plow is spoken of, and a pretty confident hope expressed that the day will come when that implement "will be seen to pass and repass through our fields propelled by steam."

Large Egg.—Mr. Jesse Buel has left at this office a hen's egg which measures six inches in circumference one way and seven and a half inches the other way. Has any body's hen laid a bigger one?

Gapes in Chickens.—J. H. D. Lownes writes in the *Southern Planter* as follows:—"My residence was proverbial for gapes, but by mixing the dough with chamberlye and baking the bread, it is banished. A tea-spoon full of urine given to a chick in the first stage of the gapes, will cure it; but begin with it, and they will never have it, with good care."

Advertisements.—The reader is referred to our advertising department for an interesting statement from Mr. Bommer in relation to his patent method of making manure.—If any of our farmers are disposed to remove to Virginia, they will find a favorable opportunity for the purchase of farms, by noticing the advertisement of Mr. Gouverneur, who, it will be seen, offers for sale a portion of the estate of the late President Monroe.

Potatoe Rot.—Some person has sent us a number of the *Honesdale* (Pa.) *Democrat*, containing an article on this subject signed "Chemico." In regard to the potatoe rot, he says—"Be kind enough to inform them [the farmers] that it is caused by a want of the alkalies." * * * "Please tell them if they would save their potatoes, and raise larger crops, they must supply lime," &c. He closes by advising farmers who read his article, to—"inform their neighbors of it, and let us hear no more of injury sustained from rot in the potatoe"! Many of our readers will doubtless recollect that we have recorded several instances where lime had been used, in various ways, without any effect to preserve the potatoe.

Centre Draft Plow.—We see it stated in the papers that Mr. John Mears, jr., attached to the house of David Prouty & Co., Boston, sent one of the best patterns of Prouty & Mears' "Boston Centre Draft Plow" to the Emperor Nicholas, of Russia. About a year has elapsed, and a day or two since Mr. M. was gratified by the reception of a note from his Excellency, M. Bodisco, the Russian Ambassador at Washington, informing him that his plow has been received, and its usefulness acknowledged, and that his imperial majesty, apprrciating his intentions, had ordered him to present to him "the great gold medal," bearing the effigy of his Majesty, and the inscription "*Præmia digno.*" The medal is a magnificent one, of the purest gold, weighing almost a pound.

Fine Sheep.—We find in the Ithaca Journal, a notice of the fleeces of Mr. J. R. Speed's sheep. His flock is said to be about 60—half of which are full-blood, and the remainder grade Merino. His stock buck is said to have sheared 10 lbs. 4 oz., of one year's growth, and several of the full-blood ewes sheared over 5 lbs. per fleece, well washed.

ANSWERS TO INQUIRIES.

Sweet Brier. D. F. B. (Peru, N. Y.)—It is said, we know not with how much truth, that it takes two years for the seeds of this plant to vegetate. Are you not rather too sanguine in the opinion that the sweet brier is capable of being made into a hedge "that will equal the thorn, and in many respects supercede it?" It may be worth an experiment, but from our observation it is not sufficiently durable and strong, does not grow thick enough, becoming too open by the dying of the old stems.

Grapes injured by Rose-bugs.—"*A Yeoman of Massachusetts.*" Syringing vines with soap-suds, in such a manner as to shower the bugs with some force, we should suppose would cause them to disperse. It is an insect that does not prevail extensively over the country, and we find no other accounts of its having attacked the grape vine.

Cast-iron Rollers.—In answer to the inquiry about cast-iron rollers, in our last, the New England Farmer says, "They can be obtained at J. Breck & Co's Agricultural Warehouse and Seed Store, 52 North Market street, Boston, where they have been for sale for years. Price from $20 to $25. Also, stone rollers, at from $12 to $18.

THE WEATHER AND THE CROPS.

From various points of the western part of the country, we hear very unfavorable accounts of the appearance of the crops. The months of March, April, and May were remarkably dry, accompanied by high winds, and several unusually cold turns. From Ohio, we have information from Cincinnati, Dayton, Columbus, Chilicothe, Zanesville, and Coshocton. The fruit was nearly all killed by frost in the vicinity of these places. The wheat was much injured by the high winds and drouth; and in many instances suffered much from frost.

Mr. George Wolfe, of Coshocton county, writes us under date of June 2d, as follows:—"We have had three or four frosts lately, which have materially injured our wheat and corn crops. In fact, the frosts and the previous drouth, have almost destroyed the wheat. I do not think it will average one-third of an avarage crop. Many farmers are pasturing their wheat fields."

The frosts which occurred here the last of May and the beginning of June, seem to have been much more severe in some other sections .We hear of much damage having been done at this time in Ohio, Michigan, and Illinois. The Ohio Cultivator, published at Columbus, under date of June 1, speaks of a frost on the night of the 29th of May, which "cut off nearly all the corn, and with it, almost destroyed the hopes of the farmers." It is added—"The prospects of the farmers in this region are gloomy indeed. We have spent the last week in traveling around, and can truly say we never saw crops generally so unpromising."

We have heard no particular complaints in regard to wheat from this state, or Pennsylvania. Grass in this vicinity is good; but south and west we hear that "old meadows" are light.

Prospects for crops in Alabama.—A. McDonald, Esq., of Eufalla, writes under date of May 19, that crops in that section suffered much from drouth, and in some degree also from cold, during April and the first part of May. A rain, however, occurred on the 11th of May, which was of much benefit. A larger proportion of the *provision crops* has been this year planted in that section than formerly.

FARM OF THE HON. J. C. CALHOUN.

In the *South Carolinian* we find an account of the farm of Mr. Calhoun, by a committee of the Ag. Soc. of Pendleton, S. C. It is spoken of as being naturally very superior, yet it is added, "to its proprietor clearly belongs the merit of very superior management." The details of the farming operations are not given by the committee, as they were so unfortunate as to make their call during the absence of Mr. Calhoun. It is stated that the two great evils with which the farmers of that section have to contend, are the washing of lands by rains, and its exhaustion by continued cropping. Mr. Calhoun it is said has found an effectual protection against the former in the use of "guard drains," and against the latter in the pea crop. The committee say—"The stock on this farm, consisting of horses, hogs and cattle, were of good breeds and in fine condition. The farm houses were sufficiently numerous, and both comfortable and convenient. And this more especially the case with the negro house, which consisted of a building of stone of superior masonry, two hundred and ten feet in length, divided into apartments, with separate fireplaces, sufficiently large for all the purposes of comfort and healthful ventilation.

"The committee, in conclusion, have no hesitation in pronouncing the management upon this farm highly superior. The useful and ornamental have been most happily blended, not only throughout the principal tillage crops of the farm, but also the more refined horticultural operations of the homestead."

WILD GOOSE—*Anas canadensis.*—(Fig. 73.)

Naturalists have not entirely agreed in regard to the generic affinities of this bird. Buffon, and most others, call it a goose, but Cuvier calls it a swan. The characteristic differences between geese and swans, are in some cases, however, not easily discovered. The bird is strictly American, not being found, so far as we are informed, on the old continent. From its peculiar habits, it is the most interesting of all the goose tribe. It is seen periodically all over North-America, from the equator to the highest habitable point towards the poles. Wilson says—"It is highly probable that they extend their migrations under the very pole itself, amid the silent desolation of unknown countries, shut out from the eye of man by everlasting barriers of ice!" Twice a year, they traverse this vast extent, amounting to one-fourth of the circumfrence of the globe! Their northern flight is the welcome harbinger of approaching spring; while their return from the boreal regions, on their southward journey, is the sure precursor of winter's reign.

Cuvier describes the plumage of this bird as—"Dark-ash; head, neck, and tail, black-streaked, and throat white; bill and feet black; tail of eighteen feathers."

Within a few years, it has been stated that *white* wild geese have been discovered in this country. Whether these are the *Snow geese*, spoken of by some naturalists, or whether they are a species of swan, we are unable to decide. In their size and note, however, they are said to correspond with the ordinary wild goose.

The wild goose breeds only at the north. Some of their favorite haunts are the shores of Labrador and Hudson's Bay. We have been informed by fishermen and others who have visited those regions, that they are found on the banks of creeks and streams, during the breeding season, in immense numbers. The fishing vessels sometimes send boats and procure their eggs in large quantities.

In becoming domesticated, the wild goose retains for a long time many of its original habits, and is much disposed to return to its natural state. An instance was related to us of a wild gander having been wing-broken by a shot, and caught. His wound healed, but he was so much disabled that he could never fly. He was kept with the domestic geese of the farm, with one of which he finally mated. He remained on the farm many years, and became very tame; yet as the migratory season returned, he always manifested the greatest uneasiness. Impelled by an instinctive desire to fly away, he would wander about, often stretching his wings and pluming his feathers; refusing food, and even leaving unnoticed his domestic mate, to which he generally seemed much attached. If a flock of his former associates chanced to fly over, salutes were quickly interchanged; but the thrilling note of the free ones in the air, in the language of our informant, "seemed to set the poor captive *crazy* for a time, and for a day or two after he would be mute and melancholy." Except during the "flying season," he was very contented.

Wild geese are incapable of propagation till three years old, though the female is said sometimes to lay eggs which will not hatch, at two years old. She seldom lays more than five eggs at a brood or in a season; but these are almost invariably hatched and the goslings all raised. Considerable advantage is thought to result from crossing the wild with domestic geese; but the progeny so produced are hybrids, and, we believe may be said, *never* to breed. This clearly establishes the distinction of species. The mongrels are hardy, grow quickly, get readily fat, and are highly esteemed for the table; at the same time producing a greater quantity and better quality of feathers than common geese. For these properties, they are held in much favor by poultrymen who raise geese for market. We have seen crosses of the wild with the common grey goose, the Chinese, the Bremen, and the large African or Guinea goose. Some of the latter, raised in Rhode-Island, were as fine geese for market at six months old, as we ever saw.

We are indebted to Mr. Bement, for use of the engraving given above, from his Poulterer's Companion.

LEVEL CULTIVATION FOR CORN.

For any ground that is sufficiently dry and warm to be suitable for Indian corn, we are confident a level cultivation is best. We do not like the common plow for working corn—it not only throws the ground too much into ridges, thereby exposing too much surface to be dried by the sun, but from its pressure on the ground it leaves that portion below the furrows, harder than it was before. On very light land, mere surface cultivation will answer for corn; but where the soil tends to pack too heavy, as it will if there is too much clay in it, we must use some tool that will loosen and pulverize it, or the roots of the corn will be cramped and the tops stunted. A narrow shovel plow, or a tool like a coulter, two or three teeth, according to the strength of the team to use it and the state of the soil, to be set in a proper frame, are best for compact soils. A light harrow and cultivator will be found sufficient on light soils.

We noticed in the *Sommerville Reporter*, Tennessee. an essay on the cultivation of corn, read before the Agricultural Society of Fayette county, by John Wary. Mr. Wray commenced the mode of level cultivation twenty-five years since, and and continues it to the present time. He has found it to answer well. He does not use the plow at all—he simply works his ground over with what he calls a *rake*, which seemed only to mellow and clean the surface. He works the ground so often with this, that the weeds have no chance to get sarted, so that he keeps the crop clean. He does not particularly describe the rake, or tell how it is made. He stated that he has tried this mode of cultivation in comparison with the old mode of using the plow, and that the rake gave invariably the best crop. He does not state particularly; we take it his land is of rather a light character. He plows his land in October and November, six to eight inches in depth, being careful to bury all the vegetation; and plants his corn from the tenth to the 25th of March, laying off the rows four and a half feet each way. and leaves three stalks to the hill. He says—"The reason why some farmers fail in the use of the rake is, that instead of *plowing* their land in the first place, they only *scratch* it, and then, instead of killing the grass in the germ, they wait until their fields get foul and then abuse the rake because it will not perform work it was never intended to do."

Windgall.—Windgalls are several little swellings just above the fetlock joints of all the four legs; they seem, when felt, to be full or wind or jelly; but they never lame a horse; the splint and spavin always do. They all three proceed from one and the same cause, which is hard riding, travelling too far in one day, or carrying too great a weight when young.—*Ayrshire Agriculturist.*

FARMING IN VERMONT.

In the month of May last, we had the pleasure of making an excursion to the "Green Mountain State."

To one who, like the writer, has been for several years accustomed mostly to the comparatively level surface of a portion of the "great valley" of the west, the physical features of Vermont are striking and impressive. The different geological character of the two sections, forms a wide contrast in their surface and aspect—the primitive region we have lately visited, being, to the traveller capable of appreciating the attractions of nature, much the most interesting. There is, it is true, beauty of surface to be met with in the west—the "rolling" prairie, the shady "openings," and in other sections the dark primeval forests, are certainly beautiful; but the scenery seldom, if ever, rises to the grand and sublime. In the west, the elevated portions of the surface have but little variety; what are called hills appearing to have been formed by gulleys having been washed by rains from a surface originally uniform, leaving the tops of the hills on a general level. Here, the upheavings of the earth have given to its surface an almost endless variation, with elevations of different altitude, from the green hill, whose grassy sides, even in the most sultry heats of summer, are freshened by the ever-gushing fountain, to the hoary mountain, whose lofty summit arrests the career of the storm-cloud!

The natural circumstances of Vermont, mark it particularly as a *grazing* region. Its mountainous surface is unfavorable to the extensive use of the plow and the large cultivation of grain crops; while the richness and permanency of its pastures, the abundance of pure water, and the healthfulness of the atmosphere, show its admirable adaptedness to the rearing of horses, cattle, and sheep. The advantages of water which a hilly or mountainous country affords, are too often overlooked, or not duly valued. We have passed through sections where the farmers, during a drouth of not unusual continuance were obliged to drive their stock miles for water, and even then were forced to raise the water by a slow and laborious process from a deep well. If the Vermont farmers should be placed for a while in such a situation, they would be able to form some idea of the worth of their numerous springs and mountain rivulets.

The time allotted to our excursion was so short as to preclude the possibility of particularly examining a very large portion of the State. Our observations were confined chiefly to the Counties of Addison and Chittenden, which are situated on the west side of the principal Green mountain range, bordering on Lake Champlain, and comprising, perhaps, the most fertile portion of Vermont. Under their appropriate heads, we propose to speak briefly of the different subjects to which our attention was attracted.

SOIL.—A considerable portion of the soil of this district may be said to be a calcareous clay, often strongly tenacious, based on what geologists term transition or silurian limestone. This is more particularly the character of the valleys and lower parts of the district. The soil of the hills and higher parts, lying above the limestone, has in its composition a larger proportion of sand, and of course partakes also of the nature of the slaty rocks of which the hills are formed. In most cases gypsum operates well on these soils. We learned a remarkable instance of its effects from Mr. RODMAN CHAPMAN, of Vergennes. He had some casks of plaster which had been wet in a freshet, hauled out on some barren clay knolls, and spread over the ground. The effect was to clothe the ground with the most luxuriant growth of white clover, blue-grass, and yellow trefoil—a plant or two of the latter having come up accidentally, from which it was spread over nearly the whole field. The sward on the lot, (which we examined,) is still fine, and the product of herbage great.

CULTIVATION.—As before remarked, the plow is not extensively used in this section of country—the object of farmers being generally to raise only about the quantity of grain and vegetables required for home consumption. It is, however, stated by those best qualified to know, that Addison county produced last year a considerable surplus of bread-stuffs, beyond supplying the inhabitants. Wheat has been less cultivated since 1830, than formerly, owing to the attack of the wheat midge, (*Cecidomyia tritici.*) For the last two or three years, this insect has been diminishing, and a knowledge of this fact encouraged the farmers to sow this grain more extensively last season than they had done for several years before. Spring wheat is the kind generally sown—winter wheat being less certain to yield well. But since it has been ascertained that the injurious insect before mentioned is diminishing, some farmers have concluded to try winter wheat, and we were shown several small lots which were very promising. The Black-sea spring wheat is considered most hardy, and on this account has commonly the preference. Yield, twenty to forty bushels per acre.

Indian Corn is cultivated with success on some of the lighter and warmer soils. On the best lands, and with good cultivation, it frequently yields sixty, and sometimes eighty bushels per acre. We were shown many samples of this grain which were as bright and heavy as we ever saw. Mr. S. W. JEWETT has a variety, which, for a northern latitude, we think highly superior. It is a twelve-rowed corn, but has been greatly improved by selection. The cob is small, and completely covered with corn, packed in the closest possible manner. Oats are a sure crop, and produce from forty to seventy-five bushels to the acre.

Potatoes flourish remarkably well, and are of superior quality. The yield is two hundred to five hundred bushels per acre. They are in some instances raised for the purpose of fattening stock, and for feeding sheep and store cattle through the winter. Those who have tried potatoes for this purpose speak very highly of them. Other vegetables are in some instances cultivated for feeding stock. Mr. W. CHAPMAN, of Middlebury, is much in favor of the sugar-beet. He has tried it for store stock, and to some extent for fattening cattle. In February, 1842, he killed a heifer, fatted wholly on beets and hay, two years and nine months old, which weighed, dressed, 838 pounds, and had 135 pounds loose tallow. Mr. C. contends that beef fatted on this root is much more sweet, tender and juicy, than when fatted with meal.

We observed that it is a very uniform practice in this district to manure the ground intended for corn and potatoes very heavily. Where, from the nature of the soil or the dearness of labor, (as is the case here,) it is inexpedient to cultivate much land, we believe this to be the true course. It takes but little more labor to cultivate an acre which is made so rich that it will yield sixty or seventy bushels of corn, or four hundred bushels of potatoes, than to cultivate one that will produce only half as much. We noticed that the manure from stables and sheep-pens was spread very thick over the ground and plowed in with a deep furrow. If it were not for the fact that the quantity of manure used is so great that it is difficult to bury it or mix it properly with the soil, we should say it was plowed in too deep. We are in favor of deep tillage for general purposes; but there are two ways of performing it—deep plowing with the common plow, and using the sub-soil plow in the furrow after the common one. Where the sub-soil is cold and wet, we decidedly prefer using the sub-soil plow. Where the sub-soil is so composed that pulverization and aration are only required to render it fertile, it may be an advantage to break and bring it to the surface by the common plow. We feel confident, however, that in the region of which we are speaking, the sub-soil plow might be used in many cases with excellent effect.

BUILDINGS, BARN-YARDS, FENCES, &C.—The buildings through this district are generally in good repair. Many of the houses are of a superior style—are convenient and well finished, and are sometimes tastefully ornamented with trees and shrubbery. Less care and judgment is generally shown about the barns and out-buildings. In planning and locating these, convenience, taste, and economy, seem to have been too often disregarded. The improvident waste of manures from this cause, is in some instances a glaring defect in farm management. Though the land is generally good, naturally, it is not all uniformly so, neither has it been equally well managed; and we saw some fields where the scantiness of vegetation showed plainly that the soil much needed the manure, which, on those very farms, was wasting away, by various means, from the barn-yard. We are happy to say that there are farms on which a judicious management, strikingly in contrast with the above, is observable. Such an instance was met with in the farm of Seth Langdon, New-Haven. The admirable neatness of this farm attracts the eye of the traveller the moment he comes within its limits. The barns and sheds are so placed as to form a hollow-square. Mangers are fixed under the sheds for feeding cattle, (the sheep are kept in another place,) water is brought to the yard, and none of the cattle, except the working oxen, are allowed to go out of the yard in winter. They are fed, (all but some of the young cattle,) in the barns at night; and during the day are fed in the sheds, with the poorer sorts of fodder—a place for depositing which, is provided in one corner of the yard. The manure is all received into the yard, which is so formed that none of it can be lost, but is all carefully cleaned up in the spring and carried to various parts of the farm. The stalls, particularly those for cows, were well contrived and neatly kept.

The fences generally preferred are cedar rails and stakes. It is laid in the form of what is called "worm fence," in some sections. The stakes are set at the corners, upright, which occasions much less inconvenience in cultivation than when they stand bracing. They are fastened by "yokes" made by boring three inch holes through suitable pieces of wood, which are slipped over the top of the stakes; two rails being generally laid above them, which complete the fence. Stone walls are sometimes made, and are, when well built, an excellent fence for all stock but sheep. But as sheep are the chief stock, and they are apt to run over stone walls, rail fence is most common. We saw in one or two instances a wall built of rather small stones, with layers of grass turf interlaid, and the top finished with turf. It was put up by a Scotchman as an experiment, and time enough has not yet elapsed to ascertain how it will answer. It is supposed that the grass will live and assist in holding the wall.

Grass Lands.—This section of country is particularly favorable to the growth of grass. Judging from appearances, it is our opinion that we have never seen any other land which is capable of sustaining as much stock to the acre. On the rich alluvions of the Scioto, we have seen fields which may perhaps produce as great a *weight* of grass per acre, but it does not appear to be as nutritive as the herbage of the best Vermont pastures. On these, the turf, which is of the thickest and finest kind, is composed mostly of the spear-grass, or Kentucky blue-grass, (*Poa pratensis*,) with other grasses and white clover enough for variety. The hay made from these lands is of the most nutritive quality. We were shown samples in which the natural greenness of the grass was preserved almost unchanged, giving a delightful fragrance, it being almost as nicely cured as the famous "Shaker herbs." Stock of all kinds will, and *do* actually fatten on this hay. It is a fact that oxen bought in the fall in only store condition, if properly sheltered and fed with such hay, become in the spring fit for slaughter, and are sent to Brighton market without any other feeding. In fact, so excellent is the hay which is made here, and so fine is the pasturage, that some of the best "grass beef" that is bought for the Brighton market is found here.

In an article on the "Agriculture of Addison county," in the New-York State Agricultural Society's Transactions for 1844," written by S. W. Jewett, some remarkable facts are stated in reference to a tract of this county said to be "fifteen miles in length and eleven wide—about one-half unimproved, covered with timber. This tract comprises six towns, averaging each five miles square."

"The census of 1840, enumerates 7,000 inhabitants; about 1,400 of this number were employed in agriculture. The number of *tons of hay* produced, were rising fifty-one thousand; *neat cattle*, nineteen thousand head; *sheep*, one hundred and forty-four thousand; and two thousand one hundred *horses*. If we include four more adjoining towns, we swell the number of sheep to two hundred and forty thousand six hundred and sixty-four."

Sheep.—The most important description of live stock for this section, is sheep, and these are kept in larger numbers in proportion to population and extent of territory, than in any other part of the United States. The Merinos, full blood, and high grades of that variety and the Saxons, are generally kept. The Merinos were carried to this section at different times and by different persons from twenty to thirty years ago. It is a well established fact that all animals undergo changes to some extent, on being removed from a country they have long inhabited to one of a different soil and climate. This we think has been the case with the Merinos first transferred to this district. The fertility of the pastures, the regular and abundant supply of nutritive food the year round, with the healthfulness of the location, have effected a visible change in the constitutional character of the animal. First, their general size has been enlarged. Every one who passes through this section, and observes the various flocks he may chance to meet, will see that their average size is considerably greater than that of Merinos commonly met with in other sections. Second, the fleece, especially of the larger class of sheep, and those which, having been bred here for some time have become fully acclimated, has generally lost something of its original fineness; but the capacity to bear a larger quantity of wool has been evidently increased, accompanied by improved hardiness and vigor of constitution, a thicker skin, and an adaptedness to the climate which leaves nothing in this respect to be desired. The increase in the weight of the fleece has been in some cases in a greater ratio than the increase in the weight of the carcass,—the wool being both longer in staple, and more thickly set on the body. Numerous cases were made known to us by honorable and veracious men, of breeding ewes (Merinos) rearing lambs every year, having for several successive seasons yielded from five and a half to six pounds of well washed wool per fleece; and of bucks yielding from ten to twelve, and in one or two instances thirteen pounds. In most cases we examined the identical animals to which we allude, and took from them samples of wool, which we can now show. The flocks which came under especial notice, were those of S. W. Jewett, Wightman Chapman, and Mr. James, of Weybridge; M. Bingham and A. L. Bingham, of Cornwall; L. O. Burchard, Ex-Governor Jenison, L. C. Remelee, M. W. C. Wright and John T. Rich, of Shoreham; Seth Langdon and Alvan Squires, of New-Haven; Charles L. Smith, of Bristol; C. B. Cook, of Charlotte; Henry S. Morse, of Shelburn.

Mr. Rich's flock consists mostly of the Merino stock purchased by his father, the late Hon. Charles Rich, of Andrew Cock, late of Flushing, Long-Island. They have short legs, compact bodies, and heavy fleeces, though not as fine in staple as some Merinos. Of a lot of one hundred and forty-seven ewes which Mr. Rich sheared last year, one hundred and five gave a fraction over five pounds per fleece, on the average. Mr. Rich has for the last two seasons been breeding from a buck bred by the Hon. William Jervis. This buck, called *Consul*, now owned by Mr. Rich, is the sire of Mr. Jewett's famous buck *Fortune*. Consul is a buck of great value—is ten years old, yet he sheared last year ten pounds of washed wool, of excellent quality for Merino. Old as he is, his fleece is still well set, and we presume will not this year fall much, if any, short of its former weight.

Mr. Jewett's flock consists of descendants from the imported Merinos of Messrs. Humphrey, Jarvis, D'Wolf, Cuff and Cock, with some purchased of William Davies, Esq., of Poughkeepsie. The buck Fortune was the produce of a ewe of the Cock stock, by the buck of Mr. Jarvis's breeding before mentioned. He is a large bodied, short legged sheep, carrying an enormous fleece of about medium quality. His average fleece has been eleven and a half pounds. He is now six years old. The lambs of his get are large, well formed, and strong. When we were there, two hundred and twenty-seven of Mr. J.'s ewes had lambed, and he had two hundred and twenty-five lambs alive and well. The lambs of the other two ewes were yeaned dead—so that every lamb was saved that was born alive. The loss from Mr.

Jewett's flock of six hundred and forty-three, was only two, from Nov. 1, to May 1. Mr. J. has many good ewes.

Mr. Wright and Mr. Remelee have some first rate sheep. We can hardly avoid particular reference to two of Mr. Remelee's ewes, which he purchased of Mr. Jarvis. With the exception of a trifle more length of leg than we should wish, they are in fleece and carcass about all that could be desired in Merino sheep. One of them especially, is almost a model of excellence. Their wool is beautiful, as all will admit who will examine the samples we took. The fleece of one, last year, weighed six pounds and an ounce, and that of the other six pounds. Each reared a lamb—one of which, by Mr. Wright's buck "Black-Hawk," now has a lamb, and though but little more than a year old, will give, we should think, six pounds of nice wool. The old ewes have also fine lambs this season.

Mr. Burchard has heretofore bred the Saxons, and many of his flock now show the characteristics of that variety. He has, however, been latterly infusing into the flock the blood of the heavier fleeced and stronger constitutioned Merino. He has some very pretty stock—some of his bucks are in all respects good samples of the finer wooled class of sheep.

We happened to call at Mr. A. L. Bingham's farm in his absence, and consequently had not the opportunity of seeing his buck called Vermont Hero, which is own brother to Fortune. He is represented to be a remarkable animal, and we regretted not being able to find him. In the flock of Merril Bingham, there are many large, well shaped, heavy fleeced sheep. Seeing them in large fields only, we could not examine them so particularly as if they had been in yards. He and his brother, A. L. Bingham, have lately purchased of the Shakers a flock of very heavy Merino ewes. Mr. Chapman has some good sheep from ewes having considerable Saxon blood crossed with Fortune. Mr. Langdon has also very good sheep. A yearling ram of his, from a ewe of Mr. Atwood's stock, of Litchfield county, Ct., is very superior. Mr. Cook has several ewes also from Mr. Atwood's stock, which are very good. Mr. Squires has a large flock. Many of his ewes strongly show the Saxon blood. He owns the buck called Don Pedro, formerly owned by Mr. Jewett. Though this buck is declared to be a full blood Merino, descended directly from the importation of Col. Humphrey, (which by the way we see no good reason for disputing,) we do not hesitate to say his wool is too coarse—coarser than should be encouraged for Merino. The *quantity* of wool he has yielded, however, is unprecedented. He is seven years old, and when we saw him had been sheared six times—the fleece of the present year not having then been shorn. The aggregate weight of his fleece is sixty-seven pounds and one ounce. Calling the weight of his fleece this year equal to that of the last, (12 lbs. 6 ozs., and it will not vary much from it,) the whole quantity of wool yielded by this buck in seven years, would amount to seventy-nine pounds and seven ounces! To do the animal justice, we are bound to say that he has great vigor of constitution, and the most perfect symmetry of carcass we have ever seen in a Merino sheep.

Mr. Morse has about two thousand sheep, of good quality, but as we intend speaking more fully of his farm in our next number, particulars are here omitted. We have much more to say of Vermont farming, and shall resume the subject next month.

ITEMS FOR THE SEASON.

Grass Seed.—One of the most successful and economical modes of securing timothy seed, and which is practiced by some farmers to great advantage, is to reap the tops of the grass while it is yet standing in the meadow, to be afterwards thrashed and cleaned, and then the rest of the grass is mowed and manufactured into hay. The seed thus costs only the labor of cutting and thrashing, the remainder affording the usual crop of hay.

Mixing manure with the soil is of the greatest consequence; and it is especially so when applied in the latter part of summer for the wheat crop. Wheat will not bear an abundant supply of unmixed manure, buried in large masses and lumps beneath the soil. When manure therefore is spread, it should be harrowed at least half a dozen times well, with the surface soil, before the plow turns it under. It thus becomes thoroughly broken, the soil is made mellow, and the whole is well intermixed. So important is this operation, that one-half or even one-third the manure will sometimes be equally efficacious where this practice is adopted.

Trimming Young Trees.—It oftens becomes necessary at midsummer, to trim the side branches of young trees, for the purpose of throwing the strength of the growth into an upright form. But if the side branches are cut closely, the main stem becomes too slender to support the mass of leaves and branches forming the top, and the tree assumes a bending or crooked form. To obviate this difficulty, trim the branches within about half an inch of the stem, leaving short stumps, with the leaves at their base. These assist in some degree the lateral growth of the stem, and serve to stiffen it, and which may be afterwards cut closely to the stem. An attention to this particular, will often save much trouble in staking up crooked trees.

THE TRUFFLE AND "TUCKAHOE."

There are probably many people who never heard of the truffle, and the number in this country who even saw or tasted a vegetable known by that name, is quite small. We have often heard of the plant called at the south "tuckahoe," or sometimes "Indian bread," but having never seen one, had no idea till lately that it was closely allied to, if not identical with some of the European species of truffle. Our attention has been particularly called to this subject by reading an article in the May number of the *Southern Planter*, written by C. Campbell. He gives an extract from a description of the tuckahoe plant, written by the late Hon. James M. Garnett; from which description, compared with that given by European writers of the truffle, we should have little doubt of their near relationship. Mr. Garnett says of the tuckahoe: "It is indeed a great botanical curiosity, for it has neither root in the ground nor stem above, but grows a few inches below the surface, apparently as unconnected with the soil as a buried cannon-ball would be. It is oval in shape, and varies in size from that of a goose-egg to that of a man's head. The coat is rough, and of a dark brown color—the inner substance is very white, similar in texture to that of the yam, and of an insipid taste."

Johnston's Encyclopedia describes the truffle as—"A round fungus growing under ground in many parts of southern Europe, destitute of roots and leafy appendages. It absorbs nutriment at every point on its surface. The truffle is composed of globular vesicles, destined for the reproduction of the vegetable. * * * Each globular vesicle is fitted to give origin to a multitude of reproductive bodies, but a few of them only perfect the young vegetable. The parent dies; the trufinelles are nourished by its dissolving substance, and the cavity it originally filled becomes the abode of a multitude of young truffles; but many of them die, the stronger starving the weaker. The truffle is one of the most wholesome and nutritive of the esculent fungi, and is generally discovered by means of dogs, which are taught to scent it; so that on meeting the truffle they bark and scratch it up. Truffles are highly esteemed at the tables of the luxurious, where they are served up either roasted in a fresh state like potatoes, or they are dried, shred, and dressed as ingredients in soups and ragouts."

In Virginia, it is said, the tuckahoe is discovered by hogs, these animals being fond of eating it, and scenting to a considerable depth in the ground.

Liquid Manure.—The Chinese, who are particularly skilful in the management of manure, are extremely careful not to waste the smallest portion; and, according to Sir George Staunton, they prefer the dung of birds to that of all others, and next to that night-soil, which they apply in a liquid state.

garden, and that they are evidently of different species. Their qualities, also, as he and some others seem to have proved, are very different—the poison-oak, when eaten by cattle or other animals, occasioning no bad effects, and the other plant producing sickness or death, when fed to calves, cows, oxen, and even men, as has been shown by experiments. Mr. Hinde thinks the plant which produces the sickness is a *nondescript;* though he is inclined to think it belongs to the genus *Rhus,* of which, as above mentioned, the poison-oak is a species.

Some communications have lately appeared in the *Prairie Farmer,* designed to show that the milk-sickness is caused by poisonous mineral substances held in solution by water, or from poisonous springs. From the facts cited, there seems to be no doubt that the water of particular places has produced sickness, both in men and cattle, but we are unable to say that it was the true milk-sickness. There is at least this objection to the theory that this sickness is caused by poisonous water, viz: that it has greatly prevailed in many situations where no such water has ever been discovered. The Mud river valley, in Ohio, for instance, a region noted for the abundance and purity of its water, was formerly very subject to milk-sickness. It seems that cultivation, and the substitution of cultivated grasses for the plants of wild growth, have there, as in other places, banished this dreadful malady.

We would feel obliged if Mr. Hinde would send us a leaf of the plant growing in his garden, which he thinks is the cause of the disease above mentioned.

ULTRAISMS.

A paper from Dr. Muse, president of the Dorchester (Md.) Farmers' Club, was read before that association in April last, a copy of which, by a resolution of the Club, has been forwarded us for publication. A great press of other matters prevents our giving space to the whole; the following extracts, however, exhibit the substance of the article:

"The mind of man is too apt on most subjects, and especially those of deep interest, to run off, unconsciously into a state of "*ultraism*"—and from one point, discovered to be defective, to an opposite one equally at variance with the sober dictates of reason, whose counsels, if seriously invoked, would readily afford a corrective to the frequent and fatal errors of extravagance; leading to the disappointment and frustration of our hopes, and purposes.

On the subject before us, this error has, in my humble opinion, been committed—and some of the novelties, in relation to the improvement of crops and soils—by a short recipe—have been too highly appreciated, and may thereby become pernicious; yet, I hold it to be quite reasonable to anticipate advantages, from some of them, as auxiliaries—but unreasonable to conjecture the possibility of such great results as are promised by their inventors.

Chemical solutions—poudrette—guano, and electricity are each, offered by their respective advocates, to the practical farmer, as an *agricultural catholicon*—a remedy curative and preventive of all the ills and diseases incident to his various crops.

In respect to the chemical solutions, it is wholly inconceivable that a grain of wheat, or other seed, should absorb from a steep of the highest degree of concentration all the requisite food contained in ordinary manures: it is admitted that one essential element—nitrogen—is required in but small portions—but it is very doubtful whether all the demands of the plant for this material, may be supplied in this manner, with the aid of the atmospheric source alone; these contribute a large portion, unquestionably of this element, as well as of carbonic acid, &c., &c., but the structure of the spongioles of the roots demonstrate that the *roots* as well as the *leaves*—the *earth* as well as the *air* furnish a share of the nutritive gasses and other soluble substances placed in it by accident or design; which experience has settled beyond the power of a possible refutation.

Where, I would ask, will be found the potash—the soda—the lime—the magnesia—the silicates—the phosphates, and the other essential materials of the plant, not in the barren sand before named; neither will they be found in the *air,* for they are not vaporable—nor in the *steep,* and yet the plant must find them or perish.

Be assured, gentlemen, we must hold on to the compost heaps; if properly made, these will supply the *deficit* essentials, which the steeps did not possess, and which the small volume of the seed could not contain."

Dr. Muse thinks it is probable that the use of steeps, as well as the application of electricity, may prove of essential service in agriculture; and he states that he is himself conducting several experiments in regard to these subjects, the results of which will be made public.

ENORMOUS OAK TREE.

Six miles W. S. W. of Saintes (in the Lower Charente) stands an old oak tree, which promises yet to live many centuries, if the axe of some Vandal does not cut it down. The following are the dimensions of this monarch of the forests of France, and probably of all Europe:—

Diameter of the trunk at the ground,	27 to 30	feet.
" at the height of a man,...	20 to 22	"
" at the base of princ'l br'hs,	3 to 6	"
" of the whole head,......	120 to 130	"
Height of the trunk,...............	24	"
" of the branches,...........	66	"

A room, with a circular seat, has been cut out of the heart wood of the trunk, from nine to twelve feet in diameter; and nine feet high. A table may be placed in the middle, round which twelve persons can sit. It is adorned with a living carpet of ferns, lichens, &c. Upon a plate of wood, taken from the trunk, about the height of the door, two hundred concentric annual rings have been counted, whence its results, in taking a horizontal radius from the exterior circumference to the centre of the oak, there must have been from 1800 to 2000 of these rings, which makes its age nearly 2000 years.

CULTIVATION OF WHEAT.

An interesting experiment, showing at the same time, the benefits of stirring the soil, and also the danger of drawing false conclusions, is given by L. Vernon Harcourt, in the agricultural department of the London *Gardener's Chronicle.*

He had seen a statement that the tailings of wheat, called "chickenscraps," being, in fact, only the refuse of the grain, would yet produce a good crop of the heaviest, fullest seed. Disbelieving it, and being desirous of undeceiving the farmers by proving its fallacy, he proceeded to try the experiment. Accordingly, a small plat of ground was sown, one-half with good wheat, and the other half with tailings. On returning home after an absence of some weeks in the spring, he was surprised to find the latter covering the ground as thick as the grass on a meadow; but found, upon inquiry, that the person having charge of the experiment, considering the seed good for nothing, had sown five or six times as much of it as of the other. As this thwarted the design of a comparison, half the thick sown was directed to be hoed out till of the same thickness as the other from good seed. The other half of the thick sown was left to take its chance. At harvest, the first twelve plants in one row of each sort, were taken as a sample; and the produce weighed as follows:

	Grains.	Av. ears pr. pl't.
12 plants from good seed weighed........	926	6.6
12 plants from tailings left thick weighed.	351	3.8
12 plants of the same thinned, weighed...	1133	7.8

It is of course evident to every intelligent person that the increase in the product of the hoed portion was owing to the cultivation by hoeing, which is further proved by the meagre supply from the unhoed wheat from the tailings. But the experiment performed under other circumstances, and with other seed, might have led to very erroneous conclusions.

MANUFACTURE OF CHEESE.

The following is an extract from the statement of **Alonzo L. Fish**, of Herkimer county, who received the first premium of the New-York State Agricultural Society, for the best cheese dairy, in 1844.

Calves' rennets *only* are used after being dried one year. There are less animal properties in them than in new rennets, and will not make cheese swell in warm weather, and on shrinking, leave them like honey comb, full of holes, with a rank flavor.

Calves, whose rennets are designed for cheese making, are not allowed to suck sick cows, or those giving bad milk, but are fed a plenty of good milk, from five to ten days old; twelve or fifteen hours after sucking, when the gastric juices are most abundant and pure, the rennet is taken out and stretched on a bow; as much fine salt is added as will adhere without draining, and hung in good air to dry. Milking is done in tin pails, strained through a large tin strainer into a tin vat, where it is not skimmed nor moved till the cheese is made. The pails are set into a common sap bucket, which being light and smaller at bottom than top, a little press on the pail will fasten the bucket to it so that it carries with the pail without any inconvenience. A light tap on the bucket will drop it, and leave the pail clean and not bruised. A tin vat, large enough to hold the milk, is set within a *larger wooden vat*, with one inch space between the sides and bottoms of the two, to admit water, which is cooled by ice and heated by steam, which water cools the milk to take out the animal heat, warms it to receive rennet, remains and heats whey and scalds curd. It is discharged by a cock to pass off into a tub, and scalds bran or meal for slop feed, when it is required. Scalded feed is required daily when the cows are milked, on hay feed. A large reservoir is built of stone and cement to contain fifty hogshead of rain water from buildings, to discharge by a cock into the above described space into a steam generator or into a tub, or any other place in the lower rooms, where it is desired. A pump affords water to this apparatus in case of drouth. Thus the same water is made to perform three distinct offices, by no more labor than to turn three cocks with thumb and finger.

After water in the reservoir is not wanted for cheese making, a pipe conducts it into the top of ice house to freeze in solid mass in winter, for cooling milk the next season. No skimmer, pail or dipper, is required about this apparatus, only to milk in, as the cream which rises over night is not separated, nor no dipping of milk, whey or water. The heating is done daily, by a handful of chips, or four quarts of charcoal, and all shift of apparatus can be made with one hand while the other is employed in the milk or curd. A young man is hired at $11 per month, for eight months, to take the whole charge of nursing, feeding, making and take care of milk and cheese through the summer, and does no other business. He is required to keep a register, daily, of the variation (if any) of heat, salt, quality and effect of rennet, number of cows milked, quantity of milk from which cheese is made, condition of curd when put to press, when cheese is put on shelf that it is weighed and numbered upon the bandage, so that when cured the result of certain variations may be known. An inch pipe passes from the steam generator and discharges steam into water under the tin vat; in ten minutes the whole mass is warmed to ninety degrees to receive rennet. The steam is then turned off (which would otherwise be lost) into a tub which stands high enough to discharge into the cheese vat and scald it after the cheese is made. Hot water is drawn at any time from the same to cleanse pails, cloth hoops, &c. Calves' rennets only are used, after being one year dry, they being less apt to make cheese swell in warm weather, and of better flavor. A piece of rennet, to bring curd in forty minutes, is pounded fine in an iron mortar, and soaked a short time in warm water mixed with a little annatto, drained, strained and put into the milk. When come, the curd is cut in large pieces with a wood knife, thickest in the middle, to give it a slight pressure before there is much surface exposed to be rinsed by whey; after standing ten minutes, the pieces are cut smaller with the same knife, then broken up by putting the hands to the bottom of the tub, bringing them through to the top, with fingers spread, with a slow motion, to give it all a slight pressure without tearing fine while tender; heat is kept as high as eighty-eight degrees while working; steam let on; the motion and pressure with hands increased with increase of heat and toughness of curd; heat is kept up to continue the action of the rennet, as it is most active when warm; heat raised to ninety-eight degrees; the steam is then turned off; it is kept at that heat thirty minutes. The scalding is now done; the water and whey are discharged, one pound of fine salt to fifty of curd is added, while warm, to shrink the curd and prevent holes in the cheese. After getting cool it is put to press; the pressure is from five to seven tons; in six hours is turned into clean cloth, and again in twelve hours more is taken out of the press and put upon the shelf, weighed, bandaged, greased with oil of whey butter, turned daily. No greater heat is ever used in the operation than the natural heat of milk, (ninety-eight degrees.)

FATTENING OF PORK IN IRELAND.

We notice in the Louisville *Journal*, an article on the "Provision Trade of Ireland," evidently written by a man who understands the subject. He informs us that the Irish pork, which in the English markets is preferred to any other, is fattened almost entirely on *potatoes*. He says:—

"The pork of Ireland is raised and fattened *exclusively* by the peasantry on cooked potatoes, with occasionally very little oats. I never knew an instance of more than ten hogs being fattened by one man for sale, and this is a very rare occurrenee. The great bulk of them are got from men who fatten but one or two hogs."

The writer is of the opinion that the "*best brands*" of beef can be put up in the western section of our country, and sent into the British market so as to pay a handsome profit; but of pork he has doubts whether even the best can be sent there to any advantage. On this point he remarks:—

"We know that a division of labor on any thing is sure to produce a more perfect article and at a cheaper rate. Just look at the ease and cheapness with which an Irish peasant can fatten his one or two hogs, almost entirely from the refuse of his family table, and see how superior the flesh of that animal must be that is constantly fed from its birth on good cooked food."

Our principal object in making the above extract is, to check the prevalence of what we believe to be erroneous impressions. The first of which is, that pork made from potatoes is *not good*—and second, that hogs *cannot be fattened on potatoes*. The latter opinion has latterly received considerable support from some distinguished French chemists. It may be proper to remark, however, that other chemists, Liebig, Johnston, &c., do not agree to this conclusion, which the experience and observation of many farmers shows to be fallacious.

FARM ACCOUNTS—PREMIUM.

Editor Cultivator—The writer of this note is engaged in compiling a *Family Almanac*, and *Repository of Useful Knowledge*, for 1846, and wishes among other things to aid farmers and house keepers in keeping regular accounts of their *business*, *income*, expenditures, &c It is believed that by presenting proper forms for doing it, a great many families may be induced to adopt this very important and useful, but generally neglected practice. A premium of $10 is therefore hereby offered for the best *form* or *mode* of keeping farming accounts in detail; and $5 for the best form of keeping household or family accounts. Will some of your readers who are in the practice of keeping such accounts, transcribe or copy enough of the same to show the plan or mode, from which a selection may be made? Communications (post paid) will be received till the 20th of August, addressed *A. F. W.*, Washington, D. C.

Washington, June, 1845.

Notices of New Publications.

"THE FRUITS AND FRUIT TREES OF AMERICA."

When we announced this work, in our May No., it was supposed that it would have been published on the first of May; but circumstances, beyond the control of the author or publisher, have delayed its publication till the latter part of the last month. We had then only seen the proof-sheets—we have now the work complete, in a beautiful volume of 600 pages—a perfect treasure to the fruit-grower. It embraces the entire subject,—production of new varieties, propagation by grafting, budding, &c—soil, transplanting, position and culture, training, pruning, diseases and enemies, with accurate descriptions of 186 varieties of apples—7 of almonds—16 apricots—4 berberries—77 cherries—10 currants—the cranberry—12 figs—40 goosberries—47 grapes—the mulberry, walnuts, chestnuts, and filberts—97 plums—223 pears—79 peaches—18 nectarines—5 quinces—14 raspberries—2 blackberries, and 36 strawberries, with tables of select lists from each kind. In addition, that nothing might be wanting to make the work complete, we have directions for the culture and management of oranges, lemons, limes, citrons, shaddocks, olives, pomegranates, and the different varieties of melons—the whole illustrated, whenever necessary, with engravings, amounting in all to over 200. The book shows the thorough devotion of the author to his subject, as well as his indefatigable research and untiring industry, and is an honor alike to its author and his country. That it will have a rapid and extensive sale, and tend immensely to increase the growing taste for the production and enjoyment of the finer varieties of fruits, is beyond a question.

New-York: Wiley & Putnam—Price $1.50.

WASHINGTON'S LETTERS ON AGRICULTURE.

Fac similes of Letters from His Excellency GEORGE WASHINGTON, *President of the United States of America, to Sir* JOHN SINCLAIR, *Bart., M. P., on Agriculture and other interesting Topics; engraved from the original Letters, so as to be an exact fac simile of the Hand-Writing.* Washington: Published by FRANKLIN KNIGHT.

It is well known that General Washington was much devoted to the improvement of agriculture. A true statesman, he regarded the prosperity of this great interest, as the basis of national independence. It is, however, a matter of surprise, that amid the arduous cares and duties which devolved on him as Chief Magistrate, and as commander-in-chief, he should have found time to direct so much attention to this object. In addition to his official business—which was invariably transacted with the greatest promptness and precision—he not only continued the general direction of operations on his large estates, but by a regular correspondence with the most enlightened agriculturists of this country and Europe, advised himself of every discovery and improvement in husbandry. The letters before us, furnish evidence of his zeal, as well as sound practical sense and good management in relation to rural affairs. As an example in point, we give from the work an extract from his letter to Sir John Sinclair, dated at Philadelphia, July 20th, 1794:

"After the peace of Paris in 1783, and my return to the occupations of a farmer, I paid particular attention to my breed of sheep, of which I usually kept about seven or eight hundred. By this attention, at the shearing of 1789, the fleeces yielded me the average of five and a quarter pounds of wool—a fleece of which, promiscuously taken, I sent to Mr. Arthur Young, who put it, for examination, into the hands of manufacturers. These, pronounced it to be equal in quality to the Kentish wool. In this same year, 1789, I was again called from home, and have not had it in my power since to pay much attention to my farm—the consequence of which is, that my sheep, at the last shearing, yielded me not more than two and a half pounds. Nor is the difference between good and bad management confined to this species of stock, for we find that good pastures and proper attention, can and does fill our markets with beef of seven, eight and more hundred weight, the four quarters; whereas from 450 to 500, (especially in the States south of this, where less attention has been paid to grass,) may be found about the average weight. In this market [Philadelphia] some bullocks were killed in the months of March and April last, the weight of which, as taken from the accounts which were published at the time, you will find in a paper enclosed. These were pampered steers, but from 800 to 1000 the four quarters, is no uncommon weight."

In relation to the facilities afforded by this country for keeping sheep, Gen. Washington adds:—"The climate of this country, particularly that of the middle States, is congenial to this species of animal; but want of attention to them in most farmers, added to the obstacles which prevent the importation of a better kind, by men who would be at the expense, contributes not a little to the present inferiority we experience."

The race of sheep once highly celebrated as "the Arlington breed," originated with Gen. Washington. This was probably the stock above mentioned, the wool of which is spoken of as resembling the "Kentish wool." They were produced, according to the history given by Mr. Custis to Mr. Livingston, [see Livingston's "Essay on Sheep," pp. 57, 58,] from the progeny of a Persian ram, crossed with sheep which Gen. W. obtained from Bakewell—the latter afterwards known as the Dishly or Leicester breed.

The letters are accompanied by some introductory and supplementary remarks from the compiler, to which is added a tribute to the character of Gen. Washington, "by the late Hon. GEORGE CANNING, Prime Minister of England;" all in the highest degree interesting, as showing the respect and esteem with which the character of our revered countryman has been regarded by distinguished foreigners, whose only motive to praise must have been a heart-felt admiration of his virtues.

We are informed in the introduction that the originals, from which these letters are exact copies, were to be deposited in the British Museum, "as the precious relics of a great man fit to be preserved in that valuable repository." Sir John Sinclair was evidently an ardent friend of General Washington, whom he eulogises as one "whose character must ever be revered, even by those with whom he contended either in war or politics, as containing as much good with as little alloy, as that of any individual whose memory is recorded in history."

Canning bestows even a still higher eulogium. He says:—"The whole range of history does not present to our view a character upon which we can dwell with such entire and unmixed admiration. *The long life of Gen. Washington is not stained by a single blot.*" * * * "He was a man in whom the elements seemed so blended that 'Nature might have stood up to all the world,' and owned him as her work. His fame, bound to no country, will be confined to no age." * * * "The character of Gen. Washington, which his contemporaries revere and admire, will be transmitted to posterity, and the memory of his virtues, while patriotism and virtue are held sacred among men, will remain undiminished!"

AUSTRALIA.

According to the account given by Capt. WILKES of the United States Exploring Expedition, the inducements for emigration to Australia, are not great. Capt. W. spent considerable time at New South Wales, which is the principal settlement of the Island, and collected many facts in regard to the soil, climate, natural resources, &c. He states that a large portion of the country is naturally barren—that much of the land devoted to pasturage, requires a hundred acres to keep five head of cattle. Nearly the whole island is subject to great extremes of drouth, followed by torrents of rain. "These drouths are sometimes of such long continuance, that we at one time read of the whole country having been burnt up for want of rain, a famine threatened, and the sheep and cattle perishing in immense numbers." An instance of this kind is mentioned by Capt. W. as having occurred in 1790, when it is said, "All the live stock which had been imported for breeding was killed off for food, and the inhabitants were reduced to an ear of corn per day. From the exhaustion which prevailed, all labor was suspended."

The drouths, he remarks, "have been succeeded by long-continued rains, which have raised the rivers thirty or forty feet, flooded the whole country, deluged the towns and villages, and completely destroyed the crops. The cattle, stacks, buildings, and sometimes even the inhabitants are swept away. It is stated that in 1839, which was considered a wet season, "twenty thousand sheep were lost in the valley of the Hawkesbury by the floods." These evils, it is added, "appear to be of frequent occurrence, and the settler in New South Wales has to contend with elements in an unusual degree."

Owing to the irregularity of the seasons, it is said, "there are hardly any streams that merit the name of rivers. It is necessary to guard against being misled by the inspection of maps of the country, and forming from them, the idea that it is well watered. Such an impression would be erroneous, and yet the maps are not inaccurate; streams do actually exist in the places where they are laid down on the maps; but for the greater part of every year no more is to be seen than the beds or courses, in which, during the season of floods, or after long-continued rains, absolute torrents of water flow, but which will within the short space of a month again become a string of deep pools. Were it not for this peculiar provision of nature, the country for the greater part of the year would be without water, and consequently, uninhabitable."

During the long-continued drouths to which the country is so subject, the vegetation is also liable to great injury from hot blighting winds, which are thus spoken of.

"The prevailing westerly winds sweep with force over the whole country, blighting all they touch. The effect of these hot winds is remarkable, for they will in a few hours entirely destroy the crops, by extracting all the moisture from the grain, even after it is formed and almost ready for harvest; and the only portion that is left, is that which has been sheltered by trees, hedges or fences. They thus destroy the prospects of the husbandman when his crops are ready for the sickle."

WOOL-GROWING

We have received through the *Washington County Post*, an article on this subject, written by Wm. McKie, Esq., of Salem, N. Y. It appears that some person had desired Mr. McK.'s opinion as to the most advisable course for the wool-growers of this region to pursue that they may be enabled to compete successfully with the increase of the wool-growing interest of the west. To this Mr. McKie replies that he thinks it is as yet undecided whether *fine* wool can be grown extensively in the west; but he has no doubt that the "coarser and more middling grades can be grown successfully, and at prices that would be ruinous to the wool-grower of the north." He however recommends "a medium course" for the northern farmers, in regard to the quality of their wool. He says—"However favorably I may be impressed with regard to the Saxons, I would not recommend the pure bloods to any but the skilful. I would recommend the cross Saxony, or in other words, the pure Merino crossed by the Saxon. An equal cross is desirable."

He speaks highly of the Saxon flock of Daniel Rogers, in Rensselaer county, derived from the importation of Mr. Grove, as standing in very high repute, and from which he could advise a selection of breeding stock. He speaks highly also of "the Campbell flock," in Jackson, Washington county, which he says can be recommended in the highest terms. He states the blood as pure Merino crossed by pure Saxon. That the wool is very soft, fine, and silky, averaging three pounds to the fleece; and is in high estimation with the manufacturers for its felting properties, &c. He observes that—"light fleeces and fine wool, are generally considered synonymous;" but this he shows is a mistake, and that we should regard quantity as well as quality, which there is no difficulty in combining. A great reason with Mr. McKie for encouraging the growth of fine wool, is the supposed probability that we may have to resort to exportation for a market, and that in this exigency fine wools could alone remunerate the grower—the coarser and middling grades being produced by other countries—at a less rate than can be done even from the prairies of the west.

In regard to preparing wool for market, Mr. McKie advises the greatest care in washing and cleansing. He says—"The practice of dipping the flock, and then huddling them together in a yard, for some two hours previous to washing, is a mode that all wool growers of distinction would be likely to practice, when made acquainted with the beneficial results. Great care should be taken to avoid dusty roads going up from the washing, and in providing clean pastures for the flocks, between that and the clipping." He discountenances the practice of letting sheep run two or three weeks after washing before they are sheared, "for the oil to come out." From three to six days, he thinks, (and reasonably too,) is long enough for all practical purposes. He states that some wool-growers in putting up their fleeces "are in the abominable practice of *carefully concealing* from three to four ounces of the most filthy unwashed dags in the centre of each fleece." He recommends that the fleeces be prepared in "the best possible manner, which will enable one to reach the highest price, besides giving the satisfaction of having done *right*."

NEW-YORK STATE AG. SOCIETY.

The monthly meeting of the Executive Committee for June, was held at the Society's Room, Albany, on the 12th—Geo. Vail, Esq. in the chair.

Mr. Tucker reported a list of Questions to be answered by the applicants for Premiums on Farms, which were approved, and ordered to be issued in a circular. In addition to the Premiums of $50—$30, and $20, on Farms, it was resolved to give single volumes or sets of the Society's Transactions, to all who furnish answers to the questions, according to the value of the reports thus furnished.

A letter was read from the President, recommending that the next meeting of the Executive Committe be held at Utica, whereupon it was

Resolved, That the next regular meeting of the Executive Committee be held at Bagg's Hotel in Utica, on Thursday, the 10th of July, at 10 o'clock A. M.; and that the Committees to award Premiums at the State Fair, be appointed at that time.

A letter was read from Mr. Wm. Wandall, of Sing Sing, on the subject of destroying the wild onion, and asking the Society's advice as to the best way of making it public. The Committee advised its communication through the agricultural papers.

☞ All applicants for Premiums on Farms, can obtain Circulars, containing the regulations and questions to be answered, on application to Luther Tucker, Rec. Sec'y, Albany, or to any of the officers of the Society in different parts of the state.

ASPARAGUS.

Mr. Wightman Chapman, of Middlebury, Vt., raised the finest Asparagus we ever tasted. Noticing its superiority, we inquired how it was grown. Mr. C. said it was raised by what he called the French mode. Instead of making a deep trench as in the ordinary way, he selected a piece of thick sward in a rich place, made up a good compost of old manure, muck, and loam, and raised a bed to the height of twelve or fifteen inches, into which he set the roots. There is certainly "no mistake" about the extra size and unusual richness of the asparagus which we saw and ate, produced in this way.

Mansfield, Conn., has the honor of manufacturing more silk than any other town in this country. In 1793, 260 lbs. were raised, and in 1830, 3,200 lbs.—most of which was manufactured by hand. Since 1830, less has been grown, but the manufacture of foreign silk is carried on to a considerable extent in factories. There are eight factories—most for sewings and twist—the others for cords, tassels, &c.

FOREIGN INTELLIGENCE.

We have our regular files of foreign papers to June 2d. They speak in positive terms of the favorable appearance of the English wheat crop. The Mark-Lane Express says—"We may safely venture to state that a finer prospect for a crop never presented itself within the memory of the oldest man living." Cold north-easterly winds had prevailed considerably through May, yet from frequent showers, the supply of grass had become abundant, and but little doubt was entertained of a heavy hay crop. The appearance of the barley and oats, including beans and peas, it is said was never better; though vegetation in general is rather more backward than usual. The prices of bread-stuffs are still low, but are a little improving. The epidemic among cattle, which it was thought at one time had subsided, has broken out afresh in some districts, and great losses have been sustained. The importation to England of foreign live stock increases, much to the dissatisfaction of British farmers. During May, no less than 900 cattle, and 200 sheep were imported from Holland to London and the various outports, being as is stated, the largest number received in one month since the tariff laws were passed. The number of oxen and cows imported at the various English ports, from the continent during the year ending with May, was 2,241 and of sheep 1,063. Accounts from Scotland and Ireland, are highly favorable for the grain-crops.

Royal Agricultural Society.—The Half-years meeting of this society was held in London on the 22d of May. Lord Portman was elected President for the ensuing year. This society is in prosperous circumstances—its number of members is 6,933. Its present amount of invested capital is £8,200. The next Annual Show will be held a Shrewsbury, the inhabitants of which city have contributed £1000 towards defraying the expenses. Principal day of the show July 17th. At the late meeting, Mr. Colman presented to the council of the society, a specimen of New-Jersey marl. The council referred the specimens and Mr. Colman's communication on the subject to Mr. Pusey and Dr. Buckland.

Improved Sheep.—We have more than once mentioned a variety of sheep, a cross of the Cotswold and Down, bred by John Twynham, Hampshire, England, which have attracted much notice. From a late account of the "Stockbridge Cattle-Show," we perceive that the reputation of Mr. Twynham's sheep is increasing,—he having carried two prizes at this show, for the best bucks of any breed or cross.

The export of wool from New South Wales in 1815 was 32,971 lbs.; in 1835 it was 3,863,227 lbs.; and since then the quantity has increased fifteen fold.

The German papers state that M. Liebig, has discovered a mineral substance, which, when combined with guano, will produce one of the most fertilizing manures known. It is added, that a company, with a capital of 120,000*l* sterling, composed for the most part of leading English capitalists, was formed for the purpose of carrying on, upon a large scale, the manufacture of the new compound.

Eggs Pickled.—The farmers' dames in some parts of Hampshire, in their notable endeavors to turn everything to good account, have acquired much fame for pickling eggs, which, while they constitute a somewhat novel feature in the catalogue of condiments generally, are at the same time particularly relishing. When eggs are plentiful, they take from four to six dozen of such as are newly laid, and cause them to be boiled hard; then, divesting them of the shells, they place them in large mouthed earthen jars, and pour upon them scalding vinegar, well seasoned with whole pepper, allspice, ginger, and a few cloves of garlic. When the pickle is cold, the jars are stopped down quite close, and the former will be fit for use in the course of a month afterwards. The eggs thus treated are excellent, and are held in high esteem by all the farm-house epicures in that part of England.

Advantages of draining.—Robert Ferguson, of Muirhouselaw, entered upon a lease of 21 years; the farm a cold wet soil; and though of considerable extent, it seldom produced more than 20 or 25 small stacks of grain, and other produce in proportion. During the first three years of the lease, many miles of drains were made and filled with small broken stones. The expense of opening the drains was borne by the proprietor of the land; and the expense of quarrying the stone, breaking, and filling the drains, was borne by the spirited tenant. The result is, the stack yard, instead of being only in part filled with a scanty produce as formerly, is now quite insufficient to contain the crop, which consists of 75 or 80 large stacks of grain, and a corresponding supply of hay, turneps, and other produce.

The celebrated Short-horned Bulls "Sir Thomas Fairfax," calved in April 1837, and the "Earl of Durham," calved in 1841, are dead.

THE NEW POSTAGE LAW.

The new law in relation to postage, goes into effect on the first of this month. The only change in the law, which will affect "The Cultivator," is that which provides that all newspapers may be sent *free* to all post-offices within 30 miles of the place of publication. The postage on "The Cultivator," will therefore hereafter be as follows:

1. To all offices within 30 miles of Albany—*free*.
2. To all post-offices in the State, or if out of the State, within 100 miles of Albany—1 cent.
3. For any greater distance than 100 miles, if out of the State—1½ cent.

Letter Postage.—In relation to the postage on letters, the new law makes very important changes, viz:

1. The *franking privilege* of Postmasters, by which publishers of periodicals have heretofore been so much benefitted, is abolished.
2. All letters are hereafter to be charged by *weight*, instead of by the number of pieces they may contain.
3. There is to be but two rates of postage for distance, all letters of *half an ounce* weight, or less, to be charged *five* cents for any distance less than 300 miles, and *ten* cents, for any distance over 300 miles—for every additional half ounce, these rates are to be doubled.

Pamphlets and Magazines are hereafter to be charged by weight, the postage being for one ounce, 2½ cents, no matter what the distance, and 1 cent for each additional ounce.

Circulars, Handbills, &c. of no larger size than a sheet of common writing paper, two cents.

Transmission of Money for Newspapers.—The following important regulation has been issued by the Postmaster General:

> Money may be left with a postmaster, in no instance exceeding ten dollars, for the purpose of being paid to distant publishers, if said publishers shall so desire, for any newspaper or pamphlet, deliverable from his office. The postmaster may retain one per cent. and give his receipt for the balance. He is immediately to report the payment, with the names of the parties, to the postmaster, through whom said amount is to be paid to the publisher, and to charge himself upon his "general account with the United States," with the amount received, deducting the one per cent. under the head of "moneys received for subscriptious;" stating the name of the payor, the name of the payee, office where payable, amount, and time when received, and shall make a full and faithful return to the General Post Office of all such cases at the end of each quarter. When presented, the postmaster at the office where payable, is to pay the amount in said receipt, deducting one per cent., which receipt, after being endorsed by the publisher, he will forward as his voucher of payment. He will enter said amount to his credit on his "general account with the United States," under the head of "moneys paid for subscriptions," giving the particulars above stated, and render to the General Post Office a full and faithful account of the same at the end of each month.

Thus, if we understand it aright, a person wishing to remit to us $10, for the Cultivator, may pay it with 10 cents fees, to the postmaster, and take his receipt for the money, which receipt he must forward to us, on the presentation of which to the postmaster here, we shall get the $10, by paying the 10 cents to which the postmaster here is entitled as his commission.

Paying Postage.—Notwithstanding the great reduction of postage, it is still important that our friends should remember that all business letters should be post-paid. To each individual who writes us, this will be a trifling matter; but to those who receive from 25 to 75 letters a day, as we frequently do, the tax would be onerous indeed, if we have the postage to pay.

SALE OF MR. PRENTICE'S SHORT-HORNS.

Agreeably to previous notice, the sale of Mr. E. P. PRENTICE's herd of improved short-horned cattle took place on the 25th of last month. The day of the sale proved favorable—the occurrence of showers on the day preceding having produced a delightful purity of air, and an increased greenness and freshness of vegetation, which seemed to invest MOUNT HOPE with more, even, than its usual attractions.

A numerous and highly respectable company from this and several other States, assembled early in the day, and after spending several hours in the examination of stock, and having partaken of refreshments, which were served in a beautiful grove, the sale commenced. It was conducted in a very spirited manner by L. F. Allen, Esq., assisted by Mr. Jones as auctioneer. The cattle were in fine condition, and passed rapidly under the hammer. Forty-one animals were sold at prices varying from $25 to $225, and averaging $112.75 per head. The prices, in general, may be considered low, when the high cost of the original stock and the acknowledged excellence of the herd offered, are considered; yet it should be remembered that the sale was positive—that there was no underbidding, or buying in.

COWS.

Flora—8 years old, J. B. Nott, Guilderland,	$215 00
Moss Rose—8 years old, J. W. Wheeler, Hyde Park,	140 00
Catharine—6 years old, M. Bates, New-York,	105 00
Snow Ball—11 years old, E. H. Smith, Smithtown, L. I.,	110 00
Melissa—8 years old, W. S. Packer, Brooklyn,	120 00
Cora—4 years old, Dr. Jas. McNaughton, Albany,	125 00
Daisy—7 years old, do do do	105 00
Diana—6 years old, J. W. Bishop. Berkshire co. Mass.,	155 00
Charlotte—5 years old, do do	190 00
Ada—4 years old, R. H. Green, Winslow, Maine,	170 00
Appolonia—10 years old, J. P. Brayton, Bethlehem,	160 00
Louisa—5 years old, R. H. Green, Winslow, Maine,	150 00
Splendor—11 years old, W. S. Packer, Brooklyn,	190 00
Jenny—4 years old, Edward H. Smith,	105 00
Aurora—10 years old, J. B. Nott, Guilderland,	145 00
Miss Smith—8 years old, P. W. Tuthill,	80 00

HEIFERS AND HEIFER CALVES.

Caty—11 months old, W. S. Packer, Brooklyn,	$100 00
Comely—4 months old, Wm. Kelly, Rhinebeck,	70 00
Nun—3 years old, do do	110 00
Meg—1 year old, Wm. Kelly, Rhinebeck.	65 00
Nell—3 years old, M. Bates, New-York.	225 00
Betty—6 months old, Wm. Kelly, Rhinebeck,	55 00
Rover—1 year old, V. P. Douw, Albany,	70 00
Calf, 2 weeks old, J. H. Prentice, Brooklyn,	50 00
Calf, 2 months old, W. S. Packer,	45 00
Burley—1 year old, V. P. Douw, Albany,	80 00
Peggy—3 years old, J P. Brayton, Bethlehem,	200 00
Peggy, 2d—4 months old, V. P. Douw, Albany,	110 00
Ramble—1 year old, W. S. Packer, Brooklyn,	75 00
Jilt—10 months old, Wm. Kelly, Rhinebeck,	60 00
Calf, 1 month old, J. P. Walker,	77 50

BULLS AND BULL CALVES.

Calf, 1 month old, W. S. Packer, Brooklyn,	$40 00
Blaize—4 months old, R. H. Green, Winslow, Maine,	55 00
Tyro—5 months old, J. B. Nott, Guilderland,	65 00
Tecumseh—1 year old, W. S. Packer, Brooklyn,	200 00
Calf, 2 weeks old, J P. Walker,	30 00
Calf 1 month old, W. Kelly.	75 00
Duke—6 months old, Gen. Kimball, Newfane, Vermont,	200 00
Calf, 3 days old, J. P. Walker,	25 00
Timour—11 months old, M. J. Hayes, Montreal,	80 00
Fairfax—5 years old, W. S. Packer,	205 00
	$4,622 50
Forty-one animals, averaging	$112 75

Of the other nine animals on the catalogue, four, (Matilda, Sally, Judy and Esterville,) were reserved by Mr. Prentice, agreeably to the terms of his advertisement—one, (Caroline,) was withdrawn for want of a bid—one cow, (Dutchess,) and a calf, died—another, (Dora,) was sick, and O'Connell, by a vote of the company, unsolicited by Mr. P., was withdrawn.

WHENCE DO ANIMALS DERIVE THEIR FAT.

The theory has lately been put forth by some European chemists, that such plants only as contain oil, or the elements of fat, can fatten animals. A late number of the Quarterly Journal of Agriculture, contains an article, translated from the French, on the "Fatting of Cattle, and the Formation of Milk, by M. M. Dumas, Boussingault, and Payen." In this this article, the theory above-mentioned, is strongly and elaborately defended. It is obvious that the subject involves a matter of great practical importance, viz: that of selecting the proper plants for the fattening of animals and the production of butter. The researches of the chemist and philosopher, may be of service in deciding this point, though it appears to us that in the adoption of new theories, we should be careful that they are not opposed to well-established facts. A sensible writer has well remarked, that "perhaps nothing has done so much to discredit, amongst the mass of farmers the probability of profitably making the science of chemistry available for the purposes of agriculture, as repeated assertions made by chemists, either at variance with, or only partially founded on facts." It strikes us that the article to which we allude is in some particulars obnoxious to this charge. In advocating the theory that animals have not been known to fatten on food devoid of fat, it is stated that hogs have not been known to fatten on potatoes! At the conclusion of the article, the writer gives a summary of the conclusions arrived at, among which it is laid down, "that potatoes, mangel wurtzel, and carrots, only fatten so far as they are joined with products containing fat substance, such as straw, the seeds of cereal plants, bean, or oil-cake." It will hardly be necessary to refer to particular cases to show that this conclusion is at variance with facts—the experience of many a Yankee, and we doubt not that of many an Irishman, contradicts it. Are there not to be found many persons who have fattened animals on potatoes or carrots? We have often fattened animals on potatoes, with no additional food than such a quantity of straw or hay as was was necessary to give proper distention to the bowels, and assist the animal to "raise the cud," and never saw better beef than from cattle thus fed. In some of the cases we have in mind, the whole quantity of food given, besides the potatoes, would not have been sufficient to sustain the animal in ordinary condition. So in regard to hogs, we have known many cases where the accumulation of fat could be attributed to nothing else but potatoes. We cannot cite cases where potatoes were the *only* food given, but the quantity of other kinds would never have fattened them.

The experiment, to which these French chemists refer in support of their theory, if well conducted in other respects, must, in our opinion, have been made with an inferior breed of hogs.

In a note attached to the article upon which we have made the above comments, is a remark in relation to the effect of carrots when given to milch cows, to which we wish to call the attention of our readers. It is said "This sort of food [carrots] is reserved for those cows which are not so good milkers, and whose milk it is wished *still farther to impoverish*, in order that it may serve as a substitute for woman's milk." Now we would inquire whether anything like the effect here indicated is known to follow the use of carrots for cows in this country? So far as we are acquainted, the effect of carrots is believed to be to make the milk *richer* instead of poorer.

PRICES OF AGRICULTURAL PRODUCTS.

New York, June 24, 1845.

COTTON.—The exports of Cotton, from 1st to 17th of June, were 16,986 bales. Prices, 5¼a8½.

BUTTER.—Orange County, in tubs or pails, 15a18—New Western dairy, 11a18.

CHEESE—5½a7.

FLOUR—Best Genesee, $4.75—Ohio and Michigan, $4.50a $4.62½.

GRAIN—Wheat, nothing doing—Rye, 66a67—Corn, 45a48c.

HEMP—Dew rotted, per ton, $95—Dressed, $145.

HOPS—per lb. 13a14 cents.

HAMS—Pickled, per lb. 5a7 cents.

BEEF—Country Mess, $9 bbl.

LARD—per lb. 7½a8.

PORK—Per bbl. mess $12.50a$13—prime, $9.37a$9:50.

TOBACCO—Kentucky, per lb. 3 cents—Connecticut seed leaf, 8a10.

WOOL—BOSTON, being the great wool-market, we give the prices of Wool in that city, as reported in the New-England Farmer of June 18th:

Prime or Saxony fleeces, washed per lb.	$0.40a0.43
American full blood fleeces,	37a0.38
" three-fourths blood fleeces,	35a0.36
" half blood do	32a0.33
" one-fourth blood and common,	30a0.31

BOMMER'S MANURE METHOD.

Interesting communication from Mr. Bommer, relative to his well known method for making manure.

TO THE AGRICULTURAL PUBLIC.

PRICE OF THE METHOD GREATLY REDUCED.—Until now I have maintained the prices fixed upon by myself and Abbott & Co.; prices which varied from six to twenty-five dollars, according to the size of the farms; and this I was obliged to do, because in accordance with our agreement, I was not at liberty to alter them. It was principally to gain this end that I bought out Messrs. Abbott & Co.

To render my work really popular, I have fixed its price so low, that each member of the whole agricultural community can purchase it. Henceforth it will be sold at the uniform price of FIVE DOLLARS for every farm in the Union—that is,

ONE RIGHT WITH ONE COPY OF THE METHOD FOR ANY ONE FARM

FIVE DOLLARS.

PRICE FOR WHOLESALE.—Agents, farmer clubs, bookstores, seedstores, agricultural repositories, offices of agricultural papers; in one word, such persons as will take a certain number of "Methods" at a time, either to be divided among their neighbors who have clubbed together, or for single sales at the price of five dollars, will have the "methods" for the following prices, viz.

For 5 Rights with	5 Methods or books, ...	$20
" 12 "	12 "	40
" 30 or more "	30 or more "	40 per cent.

(Making only $3 per piece.)

All orders must be accompanied by the amount in *cash*, and directed to my office. 113 Greenwich-st. New-York city, or to my empowered Agents; in which case the "Methods" will be sent immediately.

Each package of "Methods" will contain a good number of Prospectuses or handbills, containing, 1st. A Synopsis of the matter contained in the "Method;" 2d. Documents and Reports from several authorities of the United States, approving the "Method" and acknowledging its practicability; 3d. Certificates from respectable, scientific and practical men, attesting the results which have been obtained from its application; 4th. Editorial articles, expressing the opionion of the press.

A WORD TO ENTERPRISING MEN.

Having succeeded in making known the advantages and the practical utility of my method to competent and disinterested men, whose characters are sufficiently known to the public to place their testimony beyond doubt; my "method" being patronized by the most eminent men of this country, Messrs Martin Van Buren, Gov. J. H. Hammond, Gen. Wade Hampton, Gen. J. L. Means, Col. Singleton, Col. Hugh Lawson, Hon. J. R. Poinsett. W. B. Seabrook, Andrew Stevenson and others, who have adopted it; several thousands of the method having already been spread throughout the Union, the greater part of purchasers being eminent agriculturists; and all subscribers being satisfied with the work, my end has been attained, my task stops here; it is now a mere business matter, ready to receive the developments of which it is susceptible.

For these reasons, and desiring to employ my time in new researches and experiments, especially upon the subject of *transmutation* of dead into living vegetables, a highly important subject in agriculture, already hinted at in my work, but which is still in a problematical state, not reposing upon any solid basis; and to enable me also, in accordance with my former promises, to impart the results of those experiments to the subscribers of my method, I have resolved to cede my patent and method, either by Town, County, or by State, to single persons or to companies, on the most reasonable terms, the price of which will be fixed according to the agricultural importance of the Towns, Counties, or States.

Every purchaser of the patent for a Town, County, or State, will be supplied with such number of copies of the method, gratis, as may be agreed on.

NOTE.—The patent right *for* the State of New-York, (Long Island and Staten Island excepted;) *for* the ten eastern counties of New Jersey; *for* Frederick county, Maryland; and *for* about 40 towns in New England, have been ceded by me to several persons and companies. For all other states and territories in the Union, I can now dispose of the patent and method.

Herein I present a new branch of industry to enterpriaing, intelligent, and active men. It would be superfluous to enlarge upon its advantages, for it will be seen at a glance, by perusing documents, mentioned in the prospectuses, that my method enjoys a high reputation in the Union, and that this enterprise is in its nature as honorable as it is lucrative.

IMPORTANT NOTICE.

Having now given the best plan, taken the best measures for the prompt introduction of my "method" into agriculture, and done every thing, on my part, to enable every one to procure it at small expense, I notify those who should feel tempted to use this system, without being furnished with a right and a "method," that they will not only expose themselves to be prosecuted for an infringement of the patent, but lose their time and their money in vain trials, of which the result will be, if not totally unprofitable, at least very incomplete. Therefore, do not deceive yourselves, but be assured *of this truth*, that my large method is, to this day, the sole work in existence which contains the improved and complete system, and in which its application is rendered easy and profitable in all its branches. In a word, its possession is the main condition of your success; first, because the whole work constitutes one chain of facts and principles, which are linked together and sustain each other, and form an inseparable whole which is indispensable to the proper comprehension of the system, enabling you to apply it in a really profitable manner. Secondly, because it contains, besides the process in question, a great number of other instructions not less useful, the knowledge of which will aid and guide you, so as to put you in a way to derive from the system the greatest advantages and profits.

For these reasons, those who have formerly bought my small method, can have the large one *gratis*, by an application at my office, (postage paid,) or to my agents.

Those among you, who have faithfully tested the method and obtained satisfactory results, are respectfully requested to communicate with me. To those who have not tested its advantages, I recommend, by all means, carefully to conform to the instructions contained in the large method, in which case their success will be infallible.

STATEMENTS AND EXPLANATIONS CONCERNING THE "METHOD," AND THE RIGHTS ATTACHED TO IT.

When I first introduced this method into American agriculture. I judged it prudent, for many reasons, to publish at first, but a part of it; enough, however, to enable the intelligent farmer to succeed in the experiment. Before encountering the expense required to publish *in full* the fruits of my labors, I was anxious to ascertain if this system would be well received and properly appreciated by the agricultural public. My expectations were not disappointed. that trial having been crowned with entire success. Thus encouraged. it became my duty to persevere, and to give you the result of all my researches and experiments. This you will find in my new work, which I can say with confidence, is the key with which you can. by the exercise of a little intelligence and industry, double the product of your farms; for. in this work, the system is so much improved, its application rendered so easy. the whole so clearly explained. and so fully detailed, that if you conform to its prescriptions and instructions with scrupulous exactness, *success is certain*.

In the main, my method is based upon that known for some time in France as Jauffret's system; that is to say. I use the same materials; for, in my researches and experiments it became my duty to consult not only the small French pamphlet of Jauffret, but all other writings which have appeared upon the subject of agriculture, and especially of manure, in order to extract from them whatever, by experiment, should prove to be good, valuable, and useful to the object I had in view. The merit of this new system does not consist either in the materials, or in their combination. These materials have been known for ages as possessing fertilizing qualities, and every person at all acquainted with chemistry, knows that in mixing alkalis with animal matter, a mordant can be obtained which will produce fermentation in a heap of vegetables. This then, is not new; it is the numerous improvements and ameliorations connected with the application of these materials which give real importance to this new system. Therein lies the real progress of the art in the preparation and the application of manures, and therein consists the merit of the new edition of the *method*. True, Jauffret also undertook the application of this mixture, but he stopped half way His process, such as described in his pamphlet, cannot be used with profit and success, and that for three cogent reasons. The first is: the meagre and incomplete instructions he gives to the operator upon the application of the system; the second, because the hand labor is too painful and expensive; and the third, because he did not discover, and consequently could not tell how to employ the air as a second agent of fermentation—a very important point in the operation, because without this aid, it is impossible to attain that degree of heat which is necessary perfectly to reduce vegetable matter into manure in a short time. Therein he failed, and therefore it remained for others to accomplish the work he had left incomplete. But although I have perhaps gone much farther than all others who have hitherto devoted their attention to this subject, I do not pretend to have closed the door to improvement by my method. The question of manure is so extensive that it embraces nearly the whole agricultural art, and will in due time advance to fullness by relying upon science and practice. In the meanwhile the great step is made, the fundamental bases are established, and the system, as explained in my new work, has been so well matured by my experiments, that I can affirm without fear of misleading any one, that any farmer, who will undertake to operate on my plan, will succeed, and I assure him that he will considerably augment the products of his farm be following my economical process in the preparation and application of his manure. Here the word "*economical*" is seriously intended. The system taken altogether is essentially economical; for, except a small quantity of lime, all the ingredients which enter into the composition of the caustic lye, (which, with the air, form the two agents of fermentation,) are found upon all farms, and cost nothing but the labor of gathering them.

Concerning the patent attached to my method, it is evident that it could only be granted for the improvement connected with the application of materials already known. You should know then, that the patented process is of the greatest advantage to the farmer, being the most economical, and the most easily reduced into practice. It is also the process now in use in every section of the Union. You should also understand, that in the patent this process is only described in general terms, and that, isolated from the "method," it is not likely to be of any value. To apply it with success, it is necessary to have my work for a guide

According to an agreement between myself and my agents, Messrs. Baer and Gouliart, the patent was issued under their name, and a part of it, comprising the right for the northern and eastern States, was immediately ceded to me by them, which transfer is duly recorded in the patent office, in Liber M. page 280 of transfers of patent rights. Then by a second transfer, made to me the 6th Nov. 1844, by Abbott, Baer and Gouliart, known as the firm Abbott & Co., the remaining part, comprising the right in the southern and western States, has also been ceded to me, which transfer is also recorded in the patent office, in Liber S, page 373; so that by virtue of these two acts, the patent, issued under the above names, now belongs entirely to me.

With regard to the "method" itself, that is to say, the book which contains the directions and instructions indispensable to the farmer who wishes to apply the process; in a word, which contains the system complete in all its details, the property and the copyright appertain to myself exclusively, according to two legal acts entered in the clerk's office of the southern district of New York Thus, these two rights, although distinct, are inseparable; that is, the patent cannot be profitable to any one without the method.

I was compelled to give these explanations and to make these statements, because all these matters have been agitated by the press as well as by private correspondence; and also, that for the future, each one may know to whom to apply in regard to this patent and method.

You should not lose sight of the fact that all the copies of the method are *signed and sealed* with my own hand,—a measure I have adopted to prevent imposition and fraud.

A CALL TO THE PRESS.

☞ Editors of agricultural periodicals, and of other papers having at least 400 farmer subscribers, are invited to publish the above communication; for which entire insertion, and perhaps some other articles to be sent by me afterwards, I offer every one three copies of the method; to be delivered to him immediately after the receipt of his paper containing the whole article. Such editors of agricultural papers of which I am not yet a subscriber, will please to send me their paper, and consider me as such. GEO. BOMMER.

Office 113 Greenwich-st., New-York city.

July 1, 1845.—1t*

HOVEY'S STRAW CUTTER.

THIS machine has received the highest premiums of the Agricultural Societies of Massachusetts and New-York, and has given the most entire satisfaction wherever known. Some improvements which it has lately undergone, it is believed, render it as perfect an implement for its destined purpose, as can be desired. There are six different sizes—the prices of which, range from $12 to $35. The two largest sizes are suited to the application of horse-power, &c For sale in this city. Inquire at the office of "THE CULTIVATOR." July 1—tf.

VIRGINIA FARMS FOR SALE.

I HAVE for sale several good farms, being portions of the estate called Oak Hill, in Loudon county, Virginia, late the residence of President Monroe. It is about 30 miles from Washington, Alexandria and Georgetown—in a most healthy region, well watered and peculiarly calculated for raising stock of all kinds. To industrious and enterprising applicants, very liberal terms of payment will be given. S. L. GOUVERNEUR.

Washington, July 1, 1845—july 1—5t.

FARM FOR SALE.

IT consists of two lots, situated on opposite sides of the Albany and Schenectady turnpike, four miles from Albany. The lot on the north of the road, comprises forty, and that on the south, sixty acres. Both are enclosed by a good fence of boards with chestnut posts, erected a little more than a year ago. The lot on the south side has a small house, a stable with shed, and a good yard for manure, or stock. It is also provided with a well of excellent water. There are permanent streams of water on both lots. The stream called the Patroon's brook runs across the whole width of the south lot. With the exception of about a third of an acre on the north lot, both have been entirely cleared, drained where necessary, thoroughly plowed, seeded last year with clover and grasses, and will yield this season nearly or quite an average of two tons of hay to the acre. The two lots are suitable either for one farm or two farms, but will be sold together or separately, to suit purchasers. The natural position, as well as the soil of both lots is good, and cannot fail to give satisfaction. Every thing considered, a more desirable situation could scarcely be found in this vicinity.

For particulars, inquire at this office, or of JOHN McCARDELL, corner of Nassau and Pine-streets, New-York.

July 1—3t.

DR. VAN BUREN'S RHEUMATIC EMBROCATION.

RHEUMATISM ANNIHILATED.

THE proprietor of the Rheumatic Embrocation, comes before the public with increased confidence in the healing virtues of his remedy; for since he first offered it to the public, it has been tried in the worst possible, and most aggravated cases, over which it has completely triumphed; in some instances, where the patient had been given up by the attending physician as incurable; and in many cases where all the remedies advertised for the cure of rheumatism, had been faithfully used, without the least effect; thus proving itself superior to all other remedies ever offered to the public. The proprietor has received from various parts of the United States, and is receiving almost daily, the most flattering testimony to the curative powers of his Rheumatic Embrocation; and he feels flow more justified than ever in asserting, that it is a never failing cure, in all the various forms of Rheumatism, Chronic or Inflammatory, and in all complaints of an analagous character, when faithfully and perseveringly employed. He cannot occupy the necessary space in an advertisement, or he would place before the public, the documentary evidence of the truth of his assertion. But though he cannot do this, he is willing at any time, to show them to all who may call upon him at his principal office, No. 56 Sand-street, Brooklyn, Long Island, N. Y.

Agents solicited from all parts of the United States and the Canadas, and dealt with on favorable terms. All communications must be post-paid. Price $1 per bottle. M. VAN BUREN.

July 1—1t* Sole Proprietor.

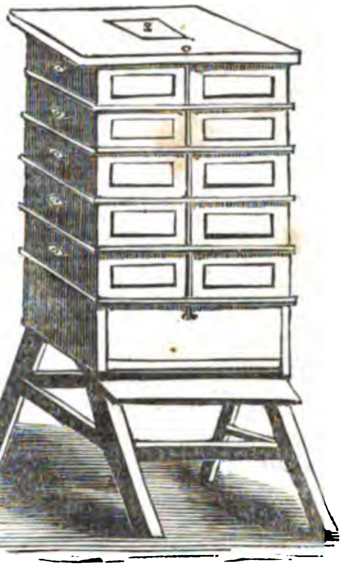
CENTRE DRAFT PLOWS.

D. PROUTY & Co., Nos. 19, 20, & 22. North Market-st. Boston, manufacture and keep for sale, a large assortment of the most improved Implements of Agriculture, including their celebrated CENTRE DRAFT PLOWS, Cultivators, Harrows, Straw-Cutters, Seed Sowers, Vegetable Cutters, Corn-Mills, Ox-Yokes, &c. &c. For the character of their plows, they have only to refer to those who have used them. The demand for them for a few years past, has been great—they having been sold extensively over the country from Maine to Louisiana, and the western States, as well as in the British Provinces; and have not failed to satisfy all purchasers of their great superiority in the qualities of neatness of workmanship, strength, durability, ease of draft, and complete execution of the work.

N. B. A few of these plows are for sale in Albany. Inquire at the office of THE CUTTIVATOR.

July 1—tf.

MILHOLLAND & CRANE'S ENDLESS BEE-HIVE.



ONE of the greatest improvements of the age. One of the proprietors of this beautiful and ingenious invention, has been for some weeks in this and adjoining counties, introducing an improvement that promises an important change in the culture of the bee. Their hive is both new and simple, and so entirely adapted to the nature and wants of these wonder working insects, that the life and labors of the bees may be perpetuated in the same hive for twenty years, or even more, yielding from 60 to 100 pounds annually, of pure, delicious honey, in clean white comb, entirely deserted of young bees, bee bread, or old filthy comb. By their process of removing the accumulated honey, the bees are unharmed, and kept insen[illegible]o their losses, and are apparently stimulated to exertion to fill [illegible]e by additional supplies of room as the bees may require. At the bottom of the hive, they are enabled to build a new set of comb throughout their abode every year, and produce each succeeding brood of young in combs which are new and clean, which is very essential to their increase of numbers, health and general prosperity; by a new and simple mode of colonising, the owner may at pleasure transfer a portion of his bees from full to empty hives, without having them swarm off in the open air, or ringing bells or beating pans, or exposing himself to be stung. In addition to its ornamental appearance, it is highly remunerative, and is so perfectly transparent, that the whole internal operations of the bees may be as minutely observed as the labors of any mechanical or laboring establishment. Thus a satisfactory knowledge may be obtained of a community of insects that have, in all ages and countries been the wonder and admiration of every one, from the philosopher to the untutored savage. The proprietor respectfully invites the inspection of practical bee men and others of taste, to his hive, which he will exhibit a few days at Wm. W. Wolford's hotel, corner of State and Hawk-streets.

Albany, June 19, 1845.—July 1—1t*

DURHAM BULL CALF AND HEIFERS.

THE subscriber will sell a Durham Bull Calf one year old 21st March 1844, a remarkable thrifty animal and good handler; when about 10 months old weighed 720 lbs. He was got by his prize bull Meteor. Also, a yearling and a two year old heifer, one got by Meteor, and one by the imported bull Duke of Wellington. Letters post-paid, will be answered. GEO. VAIL.

Troy, May 1, 1845—2t.

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☞ **ADVERTISEMENTS** **inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

SITUATION WANTED.

A YOUNG man, lately from England, is desirous of obtaining a situation as manager of a farm. Good recommendations can be given. Inquire at this office. July 1—1t.

MR. DOWNING'S NEW WORK.

WILEY & PUTNAM, 161 Broadway, New-York, have just published "The Fruits and Fruit Trees of America, or, the Culture, Propagation and Management, in the Garden and Orchard, of Fruit Trees generally; with Descriptions of all the Finest Varieties of Fruit, native or foreign, cultivated in the [illegible]ardens of this country. Illustrated with numerous engravings [illegible]tlines of fruit. By A. J. Downing. 1 vol. 12 mo., (and also 8 v[illegible]

This is the most complete work ever published on the subject, and will, it is hoped, supply a desideratum long felt by amateurs and cultivators. July 1—1t.

TO FARMERS.

A GOOD farmer who is desirous of going west, may make an arrangement on favorable terms to himself, to come on an excellent and very extensive farm on shares, for a period of years. The farm is in northern Illinois, where it is perfectly healthy. One with a family, will have preference, and making the engagement, will enable him to look around and suit himself to a farm, in buying which, the advertiser will assist. Apply to Messrs. Eddy & Stiles, Dixon, Lee county, Illinois.

July 1, 1845—1t.

FOR SALE.

THE farm of Robert White, Jun., Shrewsbury, N. J., highly improved, and in the immediate vicinity of excellent marl. See N. Y. Journal of Commerce.

July 1—2t*

FARM IN ILLINOIS.

FOR SALE—A good farm, with valuable improvements. The subscriber being about changing his business, will sell a great bargain. Also has in immediate vicinity, 2,000 acres choice land, which he will sell at a discount from government price. Address ISAAC HINCKLEY, P. M., Audubon, Montgomery Co., Illinois.

EXOTIC, NURSERY, AND HORTICULTURAL GARDENS,

Flushing, L. I., near New-York.

THE subscribers having established a Nursery with the above title, with the determination of conducting it in the very *best* manner in all its departments, offer for sale, *at reasonable prices*, a select variety of Fruit and Ornamental Trees. Hardy Shrubs. Herbaceous Plants, Grape Vines of all the best kinds, superior Strawberries, Fastolf Raspberry, Gooseberries, &c. Bulbs and Tubers, superb Carnations, Dahlias, &c., and a most extensive and choice collection of Green-House and Stove Plants, embracing every thing *new* and *beautiful* in that department, personally selected in Europe during the past summer, of Roses and Camellias

We have a very choice collection of the former, full 1,000 varieties, and of the latter nearly 300, all in fine order.

Catalogues of the above will be sent gratis to all applicants, *post-paid*, and every order promptly executed. From unknown correspondents, a remittance, draft, or satisfactory reference expected.

May 1, 1845—m. & jul. VALK & Co.

NORTH DEVON CALVES.

THE subscriber offers for sale 4 full blood North Devon Bulls and 2 heifer calves.

Two of the Bulls 5 and 6 months old, price each,	……	$25
" " 11 " "	……	30
One of the Heifers, 12 months old, price,	……	30
" " 18 " "	……	40

They are beautiful animals, in fine condition, and of a suitable age to ship. Address JOHN P. E STANLEY,

46 South Calvert corner of Lombard-street.

Baltimore, Maryland, June 1—2t.

SEED STORE AND AGRICULTURAL WARE-HOUSE.

OUR Spring supply of seeds is now ready, and we shall be happy to receive orders for Field or Garden Seeds, of every description, Black Sea, Italian and Siberian Spring Wheat, Barley, Peas, Clover Seed, Timothy Seed, Seed Corn, Shaker and other Garden seeds, &c. Also, a full assortment of farming tools selected from the best manufacturers in the country. Hoes, Scythes, Forks, &c. cheap by the dozen. E. COMSTOCK.

Rome, Oneida county, March 1, 1845.

AURORA AGRICULTURAL INSTITUTE.

THIS Institution, recently opened, is located on a farm of over 200 acres, lying in, and directly adjoining the village of Aurora, on the east bank of Cayuga lake, in Cayuga county, New-York, 16 miles from Auburn, by stage, and 12 miles south from Cayuga Bridge and the Auburn and Rochester Railroad, by steamboat direct, in summer.

Its design is to afford every facility for young men to make themselves thoroughly acquainted with the principles of Agricultural science, and their judicious application to practical husbandry; and particularly to afford young men from our large towns, the most favorable advantages for preparing themselves for Agricultural pursuits.

Terms $150 a year, payable quarterly in advance. No person under fourteen years of age will, as a general rule, be received.

Pupils will be received at any time, and the course of instruction continued through the year without vacations, but permission of absence will be granted if requested.

Applications may be made to B. R. McIlvaine, 44 Great Jones st New-York, to Rev. W. Roosevelt, 413 Rroome-st., and Hon. B. R. Wood, or the Editor of the Cultivator, Albany.

CHARLES C. YOUNG, A. M., Proprietor and Principal.
Alexander Thompson, A. M., M. D., Lecturer on Botany, Geology, Agricultural Chemistry, &c.
David Thomas, Visitor and Adviser.

May 1, 1845—3t.

ROME PLOW FACTORY.

THE Diamond Plow which received the first premium at the State Fair at Poughkeepsie, as well as at every County Fair where it has been shown, is manufactured by the subscribers in the very best style, and for sale at wholesale or retail. Also, some eight or ten patterns of approved plans, as well as Scrapers, Cultivators, Cradles, Mott's Agricultural Furnaces, &c. Orders from abroad promptly filled, aad a liberal discount to dealers.

March 1, 1845. BRAINERD & COMSTOCK.
Rome, Oneida county.

PLOWS.

AT the Syracuse Agricultural Warehouse and Seed Store, can be obtained Delano's celebrated Diamond Plow made by Mr Howard Delano, of Mottville, for the sale of which, we are sole agents for this town. Price, $6 for plain plow, and $10 for the wheel, coulter and clevey. Also, a full assortment of the well known Massachusetts Plow, made by Ruggles, Nourse & Mason of Worcester. 300 bushels seed barley, 300 do. pure Marrowfat Peas, 100 do. Clover seed, 150 do. Timothy, and a general assortment of all the varieties of seed sown by the tillers of the soil; Cultivators, corn plows, Wheel-barrows, Churns, Cheese Tubs, Cheese Cloth, Hoops and Presses, Hoes, Manure, Hay and Barley Forks, Shovels and Spades; and a very great variety of articles appertaining to the interest of the husbandman. Orders promptly executed.

Syracuse, April, 18[illegible].—3t. FOSTER & NOTT.

BOOKS FOR SALE.

AMERICAN Farmer's Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale at the office of "The Cultivator."

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES

VOL. II. ALBANY, AUGUST, 1845. No. 8.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

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M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,
where single numbers, or complete sets of the back volumes, can always be obtained.

Foreign Correspondence.

MR. NORTON'S LETTERS—NO. XIV.

Analysis of Slates—Importance of Chemical Investigation.

Laboratory of Ag. Chem. Association,
Edinburgh, May 30, 1845.

L. TUCKER, Esq.—Among my other labors in the Laboratory, I have lately been engaged in an analysis of a series of slates, with a view to the agricultural capabilities of the soils formed by their decomposition. Such analyses are not difficult in performance, and are, as I hope to show, of great importance to the practical man.

The seven slates of which I give the analyses, were from Wigtonshire, in the south-west corner of Scotland, and were picked up at random by Prof. Johnston, during one of his journeys in that section.

Without perplexing your readers by long descriptions of the process employed, I will only say that the powdered slate was first treated with muriatic acid, which dissolved the carbonates of lime and magnesia, and a large portion of iron and alumina. The remaining insoluble portion was then fused, and from it obtained the silica, the remainder of the iron and alumina, and the caustic lime and magnesia, all of these last having been in combination with the silica as silicates.

The alkalies, that is the potash and soda, were determined only by loss. The principal object sought was the lime, and this was determined with much care. The annexed tables will show, I think, that the investigation was not an unimportant one:

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5	No. 6.	No [illegible]
Silica, ...	60.13	68.08	57.53	75.79	67.59	37.82	7[illegible].06
Iron and Alumina sol. in Mur. acid.	5.31	5.51	7.67	6.43	4.92	12.13	7.09
Do, obtained after fusion,.....	13.93	18.12	22.29	9.45	21.49	39.41	13.61
Carb'te of Lime,	12.77	0.46	3.51	0.45	0.30	......	0.34
Carb. Magnesia,	3.43	0.39	1.73	2.15	1.66	.....	0.35
Caustic Lime,...	0.24	0.62	0.30	1.09	0.43	0.50	......
Caustic Magnesia	1.25	1.07	1.80	0.44	2.90	6.13	2.79
Alkalies and loss,	2.94	5.75	5.05	4.20	0.72	4.01	3.77
	100.00	100.00	100.00	100.00	100.00	100.00	100.00

The above figures represent the number of pounds in a hundred, the per centage. Thus, in No. 1 there are 60 13.100 lbs. of silica, 12 77.100 lbs. carbonate of lime, &c.

On one point I have not yet satisfied myself. I think that some of the lime dissolved by muriatic acid. was in the state of soluble silicate rather than carbonate, that is, in combination with silica in place of carbonic acid. This, if true, is important, and I am about to determine the fact, but shall not be able to give the result in this letter.

It must be obvious, even to a person unacquainted with the nature of the substances above named, that soils formed by the decomposition of these slates must differ greatly in their composition; but to one who knows their properties it is no less evident that they must differ in their agricultural capabilities also.

We will first notice the important ingredient of lime. All of that represented as carbonate, is in a state to be directly available for the food of plants. The caustic or quick lime, being in the insoluble part, would be more tardy in its operation. It is not to be despised however, for its action, though slow, is sure. We see as to the carbonate, that while No. 1 has 12.77 lbs. in a hundred, Nos. 2, 4, 5, and 7 have only from 3 to 4 tenths of a pound, and No. 6 has none, or merely a trace.

The differences in the quantities of magnesia are also striking, and it is not unworthy of notice that there is generally more of it in the insoluble portion, represented as caustic magnesia, than in the state of carbonate in the acid solution. This being a necessary ingredient in a fertile soil; its presence is favorable, though in excess it is found injurious. In No. 6 there is perhaps too much of it, especially when we consider the small quantity of lime.

The alkalies are also, as they should be, in considerable quantity, except in No. 5. The quantity of iron and alumina soluble in muriatic acid is as high as 12 per ct. in No. 6, and as a portion of the iron is in the state of protoxide, and soluble therefore in water, it might under certain circumstances accumulate in the subsoil to a hurtful extent.

The proportion of these substances being so different, we see proved the importance of chemical investigations. The above slates were taken from separate strata, all of which would probably be embraced within a circle of 20 miles, and the soil produced by each would need a peculiar treatment. How absurd would be an attempt to cultivate all upon the same system, and yet such attempts are not unfrequent. It is in such districts as the one now under consideration, that we find contradictory accounts respecting the benefit resulting from the application of certain manures. For instance, a farmer upon the soil of No. 1 finds that the application of lime produces no good effect, while his immediate neighbor, upon another strata, such as No. 6, may say that lime is quite invaluable, that it doubles his crops. One therefore, is an advocate for lime as an universal remedy; the other says that it is of no use whatever. Both are right as to their own cases, but are wrong in making a rule from one isolated instance, or even the experience of a limited district.

Lime would no doubt be effective added to the soils of all the slates except Nos. 1 and 3, while sulphuric acid and bones would greatly benefit the whole of them, as supplying in addition to lime, sulphuric and phosphoric acids, in both of which substances they are either deficient or contain them in very small quantities. My remarks might be extended to a very great length, and might embrace many points necessarily omitted, but I will not trespass too much upon your columns.

JOHN P. NORTON.

ROTATION OF CROPS IN SCOTLAND.

Featherhall, Midlothian, 30th May, 1845.

To the Editor of the Albany Cultivator.

SIR—In my last I pointed out to you that the characteristics of a philosophical course of rotation of crops, are, placing plants requiring the same substances for their development, as far from each other in the course as possible; and the affording facilities for the disentegration of the soil, and for destroying and preventing the growth of weeds. I shall now draw your attention to the principal rotations practiced in the Lothians, and examine them by the standard above laid down; but before doing so, it will be necessary to inquire, what are the substances of which the different crops are composed?

At the risk of repeating what may already have appeared in your journal, I transcribe the results of some of Sprengel's analytical researches into the constitution of vegetable bodies, and I also add a table prepared by myself, showing the qiantities of inorganic substances per Scots acre, carried off, by a good crop, such as is usually raised in my own district, (a fertile one.)

TABLE showing the quantity of inorganic substances contained in 1000 *lbs. of each of the different productions named with the exception of the Turneps and Potatoes, which show the quantities in* 10,000 *lbs.*

	Wheat.		Barley.		Oats.		Beans.		Vetch		Rye Grass	Red Clover.	White Clov'r	Turneps		Potatoes.	
	Grain.	Straw.	Grain.	Straw.	Grain.	Straw.	Grain.	Straw.	Grain	Straw				Roots.	Leaves.	Roots.	Leaves.
Potash,	2.25	0.20	2.78	1.80	1.50	8.70	4·15	16·56	8·97	18·10	8·81	19.95	31.05	23.86	33.3	40.28	81.9
Soda,	2.40	0.29	2.90	0.48	0 32	0·02	8·16	0·50	6·22	0·52	3·94	5.28	5.79	10.49	22.2	23.34	0 9
Lime,	0.96	2.40	1.06	5.54	0.66	1.52	1·65	6·24	1·60	19·55	7·34	27.80	23.46	7.52	62.0	3.31	129.7
Magnesia,	0.90	0.32	1.80	0.76	0.67	0.22	1·58	2·09	1·42	3 24	0·90	3.33	3.05	2.54	5.9	3.24	17.0
Alumina,	0.26	0.90	0.25	1.46	0.14	0.06	0·34	0·10	0.22	0·15	0·31	0.14	1.90	5.36	0.3	0.50	0 4
Oxide of Iron,	trace	.....	trace	0.14	0.40	0.02	....	0·07	0·09	0·09	......	......	0.63	0.32	1.7	0.32	0.2
" of Manganese,	.....	.....	.....	0.20	.....	0.02	....	0·05	0·05	0·05	......	......	......	......	......	......	......
Silica,	4.00	28.70	11.82	38.56	19.76	45.8[illegible]	1·96	2·20	2·00	4·42	27·72	3.61	14.73	3.88	0.84	0.84	49·4
Sulphuric acid,	0.50	0.37	0.60	1.18	0.35	0.79	0·89	0·34	0 50	1·22	3·53	4.47	3.56	8.01	5.40	5.40	4.2
Phosphoric acid,	0.40	1.70	2.10	1.60	0.70	0.12	2·92	2·26	1·40	2,80	0·25	6.57	5.05	3.07	4.01	4.01	19.7
Chlorine,	0.10	0.30	0.19	0.70	0.10	0.05	0·80	0·80	0·43	0·84	0·06	3.62	2.11	2.39	1.60	1.60	5.9

TABLE showing the quantities of inorganic substances per Scots acre, carried off by the following crops in pounds.

	Potatoes	Wheat.	Turneps	Barley.	Hay.	Oats.	Beans.
Potash,	121.23	6.32	199.35	13.74	85.11	43·65	69.38
Soda,	52 81	7.01	95.36	10·14	28·98	4.05	22.15
Lime,	56.05	3.80	114.64	19.80	98.86	9.42	25.96
Magnesia,	13.19	3.37	23.68	7.62	11.92	3.00	11.26
Alumina,	1.27	3 80	2.82	5.13	1.59	0.69	1.20
Oxide of Iron.	0.79		3.94	0.42		1.29	0.24
Do. Manganese,				0.60		0.09	0.17
Silica,	20.40	110.45	30.96	157.14	119.90	265·74	10.85
Sulphuric acid,	13.71	2.54	81.27	5.31	25.29	4.60	3.41
Phosphoric acid,	16.40	6.95	35.49	11.10	17.42	2.64	15.21
Chlorine.	5.46	1.30	25.43	2·67	9·29	0.52	3·82

I shall first then notice a rotation which prevailed over a great extent of country, but which for reasons I shall afterwards explain, is now much restricted. I refer to what is called the four course shift; it consists of, 1st year, naked fallow, beans, or (near large towns) potatoes, to all of which a liberal supply of manure is given; 2d year, wheat; 3d year, grass for hay or pasture; 4th year, oats. In a pastoral district or one where a light soil prevails, this course is modified thus: 1st, turneps manured; 2d, wheat or barley; 3d, grass for hay or pasture; 4th, grass, pastured; 5th, oats. By referring to the 2d table you will find that this rotation may be called a correct one, as you will observe that the beans, potatoes, and turneps, take large quantities of substances which the wheat and barley use sparingly, but upon which the succeeding hay crop makes large demand, this again followed by oats, requiring a limited supply. It has been found however, that in this course, it is often difficult to secure a plant of clover, (a matter of the first importance, owing to the land becoming what is technically termed "cloversick," a circumstance which, notwithstanding the strong light of science now shed upon agriculture, is still unexplained; this has given rise to a more extended rotation, in which grass recurs after longer intervals, and is generally found to have the desired effect.

In the best cultivated districts of Mid Lothian, the extended course I have just adverted to, consists of 1st year, potatoes manured; 2d, wheat: 3d, turneps manured; 4th, barley or oats; 5th, hay; 6th, oats. In East Lothian, where, owing to the distance from any large town, potatoes are little cultivated, this course consists of first year, naked fallow manured, 2d, wheat, 3d grass, 4th oats, 5th beans manured, 6th wheat; on light descriptions of land the fallow is sometimes displaced by turneps.

In the fertile district around Dunbar, the soil of which consists of a rich loam, a peculiar rotation prevails, which has been termed the "Dunbar system." It consists of, 1st year, turneps manured, and consumed by sheep on the ground; 2d, wheat: 3d, grass (pasture;) 4th, wheat or oats; 5th, beans manured; 6th, wheat. The most remarkable feature in this course, is the raising of wheat every second year, the crops of which are most luxuriant. On referring to the table, it will be found, and the fact is a very curious one, that wheat contains a smaller quantity of inorganic substances per acre, than any other of the ordinary plants of agriculture; we must not however, forget that it is rich in nitrogen, and we find that it requires a great supply of azotised manures, and accordingly that the treatment of the land in this district is of the most liberal character. On examination of the three last mentioned courses, you will observe that they possess all the characteristics of a judicious rotation in a very high degree; with the exception of the last, they introduce a large number of plants into the course, thus preventing their repetition, except at long intervals; they also afford two opportunities in six years, of deepening and minutely pulverizing the soil, and extirpating weeds during the cultivation of what have been termed fallow crops, which are always grown in rows, with intervals varying from 26 to 30 inches, in which the horse and hand hoe are kept constantly at work until the foliage of the plants prevents their further employment.

I have now laid before you a short account of the rotations generally practiced in our best cultivated districts; on no farm however, are they adhered to without some slight deviations, as circumstances sometimes occur rendering departure from the particular course generally adopted, judicious or indispensible, as for instance when grass seeds fail, &c.; the rotation is the rule however.

In concluding this paper, it is with pleasure that I advert to the interesting fact, that here we find the revelations of science illustrating and explaining the maxims of a lengthened and wide spread experience, thus showing us the value of those researches, which some have been but too much disposed to decry, and bidding us hope the noontide of that day is not far distant, the morning of which has already dawned, when scientific knowledge, based upon carefully conducted experiment, will replace that knowledge which has only been obtained by the gropings in the dark of generations, and by a painful and dear-bought experience.

In my next I will proceed to give you a detail of the methods pursued in the cultivation of the different crops, beginning with the fallow ones. JNO. GIRDWOOD.

LETTERS FROM MR. HORSFORD—No. VI.

Mr. Tucker—The annexed diagrams will enable your readers to form a tolerably correct idea of the plow generally used in the vicinity of Giessen. Fig. 75 represents the various parts in connection. Fig. 76, the part corresponding with the mouldboard. Fig. 77, the share of the plow, from above. A crotch, of natural growth, furnishes the handles and uprights for the reception and support of the beam—a round pole of the usual diameter. These are connected with an imperfectly squared block at the bottom, which occupies the place of the landside, and is plated on the sides and below with iron. The cutter fits loosely a mortice in the beam; and immediately below, or perhaps more generally a little behind, the share. Fig. 77 is bound to the landside. Those portions included within the dotted lines of Fig. 77, are wrapped around the termination of the block. A frame work of eight or ten inches square, supported by the wheels, gives free play to the beam, and permits elevation or depression by means of little blocks, regulating thereby the depth of the furrow. The whiffletrees are fastened to a short tongue, which passing through the axle is attached to a chain, extending to the middle of the beam, and there secured by a clevis.

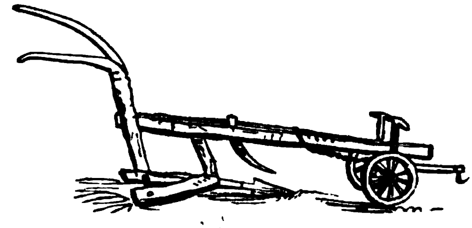

Fig. 75.

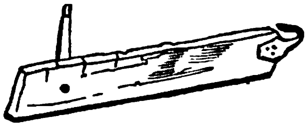

Fig. 76.

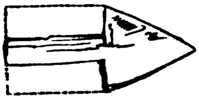

Fig. 77.

It will be seen that thus far, the plow is as well adapted to turn furrows to the right as to the left. The addition of the mould-board, Fig. 76, determines the direction. This is changed in plowing, from one side to the other, so as to turn all the furrows the same way. I have seen this plow in use with one horse, with two horses, one ox, and with two cows, though not yet with two oxen, though I presume it is in difficult plowing.

In Baden, near the Heidelberg, another kind of plow is employed. The annexed diagram, (fig. 78,) was sketched from the best one that I saw. In place of the shoe near the end of the beam, to regulate the depth of the furrow, many were furnished with pairs of wheels. The mould-board consists of a single sheet of iron plate about the eighth of an inch thick, to which the requisite form is given in a kind of press.

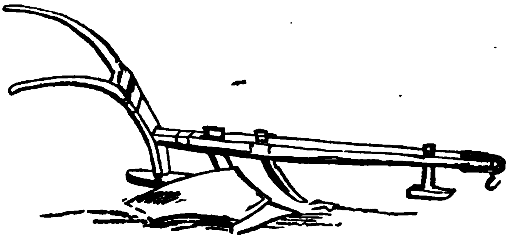

Fig. 78.

Other plows, consisting of modifications of this and that of Fig. 75, are, as I am informed, in use both in the vicinity of Heidelberg and in other parts of Baden.

The harrows that I have seen, are simply the quadrangular frame much in use upon farms in New-York, except that they are generally very much lighter. A convenient mode of transporting the plow and harrow has, for the last four weeks, been illustrated each morning, as the peasants go from the town to their fields in the adjacent country. The plow turned down upon the side, is supported by a crotch, the two prongs of which trail at some distance behind upon the ground. Upon the plow the harrow rests securely. This troop of peasants going from the cities and villages every morning, and returning at evening, is unlike any thing the new world affords, or ever will. There can be no desire that it should, for in the course of a year, an immense sacrifice of time, through this feudal inheritance of residing in hamlets and towns, must be inevitable.

That improvement in agricultural implements should be slow in Hessia and Baden is not difficult to explain. Modes and practices that have received the sanction of centuries, and are positively known to be connected with certain invariable results will naturally be more warmly confided in by a peasant of moderate means, than new and untried schemes, though they may furnish much larger returns. With the burthen of taxes, which I was told amounts in this rich Duchy of Baden, to about one tenth of the income of the agriculturists, the peasant with his whole family must work most industriously, and live most economically, if he would be prepared for advanced age or illness; and above all if he would make the condition of his sons, at their entrance upon active life, better than that of their fathers had been. I am inclined to give this explanation to the want of enterprise in general, and of course to the hesitation in the adoption of improvements.

In a conversation with the Director of Agriculture, connected with the University of Heidelberg, I mentioned the extensive use of threshing machines in the United States, and inquired if they might not profitably be introduced here. He thought not, and gave the condition of the peasantry, their moderate means, and generally small fields of grain, as reasons. I remarked that more recently, few individual farmers, comparatively, owned machines, but that most of the wheat in particular sections was threshed by movable machines, to which a portion of the horse-power and most of the men were supplied by the owner of the wheat. This gave him a new view of the matter; stillhe seemed to think it would be difficult for a manufacturer to find purchasers. And the gentlemen to whom I mentioned the subject and of whom I made the same inquiry, remarked that without threshing with the flail the peasants would have nothing all winter to do.

I commenced this letter more than a fortnight since, and in the interval, the gardens, fields, and woods have assumed a new dress, as beautiful here as I have ever seen it any where, and the more grateful that the winter has been so prolonged. In November, the hedges, fruit, shade, and forest trees, all seemed to me dwarfish, and altogether of indifferent development. But now they have been through the hands of the *Forest master*, and display a neatness and prettiness of appearance that enables them to approximate their *natural* brethren of America. Apple trees have been engrafted anew, bowers and ornamental shrubs trimmed and trained, and these with the groves in bloom and leaf, make Giessen, to one at all disposed to a generous consideration of good qualities in objects about, a very pleasant place of residence. One feature of the landscapes in the vicinity, at first impressed me unpleasantly. It was the abrupt cutting at a height of from twenty to forty feet, and close trimmings of the trees along walks, and particularly throughout the valley of the Lahn and its tributaries. I was none the less gratified that no object seemed apparent in what seems to me, this strange taste of the Germans. At length, a pupil of the Forest Instruction Department of the University, explained it fully. The close trimming in the spring supplies from the willows, the basket manufacturers;—of the larger and harder woods, materials for controlling the channels of the streams, by filling up the elbows, of making partial dams, and a variety of other uses; and the trunks becoming exceedingly hard from the abundance of knots and curvatures in the grains, furnish a valuable kind of timber

In walks about town and in the adjacent country, numerous mills are met with, all upon the same plan, for grinding wheat, rye, &c. They are scarcely more complicated than the pestle and mortars of the ancients—comparatively speaking. A building in Marburg, about seventy feet long and one story high, contains seven of the entire suites of apparatus. Each stone has its separate wheel, and is of about two thirds the diameter of those used in Rochester, and in the northern states generally. The bolt is a little trough, about four feet long, six inches wide, and three deep, with a linen sieve across the bottom. It is subjected to a lengthwise, vibratory motion, and is inclined so as to conduct the pulverized grain pretty rapidly from one extreme to the other. This and the whole hopper, stone and all, occupy scarcely more than twelve feet cube. The best flour is ground three or four times; of this the white bread is made in little biscuits, while the loaves in use as the staple by every body, are dark brown and contain rye.

Compare this with the sources of bread in the Genesee valley! Here with one stone, a man may grind, perhaps, ten bushels in a day—and with fifty stones, a corresponding proportion would be ground. I remember having read that in the season of 1841, something like 2500 barrels, daily, were ground and packed in the city of Rochester alone. The statement of this index of the perfection of our machinery for flour making, does not fail to bring an exclamation in Giessen.

The lectures are all in progress. Liebig's course is attended by more than a hundred students—some of whom, however, are members of the medical class. You have doubtless already learned that he is applying science to the manufacture of manures for England. I send you herewith, a letter published not long since in England, and of which, as there is a copy right reserved, you may not receive another copy. If you can find room for it in the Cultivator, I wish it might have a place for your readers. It certainly presents in the clearest light—in the most comprehensible and convincing form, the advantage which will result from the application of science to agriculture.

Truly yours, E. N. Horsford.

MR. MITCHELL'S LETTERS—No. VIII.

The Moorlands of Scotland—Their Cultivation and Products.

Inverness, North of Scotland, June 16, 1845.

Luther Tucker, Esq.—My last contained notes through the bog districts of Ireland; the present dates from the capital of a still wilder country. Nothing can exceed the sterility and impracticable nature of much of the Scotch moorland. The soil is meagre, rests upon beds of coarse gravel, and is covered with heather, affording nourishment to a few sheep and black cattle, not much larger than the sheep of England, and to the multitudes of grouse which draw southern shooters by thousands in the months of August and September. These moors are measured, not by acres but miles, and lie variously from 1,000 to 4,000 feet above the sea. Habitations are seen only at great intervals of distance, and consist either of a shooting lodge, keeper's cottage, or shepherd's hut. The roads are few, and except in the shooting season, commencing with the 12th of August, are travelled only by the mail coaches.

I speak now more particularly of the great inland districts both north and south of the Caledonian canal. Agricultural resources are necessarily exceedingly limited. The annual rental value of the moorlands proper for grazing, would not exceed two cents an acre. The shooting privileges and trout and salmon fishing in the streams that are scattered over them, would add perhaps eight or ten cents to the yearly value; depending, however, much upon the strictness of preservation and convenience of access. It is not uncommon to pay some $2,000 to $3,000 for the privilege of shooting over a moor a single season. Estates are of enormous extent. Two days since I rode for upwards of fifty miles through the Athol property alone. Timber is chiefly pine and larch—only to be met with in plantations, or occasionally remnants of native growth, scattered through the glens and upon the sides of the mountains. Nor do the plantations make an inconsiderable figure in the landscape of this wilderness, since the number of larches planted by the late Duke of Athol exceeded twenty-seven millions. Birch grows extensively in the valleys, but reaches a size only sufficient for fencing and fuel. Thirty to forty miles of distance may nevertheless be gone over in the moor districts without sight of a tree.

Grazing prevails to such an extent in the Highlands as to deprive the majority of the population of any steady employment, and extreme poverty is the natural consequence. The huts of the poorer classes are even more wretched than any I met with in Ireland. The walls are of stone and mud, the roof of turf, and the floor the bare ground; sometimes a rude chimney is constructed, but oftener the smoke is allowed to escape at the door. Their food, oat meal and potatoes. They manage to put in a small patch of oats about their cottages, which the younger children watch against the depredations of the roving cattle; and in the valleys the farmers allow those who please to plant with potatoes as much land as they will supply with manure. Oats and potatoes, with some wheat, are principally grown in the better agricultural districts of the north. The chief agricultural exports are sheep, wool and black cattle. The sheep are mostly the black faced, of very smal size, and light and coarse fleeces. They are extremely hardy, and as nimble as goats; the mutton is not fat, but very sweet; and it commands an extra price in the London market. This breed of sheep is frequently crossed in the more fertile districts with the Cheviot sheep of the south, and in some the Cheviots are wholly preserved, or crossed with still larger sheep of England—the finer wool and larger carcases of the latter ensuring larger profits. An annual fair is held in Inverness in July, at which it is estimated 800,000 pounds of wool, and 100,000 sheep change owners. The black cattle are small, but the beef is highly esteemed for its delicate flavor, and maintains a good price even when it comes in competition with the famous breeds of the south.

Such dairies as are to be found, favor the Ayrshire blood. The butter is good—worked wholly with beach paddles, and neatly turned into forms of acorns and strawberries for the table. Much poor cheese is made in parts of the Highlands, which would not do discredit to some of our white cheese makers at home, but the best is either from England or Ayrshire.

The implements of agriculture are not of so improved a character as in the south. Neither draining or drilling is general. The crops are not clean, and from the window where I sit, I can distinguish the oat fields over some miles of territory by the yellow blossoms of the mustard.

Great numbers of Highland ponies are annually sent to England. They are very hardy and strong, and are sold from £3 to £6 a head. Guano is used extensively near the seaport towns, and sea manure along the coasts. Hedges are not numerous, nor are divisions of any kind, herds of cattle being generally attended, even in the immediate neighborhood, by a watcher. Farmers are just now busy with the sowing of turneps, and the cleaning and earthing of their potatoe crop. These crops are both planted in drills. The potatoes are put three or four inches apart, directly upon the manure, and covered with the plow—afterward rolled. When an inch out of ground the crop is thoroughly hoed by hand; it is next gone through with a scarifier, which thoroughly loosens the soil between the rows; this is followed by the plow throwing a furrow against the potatoes from either side. One thing is highly noticeable, both of this and of every drilled crop I have yet seen in Great Britain—this is the extreme regularity and evenness of the rows. A furrow of a hundred rods in length will not vary a foot from a straight line. This is effected not by measuring and timing, but simply by the expertness of the plowman and the perfect training of the horses. It is unnecessary to say how much this adds to the appearance, as well as to the facility with which a crop is cultivated and harvested.

Here, as in every part of Scotland I have visited, the native gardeners maintain their celebrity; vegetables being abundant and good. Farm cottages of the better class are built of stone, and the roofs slated. Heath is used for thatch, as also turfs cut into scollops. The season had been up to the 10th instant exceedingly cold. The weather has now changed to the warmth of midsummer and vegetation is most rapid. The oat and wheat crop are not, however, more forward than usually at this season in New England; the grass is, I fancy, in advance of yours. Soiling is praticed to a considerable extent on some farms in the neighborhood of the towns, and fresh cut grass is extensively fed, with oats, to working horses. Clover and the Italian rye are the prevailing grasses cultivated.

Honey is abundant in the Highlands—made from the blossom of the heather; it is not agreeable to my taste, however its mildness may suit others. The hive is after the oldest fashion, and most rural, being formed by a coil of twisted straw.

The clothing of the farm laborers is home-made, mostly a blue mixture; and in nearly every cottage you can hear the sound of the loom.

The observations above apply exclusively to the northern districts of Scotland; those of the south being of as different character as possible; and offering the finest examples of British husbandry which has yet fallen under my notice. They will be the subject of some future communication.

You will notice with some interest reports of the recent debate in parliament upon the subject of the corn laws; offering additional ground to suppose that the free importation of grain will be the ultimate and not very distant result of the increasing agitation of the subject.

Truly yours, D. G. Mitchell.

Domestic Correspondence.

CANADA THISTLES.

I was glad to see in a late number of the Cultivator the remarks on this weed; and more particularly the caution against its introduction into places where it is now unknown; as in this case an ounce of prevention is worth some forty or fifty tons of cure, at least. But that the inexperienced may know something more of the evil they should shun, I wish here to repeat in substance a statement I have seen somewhere of the loss occasioned by a small patch of Canada thistles, which is perhaps about right for such as are *small*—large ones needing a different estimate, especially such an one as I once saw, which *covered an entire large farm*, having spread to this extent during a few years neglect.

Loss from a Small Patch.

Loss in lot No. 1, wheat smothered by their growth, ...	$12 00
" " No. 2, wheat checked in growth, and injured in quality by green thistles bound up with it, ...	10 00
" by having ten hands hindered an hour each day, for five days, picking thistles from their fingers, ...	4 00
" by a load of wheat upset before a long shower, by being badly built, the loader being afraid to touch the sheaves,.......	3 00
" by tearing leather strap and breaking three cogs from horse power threshing machine, in attempting to force a large bundle of tough thistles, unbound, through the machine, ...	5 00
" of time to 11 hands, and by collecting them again, three days after the above accident, when the machine was mended, ...	3 00
Total, ...	$37 00

The profits of a farm covered with such patches, intermixed with corn, oats, barley, grass, &c., may be reckoned the same way.

A city may be most *easily* preserved from conflagration by allowing no fire to spread; by extinguishing instantly all that appears. The same principle applies to the spread of Canada thistles. A miller refused to employ a skilful embanker to close a muskrat hole in his dam because he asked a dollar—a sum he would gladly have paid the next day, when the hole had washed larger, but not three dollars, the amount then charged; but the third day he was *compelled* to pay fifty dollars, as the torrent was fast sweeping away his dam. The spread of Canada thistles *must* be stopped, if we continue farming; why not do it then when it may be *easily* done?

I have had some experience in destroying them, and more observation; and I know of no way which will at all compare with thorough and repeated plowing.

The first plowing must be left till about the time that the thistles appear in flower, or when they have become considerably exhausted by growth, when they must be *well* and *deeply* turned under, mowing the thistles previously if necessary to the success of the work. Then they must be again turned under at least once a month till mid-autumn, or thereabouts, when, if the work has been WELL DONE, *the patch will be killed forever*, or till the ground is again seeded with thistles from elsewhere. Wheat may be sown on the ground the same autumn. A statement of a few experiments may place this in a clearer light:

Daniel Wilson, of Covington, Genesee county, N. Y., had a patch of Canada thistles so dense that the roots formed a complete mat. "He plowed the ground at regular intervals of four weeks for four successive times, when after the fourth plowing there was not a thistle to be seen, and the ground was in fine tilth for sowing wheat, loose and nice enough for any garden vegetables; and now, July, 1833, there is a most luxuriant crop of wheat on the old thistle bed, and *not a solitary thistle has been found*, although it has been carefully examined by those interested in testing its efficacy."

"I commenced about the first of June," said the late V. Yeomans, of Walworth, Wayne county, N. Y., "and plowed them about once a month, and harrowed them as often, till about the first of October. The result is, *their entire destruction*, except a few places where the plowing could not be well done."

Augustus D. Ayers, of Romulus, Seneca county, N. Y., says, "The field contained six acres, principally occupied with Canada thistles, on which a Florida war had been waged for twenty-five years or more, with little prospect of success or termination. In the latter part of May I broke it up, plowed the ground deep four times, and harrowed it in the heat of summer. The result was, it *killed the Canada thistles*, and my ground is in good condition for after cropping."

An experiment of this kind I also tried myself on about four acres of Canada thistles, by causing the ground to be plowed thoroughly four times during the season. The occupant, who bought the land that year, informed me that none appeared the following season.

The importance of doing the work well, and of cutting off and deeply burying every plant, must be obvious; and the superiority of throwing them so far under the surface as to require a month for them to creep out, over a mere skimming of the surface with the hoe, or cutting them off above the surface with the scythe, must be also evident. A correspondent of the Genesee Farmer (vol. 4, p. 324,) killed a patch by hoeing them to the surface *twice a week;* but he worked from spring till nearly the first of eighth month (Aug.) before each successive three days' crop began to diminish; after which, by closely following their retreat, they rapidly disappeared. But they had a much better chance to *breathe* in this case, being a part of the time above ground, than when kept wholly under by a deep plowing as soon as they made their appearance above the surface. Such treatment would prevent the necessity of taking up and *burning* "every plant and vestige of the root," as Dr. Smith recommends in the article above alluded to, which in large patches, where the roots often run several feet below the surface, would be wholly impracticable; or of pulling up every shoot as soon as it appears, *"for seven or eight successive years,"* as Loudon recommended,—the phrase **"as soon as it appears,"** meaning probably from one week to one month, or more; for it is impossible for *any* plant to live *wholly* beneath the surface for half that term of years.

J. J. T.

DISEASE OF THE POTATOE.

Mr. Tucker—The subject of the disease which last year prevailed so universally among potatoes, is one which has very naturally and properly called out the the inquiries and conjectures of many investigators, and as yet no particular cause for its existence seems to have been concluded upon by the mass of cultivators. Some suppose that the membranes of the leaf are destroyed by an insect, and that the work of decay originates in this cause.

But of this theory for it is theory and nothing more, we are prepared to say, that we saw, (and so did every observing farmer, we must think,) hosts of small, black flies infesting potatoe fields, in years long before we ever heard of the disease in potatoes, and the usual consequence was, that the membrane of the leaf was eaten out, as somebody, in some particular instance, saw it last fall. Then, again, in proof of the innocence of the poor insect, (who is certainly driven to rather hard fare, even for a mischievous fellow,) in this matter, we must say that we saw with our own eyes, and no mistake about it, leaves of potatoes after they had become dry by the disease, as perfect in all their parts as any potatoe leaves we ever saw. Others are of opinion that the cause of the disease is owing to the "influence of a worm in the root," but we have seen no statement of such animals being found in such locations until the disease had made some progress, so there must be some doubt in the case as to whether the worm does the mischief, or is attracted by the consequences of its having been done to feast on the corruption that ensues.

Last fall, we ventured an opinion on the cause of the disease which as yet we have found no cause to relinquish, but on the contrary, from the facts we have collected and observations we have made, we have become more tenacious of its correctness. It was simply this, that from some cause which we did not then and cannot now define to our own satisfaction, the potatoe vine was attacked with a rust similar to that we frequently see on the straw of rye and wheat. That in the case of the potatoe, it first showed itself in a very small blotch on the side of the stalk, which continued to spread until it had gone round and through the stalk, when the latter, at the particular point of disease became dry and hard as though it had reached its maturity. The death of the top of the stalk of course soon follows, but the lower part remains green for a while. The conjecture, (it was mere conjecture) we threw out, was this, whether the sap which was now stopped by the dryness of the stalk in its usual channel of circulation, and, of course, prevented from passing into the leaf, its natural laboratory for preparation to return to the tuber and fulfil its accustomed service in giving it nourishment, did not necessarily return prematurely, and either from excess of quantity, or by bringing back some quality which had better been given to the winds, induce the disease in the tubers? Our own potatoes were too far gone to experiment much upon, when we, surprised with the novelty of the action, hit upon a single plan to adopt. It appeared to us however, as soon as we saw *how* the mischief was progressing, that mowing the tops was the best and perhaps only efficient method to pursue. A neighbor, whose crop was smitten long after our own, tried this experiment, by mowing about half a field, as soon as the tops exhibited symptoms of the disorder, and the result was satisfactory and cheering. Where the tops were so mown, no appearance of the rot was ever discovered, and the potatoes gave all the evidence of maturity which the circumstances of the case could possibly admit of, while the other part of the field suffered as much from the rot as any in the vicinity. Here, then, is one instance in favor of our theory.

Other experiments were tried, of which we shall cite but one or two. In one case, a farmer dug a very few hills when the vines first showed symptoms of disease, and carefully buried them and let them remain until the usual time of digging, when they were taken out all sound, while the most of his crop had suffered essentially. There can be no doubt we think, that when potatoes are dug so early as the rot came last year, but that they must be put in small bodies and kept cool and excluded from the atmosphere. Their tendency to heat, and thus become heavy and insipid, warrants us in that conclusion, and so we infer that the letting them remain in hills with the tops taken off, until the usual time of digging is a much cheaper and better way than to dig and put cellars, or on floors in piles.

Another course of proceeding which has come under our observation, was adopted by some Irishmen, who had known this enemy to their favorite esculent "in the old country," and which it may not be useless to mention. When they saw the crop smitten, they dug it immediately, and piled the potatoes on the surface of the ground, taking care to guard them from sunshine until the job was completed, when they covered the pile entirely with clay. The result was probably as they had known it to be aforetime. Their crop was saved and their potatoes of *good* quality. The clay, undoubtedly acted as a two fold agent, kept them cool and excluded the atmosphere and storms.

We have only to say, in conclusion, that if any one can confute any point we have advanced, we shall be happy to have them do it. Truth and light are what we are looking after in this matter, and if we have advanced an error, the public good requires that it should be set right. And especially does the agricultural interest of our country require that this pestilence which made such rapid strides in its advancement the last year, should meet with hot pursuit by every philanthropist, until its progress is stayed if not effectually stopped.

Yours truly, W. Bacon.

P. S. There have been many experiments in planting potatoes tried in this region, this spring, with reference to preventing the disease. If any thing of importance results from them, I shall give due notice.

Mount Osceola, Mass., June 22th, '45.

THE SUGAR CANE.

L. Tucker, Esq.—In case you do not possess a better treatise on the subject of sugar cane, you are at liberty to use this as it may interest Mr. McDonald, noticed in the May number of the Cultivator, page 151.

Sugar cane designed for the plants are cut before frost; usually early in Oct., and either planted immediately or put down in matelas or beds from one to two feet thick, like shingling, with the tops uppermost in order to protect the stalks and eyes from freezing. Cane may be planted in the autumn or any time between September and March. The usual time is after rolling, or sugar making, in January and February. When planted the leaves are taken off.

The ground is well plowed, and if rough, well harrowed; after which, it is laid off in furrows with a plow, from four to six feet apart, as scarcely any two plants are alike and the cane is laid lengthwise in the furrows. A single stalk is by some deemed sufficient. I would prefer it double, with all the eyes sound. Long cane is better cut in two or three pieces. It is then covered with the hoe or plow from one to three inches in depth. Light covering would be preferable were there no danger from freezing.

After the winter is passed the cane is bared on each side with a plow, throwing the furrow from the cane; and the cane is now scraped with the hoe; taking all the surplus earth from over the cane—leaving the cane near the surface, in order to promote early vegetation.

It is now kept clean from grass and weeds until it has suckered or stooled sufficiently thick to produce a full stand; soon after this, say last of May or in June, it should be hilled from three to four inches and laid by and unmolested till ready to harvest or cut for the mill.

Allow me here to say, the ground, when planted, should be so thoroughly ditched and cross furrowed, as not to allow any water to stand on the surface of the field or ground. Three cart loads of cane may plant an acre single, but we are not governed by loads. Cane ripens or matures usually from three to six or sometimes or seven feet high, commencing from the bottom, say in August or September, and ripens about a joint or six inches a week till injured by a freeze. The frost does not injure it.

It is first cut or topped as high as the leaves are dry: say under the green leaf, and the top is thrown upon the ground as useless, or is often winrowed or put up for plants where plants are scarce. The leaves are stripped from the cane already topped, and the cane is then cut with a cane knife close to the ground, put in carts and carried to the mills. The cane is then usually placed upon a carrier, made of two endless chains, connected to each other by wooden lats, forming a band of from two to four feet in width, forming an inclined plane; carrying the cane up to the mill, and dropping it in the hopper, just as fast as the mill, which is somewhat similar to a rolling mill, rolls the cane, and thereby expresses the juice, which runs into receivers; and the sooner it is put in the kettles, boiled, skimmed, and concentrated to syrup or the striking point, the better.

As it is presumed no one will undertake to make cane sugar without first seeing the operation or procuring the assistance of one who is experienced, I deem any further information unnecessary.

In conclusion, permit me to say, scarcely any two think alike on the subject.

Respectfully yours, S. TILLOTSON.

New River, La., May 23, 1845.

NOTES OF TRAVEL IN THE SOUTHWEST—No. V.

BY SOLON ROBINSON.

On the 4th Feb. Mr. R. crossed the Mississippi, at the "Iron Banks," marked on the maps as Columbus, Kentucky, built between the river and a hill some 200 feet high, composed of clay, lead and iron stone, and up which the road leads to an entire change of soil and description of country from that on the opposite side of the river. Here the face of the country is quite broken; soil rich clay; timber, beach, sugar, poplar, oaks, hickory, dog-wood, &c.—all of which indicate a good strong soil, *and good* grass land; yet it is not here, notwithstanding this is the blue grass state.

But here is not to be found the same kind of population that is to be found in the blue grass and stock raising part of Ky. The crops here are corn enough to eat and feed through the winter, and tobacco enough to sell to buy the few necessaries required. The farms are small and houses generally poor, and here as in Missouri, always something out of order—stables without doors—farms without gates—and whole neighborhoods without a good head of cattle, horses, hogs or sheep. There is in this part of Ky., an abundance of most excellent land, tolerably heavy timbered, that can be had for about $2 an acre, out of which excellent farms could be made.

On the 5th, Mr. R. passed into Tennessee—the land similar to that described yesterday. The best buildings are the towering tobacco houses, in which the crop is hung up, as soon as it is cut and wilted, where it hangs to dry, and is then "fired."

The great pest in the cultivation of this crop, are the worms that prey upon the leaves, and unless destroyed, will destroy the crop. The eggs are deposited by a miller almost as large as the humming bird, and very much resembling it in movements, upon the upper and under side of the tobacco leaves, from the time it is about half grown till it matures. These hatch and grow "powerful quick," and eat "powerfully," and have all to be picked off by hand; though some have trained turkeys to perform a part of the work. In cutting up the crop, the laborer seizes the stalk with one hand, and splits the stalk nearly to the ground with a stout butcher knife, then cuts it off and throws it in piles to wilt, which it will do in a few hours, when it is hauled to the house and hung across sticks in the upper tier and so down till the beams are full; when it is sufficiently dry, large fires are built on the ground so as to give as much heat as possible with little blaze or smoke. This is a dangerous operation and accidents often happen. After it is thus cured, it hangs till a wet spell moistens it so that it can be handled to strip, or if the room is wanted, it is taken down and bulked away to make room for the next cutting. The crop avarages about 800 lbs. to the acre, worth 2¼ to 3c., and 2 to 3 acres to a hand. As a matter of course when tobacco is the general crop, the land is rich; yet generally speaking the people do not appear so in this part of the country.

Although here is nothing but corn and fodder, yet stock looks better than in Missouri. Pretty good oxen with miserable yokes and bows, are worked upon more miserable carts. In fact all the farming implements are of the roughest kind—even brooms, that indispensible article with a yankee housekeeper, are not to be found, unless you are pleased to denominate that miserable little switch of broom straw with which you see a negro poking about the floor as though looking for dropped pins rather than sweeping, by the name of broom. Perhaps you may think the floors are all carpeted—on the contrary I never saw the first one of these household comforts.

This district is a natural "eccalobion" of swine, and needs no artificial hog hatching machine to encourage the natural increase of pigs. With little feeding and less care, particularly when "mast" is plenty, they live, move have their being, independent of their owner, but who nevertheless is dependent on them for his living.

The western district of Tennessee contains an abundance of most excellent land, yet covered with the native growth of forest trees, mostly oak, except upon creek bottom land, and occasionally upon small tracts of upland; where all the kinds of timber usually found upon the richest alluvial land of the west, grow in the greatest luxuriance; requiring a great deal of hard toil to prepare it for culture, but affording an assurance to the husbandman that when once cleared, he will have a soil that no judicious system of culture can ever wear out. But I am sorry to say that that system however, is not pursued generally, as can be seen in the fact after a few years of "skinning," it becomes too poor to produce a good crop of tobacco, and therefore the tobacco planter is annually making additions of new land instead of trying to keep up the fertility of that which was first cleared. Tobacco is a very ameliorating crop, and leaves the land in fine condition, particularly for wheat; which crop however, is but little cultivated, for two reasons—first, the tobacco crop in "wormy time," requires every pair of hands on the plantation that is able to crush a worm, at the very time too when the wheat needs an equal amount of care to save it from total destruction by the weevil, which often destroys the crop even after it has been thrashed and cleaned and stored away. And secondly, the tobacco is a more certain crop in growth and sale for cash, which is the grand desideratum, and which will be sure to prevent the cultivator from bestowing any care towards the improvement or preservation of his soil in a country where new land can be purchased so cheap as it can here, when that first cleared will no longer produce his favorite crop.

On the 7th of Feb., between Dresden and Jackson, Tenn., I began to leave the tobacco and enter among the cotton plantations, the soil becoming more sandy and light, though not showing much more appearance of wealth until within the precincts of the latter town, which is beautifully situated upon a plain, and contains some 1,500 inhabitants, and many handsome mansions; a very fine court house and a college and a flourishing female school. Leaving this place a short distance from the town, we cross the "Forked Deer Creek," over a toll bridge and high clay turnpike over a two mile wide bottom, subject to overflows, and covered with beech timber, which if cleared off and set with grass, I vento say would prove more profitable land than some of the upland. I notice generally that the bottoms are the last to be cleared, but time will prove their value. Out of this stream, the cotton from this region is sent in flat boats to the Mississippi. Between this town and Lagrange, the last town in Tenn., the land grows more and more sandy, and when badly cultivated, is very liable to wash into gullies; some of which, particularly by the road side, becomes perfectly unmanageable. Passed fine cotton plantations, and some very good and some I think very poor land, covered with small black oak timber, and crossed the Hatchee river, which in high water is navigable for steamboats, and like nearly all the streams in this country, having a wide overflowable bottom. We are now fairly entered upon the cotton region, that being the all engrossing crop of this part of Tennessee, and of which I expect hereafter to have much to see and say as I proceed south.

This, 9th of Feb., four miles south of Lagrange, upon a very warm sunny day, I crossed the Mississippi line. The grass to-day looks green and spring like, and plum trees are leaving, and peach buds are just ready to burst into blossom. Much land shows that there has been a good deal of a kind of work done that people really seem to be in sober earnest when they call it "plowing." The weather is more like May than February. Birds and frogs making meloby--grass growing--flowers blooming—gardens making, etc.

From here to Holly Springs, the county seat of Marshall co., and a flourishing fine town, the land grows hilly and sandy, and bottom lands more swampy. The upland timber mostly black oak, interspersed with white oak and hickory, and much of it uncultivated. Some fine farms—horses good—cattle poor and sheep poorer. In the course of the day after passing Holly Springs, I met with the first stone that I have seen since leaving the mountains of Missouri. It is a kind of redish sand and iron stone, and has the appearance of being of volcanic origin. Passed Oxford, the county seat of Lafayette co., and crossed the Tallahatchie river, (I like these Indian names,) which is also another high water steamboat stream, with wide bottom uncultivated beech land, upon which grass instead of trees ought to be growing. Saw mills through all this region being scarce, and lumber from $1.50 to $2.50 per hundred, nearly all the houses are built of logs. Near the south line of Lafayette, crossed the "Yokenatuffa," (a very pretty name when you get used to it,) across a beech bottom, with a liberal sprinkle of the beautiful holly.

On the 12th day of Feb., in Yallabusha county, I saw peach and plum trees in full bloom, and garden peas and potatoes up, and oats sowing. And here in one field I saw 20 one horse, or one mule plows, skinning the surface of this light, loose, fine, sandy soil, and sending it on a voyage of discovery to the gulf of Mexico. And as in this country I am going to initiate my readers into the arcana of a cotton plantation, I will here part company with them, under the assurance that the country we are yet to ramble over will afford an abundance of incidents far more interesting than that which which we have hitherto visited; and I humbly hope that I may be able so to collect and arrange those incidents that you will be pleased to continue to give a monthly welcome to the familiar face of your old friend,

Solon Robinson.

WATER FOR STOCK—CEMENT PIPES.

Mr. Tucker—Few articles interested us more, in your last volume, than the editorial of the March number, upon the importance of water for stock, and the most efficacious and economical means of procuring it. It is surprising to see how many farmers leave their stock to suffer, and how many inconveniences they submit to, year after year, in this essential matter. It is worth any farmer's while to incur the expense of a pretty deep well, or several cisterns, rather than drag along, year after year, as many do, with stinted rations, because it is so far to bring it. Cisterns are preferable, and generally furnish an adequate supply, if buildings for shelter bear any proportion to the stock kept.

But when thus obtained, the labor of raising it is considerable, and is a serious objection with many. In some cases a daily pumping by the hour would be required. This might generally be avoided by constructing the cistern in a knoll or bank, above the level of some part of the yard, to which it could be conducted in pipes, and let off at will, by a turn of the finger, through a stop-cock or fasset. In the first instance this would be less expensive than a pump, save the daily labor of working it, be less liable to get out of repair, or freeze up, and in every way to be depended on in all weathers and seasons. Where such cisterns are not practicable, they might be placed within the building and made secure against frost at a small expense.

But after all, where the farmer has a stream or spring within a hundred rods, he had better bring it to his yard than rely upon well or cistern. He will then have healthy, living water, better than that from any cistern or well tainted with filtrations from the yard above. Where the supply lies above the yard level there is no difficulty; and when it is below, either wind or water will raise it by means of forcing pumps, at an expense of less than $20, in either case. When wind is used, a reservoir will be necessary to hold a supply during a "calm." Your readers can get a good idea of either method by consulting the Cultivator, vol. 7, pages 47 and 174.

Heretofore the pipes or conductors have been very expensive, and when some farmers have almost made up their minds to take the matter in hand, and free themselves from their inconveniences, visions of logs and lead rise up before their eyes, and they are deterred by the expense attendant upon either of these modes, from doing anything. At least, so it was with us. We had a running stream within a short distance; but your plan of a cheap, home made, cement pipe was not known in this region till brought to notice by the Cultivator. But then there was that (to us) foreign substance—water-lime—to be obtained from the city, at an expense of about 37½ cents per bushel, including transportation and the trouble of procuring it.

Notwithstanding, the *plan* appeared so simple and cheap, and as the whole labor could be performed by ourselves, so I determined to try the experiment with our own lime. I was led to this by a statement that water-lime owed its hardening property to magnesia, of which our lime-stone contained about the same—forty per cent—as the Ulster county lime. This has also been ascribed to silica and oxide of iron. I have since purchased and read Johnston's Chemistry, and the same thing is said there of magnesia, page 367; and yet in a note, page 365, three different water limes are mentioned as having no magnesia at all, but a large per cent of alumina.

In order to test the question in my case, I took four parcels of lime, duly numbered and marked, placed them under water, and in a few weeks found the parcel mixed with an equal quantity of sand, had hardened so as to satisfy me of its fitness for my purpose. The other parcels of mortar had, some more and others less proportion of sand. I accordingly used it, half and half of each, sifted, to get out unslacked lumps of lime, pebbles, &c., and laid it down immediately. The lime was just burnt, and no doubt would have hardened sooner if ground, as I have since ascertained they would have been willing to do at the plaster-mill. I would advise this whenever farmers undertake to use their own lime for cement, although slacking with water may answer, as it did with me.

Upon examining the pipe this spring, after having a full run of water through it all winter, I found the inside as hard as stone, and not washed or worn in the least, as I feared it would be in its new state. I am satisfied this kind of pipe is just the thing for farmers—cheap and durable—conducting the water without taint or defilement from rotten wood or metallic poison, and needing no repairs when properly taken care of. An inch, or an inch and a half bore is large enough for any ordinary farm-house or yard. I used a rod about an inch and a quarter in size, and five feet long. I thought the short rod you prescribe much too tedious; and I also prefer a ball to the tapered stick you mention, to draw after the rod, in order to smooth and equalize the tube. The long rod should be tapered at the end, a hole bored an inch therefrom, through which to fasten the ball with a strong rope-cord five feet long. Two boards, five feet long and six inches broad, with fastenings, constitute the whole apparatus.

In constructing the work it is best to have it in about four divisions, and the same number of apparatus; begin at the lower end, lay a section on each of the divisions, and then the first will be hard enough to draw the rod; thus the work can proceed without delay for it to harden.

Care must be taken that the rods be not left too long. When bringing the divisions together, a short rod must be used and the joints closed up with a length or two of bricks. When any stoppages afterwards occur, and they will sometimes happen, by taking off the top brick in these joints it can be ascertained in which direction the obstruction lies. Then, by boring with a small gimblet, or some similar tool, the exact position can be ascertained. When the pipe is opened, and it is removed, a thin wooden pipe can be inserted and plastered over with a thick coat of mortar, and the pipe be as sound as before. These stoppages are extremely vexatious, and the head of the pipe should be well guarded with a tight box, and punched tin or sheet iron on three sides. Sometimes small tadpoles or frogs, and other water vermin, get within the tube, where they may grow larger, till they cannot get out, and are a moving obstruction from place to place, which it is exceedingly difficult to remove, without taking up the whole pipe, or one of the divisions at least. The holes in tin or sheet iron should be of the smallest practicable size, and very numerous, that the entrance of these intruders may be prevented.

In digging the trench endeavor to have no part lower than the point where it runs out, even if it must be a little farther distance round. This is necessary in order to have a straight, strong current right through to carry out any sediment in the water, lest it settle in the lowest part of the tube and prove a stoppage. I erred in this matter, having come across a hollow to save distance. Where this cannot be avoided there should be a joint or opening from which the sediment could be removed from time to time as it collects—say once a year.

A short story will tell the tale of expense. With a bushel of lime to every rod, a like quantity of sand, and a man to mix and carry mortar, I am satisfied I can lay more than twenty rods per day. The bill is as follows:

20 bushels of lime and sand,...	$3 00
1 hand to tend, ...	75
Preparing apparatus and laying down pipe,................	1 25
	$5.00=25 cts. per rod.

Our mechanics here want 60 cents per rod for putting down logs, with timber, hands, board, &c., all found them—in all, probably about $1.25. I have made no account of digging the trench, for that is about the same in all cases, whether wood, lead or cement be used.

My experience has made me the warm advocate of cement pipes, and I can see no reason why any farmer should be without running water in his yards, if there is a spring or stream within a quarter of a mile. Even where water-lime must be had, the expense need not much exceed fifty cents per rod.

And now, Mr. Editor, if this statement shall induce any of the readers of the Cultivator to avail themselves of the advantages of cement pipe, I shall enjoy an extra satisfaction, over and above that experienced during the past winter, in seeing our stock so conveniently provided with this great essential to their thrift and comfort.

A. R. D.

Hackettstown, N. J. July 2d, 1845.

ERROR CORRECTED.

In the last volume of the Transactions of the State Agricultural Society, the opinion is advanced, in the essay on the Cultivation of the Apple, that all the varieties of this fruit originated from the native species in England, known by the name of *the crab*. This opinion, it is true, has the authority of the most of modern botanists to support it, and nearly all horticultural writers; but errors are often copied from one to another, without sufficient examination. Great men sometimes make great mistakes; and Professor Lindley, one of the highest botanical authorities in Europe, not only considers the apple as an improved variety of the crab, but speaks of the Green gage and other plums as having originated from the "Savage sloe," although the cultivated plum, or *Prunus domestica*, is a species totally distinct from the sloe, or *Prunus spinosa*.

Ray considered the English Crab as a distinct species from the cultivated apple. And those who regard them as only varieties, give distinctive characters more striking and permanent than many which separate species universally admitted as distinct. They are the following:—

Crab Tree. Leaves ovate, acute, villous underneath; styles bald; fruit the size of a chestnut, acerb, astringent, austere.

Apple-tree. Leaves ovate-oblong, acuminate, glabrous; styles villous; fruit more or less sweet.

Whether these characters be admitted as sufficient for separate species or not, one fact must be admitted, that although the crab has grown in England from the remotest antiquity, no variaton in it whatever has taken place; while the cultivated apple appears to have been unknown there until it was introduced by the Romans, and is well known to be subject to interminable changes.

It will be borne in mind that the American crab is a totally distinct species from the common apple, and from the English crab.

J. J. Thomas

Macedon, 6 *mo.*, 1845.

DAIRY—QUALITY OF MILK.

In many parts of the country the dairy is such an object, and it is so desirable to have a living machine that can convert, in abundance and perfection, the food it consumes, to so useful, so profitable, and so essential an article, as milk, that the breed the most distinguished for that property must always be in great demand. But whether a particular breed should be kept entirely for that purpose, or whether it is preferable to have stock partly calculated for the butcher, and partly for the dairy, is a point well entitled to the most deliberate consideration. It is probable a breed might be reared by great attention, the males of which might be well calculated, in every respect, for the shambles; and the females of which might when young, produce abundant quantities of good rich milk, yet when they reached nine or ten years of age, might be easily and quickly fattened. This would be not only the most desirable, but the most valuable breed that could be propagated, and from an experience of fourteen years, we have found the Durham Short Horned breed as aproximating the nearest to that point; but they require as a condition, an abundance of rich, succulent food, and warm, comfortable quarters in winter.

One good cow full fed is worth more for the dairy than four ordinary half starved ones. As an illustration of the truth of the above fact, we quote the following from an English publication. "A farmer, some years since, kept *eighteen* cows upon a *common*, and was often obliged to buy butter for his family. The common was *enclosed*, (which deprived the farmer of his pasture;) and the same person supplied his family amply, with the milk and butter from *four* cows *well kept*."

An ordinary cow fed on young clover should give for the first three months after calving, from fifteen to eighteen quarts of milk per day, which will produce, if of good quality, 1¼ lbs. of butter—or nearly 9 lbs. per week. Where the number of cows is greater the average will be less, because where there is only one or two cows, a deficiency in one of them is immediately noticed; the cow is got rid of, and a better one substituted.

The excellency of a dairy cow is estimated by the quantity and the quality of her milk; and the quality of the milk is estimated by the quantity of butter that it will yield. Much depends on the quality of the food, but more on the animal. The writer has known one cow whose milk would not produce butter, and never was discovered while milked with the herd, but was soon apparent when separated and milked alone.

There is a simple instrument, called the Lactometer, used for measuring the relative qualities of cream which the milk of different cows, at the different seasons of the year, affords. It consists of a mahogany stand, supporting six glass tubes of equal length and diameter. These tubes are marked ten inches from the bottom, and graduated down in 10ths of an inch for three inches. Now, the milk from the different cows is poured into each tube, (which should be marked with the name of the cow,) and filled to the upper or ten inch line, and the number of degrees the thickness of the cream occupies in each tube, indicates the per centage. For example, if the bottom of the cream stands at 1 inch, if denotes 10 per cent. cream.

In a trial, with one of these instruments, of seven cows, six weeks after calving, in the months of March and April, we found they varied from 13 to 7½ per cent. Out of the seven cows the milk of two produced, after standing twenty-four hours in a temperature of 48 degrees, thirteen per cent cream—one twelve and another eleven per cent, in the same temperature. Another at 46 degrees 9 per cent, while two at 40 degrees stood at 8½ and 7½ per cent. The milk of four cows mixed, in a temperature of 48 degrees, marked 11 per cent. Now, it is well known by those have paid any attention to the subject, that temperature has considerable influence in raising cream, which may, in part account for the low per centage of the two last named cows; but in other trials we have found they varied from 7 to 20 per cent.

After comparing the accounts given in a variety of places and situations of the average quantity of milk which a cow gives when kept alone, and well fed as they generally are, with a full supply of food, such as they relish, to the extent of their appetites, the result is, that it greatly exceeds that of our best dairy herds, and the quantity of butter made from a given quantity of milk is also greater.

I am aware that high feeding of milch cows on grain, is not generally believed to be profitable, but I am satisfied that the cows would give milk nearly the whole year, be made good beef at the same time, and their calves would be much more valuable.

If cows are ever allowed to fall away low during winter, in vain shall we hope to obtain an abundant supply of milk by bringing them into high condition in the summer; for if a cow be lean at the time of calving, no management afterwards, will ever bring her to yield for the season anything like the quantity of milk that she would have done, had she been all the while in high condition.

C. N. Bement.

American Hotel, Albany, August, 1845.

AGRICULTURE AND MINES OF N. CAROLINA.

Having passed over the principal part of this State during the last year, I have thought perhaps it might interest some of your readers to give a sort of flying account of it. This State possesses as many natural advantages as any other in the Union. The eastern part of it has large and extensive fisheries for herring and shad. The planters who live on the coast and on the banks of the rivers, nearly all fish during the season. The offal of the fish is used by them as manure. This, together with the shell marl beds which are found in all the lower counties, enables the planters to make large crops of corn, wheat and cotton. The marl, however, is not yet much used, as its application is not well understood. The land is generally low and level, formed of a deep alluvial bottom, and strongly acid. About five feet from the surface the formation of shell deposit commences, and extends in some places to the depth of ten feet. The marl laying so near the surface, renders its application easy, which would neutralize the acid and render the soil more friable. Large tracts of land, which will now hardly bring weeds, by a good marling could be made to produce heavy crops. The county of Terrel is celebrated for its grapes and Scuppernong wine, several thousand gallons of which is made every year, but mostly for home consumption. On the bank of the Cape Fear river some attention is paid to the culture of rice; the fields are quite extensive and very handsomely laid out. The lands in the western part of the State are generally good, especially when you approach the mountains, and nearly all the counties west of Raleigh, are rich in minerals; several extensive gold mines are in active operation, and pieces of native gold have been found worth seventy dollars. In Davidson county there are some silver mines which are worked daily with from fifty to one hundred hands, yielding a good profit. Copper mines are numerous, but little or no attention is paid to them, as the process of smelting is not understood, and the transportation of the ore too expensive, with the present state of the road, to send it to market. A survey of turnpike roads was ordered by the last Legislature, and as soon as it can be completed there is little doubt but that copper mining will be found as profitable as the others. The principal crop of the mining region is cotton, but the low price and the distance from market, has caused many of the planters to turn their attention to mining, which will shortly prove very lucrative. There is great want of labor-saving machines here, both in mining and agriculture.

Your paper has a good circulation in North Carolina, and its effects are plainly to be seen. Almost every intelligent planter will *tell you*, or *show you*, something that he has learned from the Cultivator. The low price of lands, and the facility with which they could be improved offers great inducements to emigrants, and the investment of capital in this state.

Your friend, John C. Mather.

Raleigh, North Carolina, July 14th, 1845.

LETTER FROM DR. LEE.

The Dairies of Chenango County—Science of Agriculture—The Crops.

Smithville, Chenango Co., N. Y., July 15, 1845.

This county has long been noted as a good grazing district, and admirably adapted to the production of butter, cheese, beef, mutton and wool. Its broken surface and high hills seem to attract clouds loaded with vapor and rain, which, falling on the most elevated points, irrigate the whole district, and sustain numerous living springs. Pure cold water and a plenty of it, may be regarded as indispensible to the dairy business. In limestone countries, the rocks are so full of seams and cavities that most of the water which falls in rains soon finds its way so far below the surface that the roots of the cultivated grasses cannot reach it. On the side hills and in the valleys of Chenango county, the grass is remarkably green and luxuriant for this season of the year; owing, mainly, to an impervious subsoil, which keeps the water near to the surface.

I have visited a number of fine dairies. In several, the butter is contracted at 13 cents a pound. The expectations of the cheese-makers are pretty well raised, in view of a better market in England than they have realized at home. In large butter dairies the cream or milk is churned either by water power, or the weight of a large dog or sheep walking on an inclined wheel. A sheep that will mate with cows, churn 30 or 40 lbs. of butter a day, and yield its owner 5 pounds of good wool a year, is truly a valuable animal. There are such in this county, which run and jump on a tread-wheel and churn for an hour with more spirit than any boy or girl that I ever saw attempt to extract 20 lbs. of butter from a churning of milk or cream.

Pans of milk set for the cream to rise should be placed not on board shelves, but either on cool flat stones, or on *slats*, so that the cool air can circulate under the bottom of the pan as well as around its sides. A well flagged stone or brick floor, moistened with cold water, keeps down the temperature of the milk house The butter is worked over by a machine which I will not attempt to describe, that manages 40 lbs. at a batch, and does its work much easier than a ladle. Ground Turk's Island salt, or Liverpool, is preferred, and generally used. The cows are never left in the yard over night, and never denied a plenty of good fresh feed.

The shale and sand stone rocks of this region seem to yield, as they are decomposed, lime, potash, soda, magnesia, clay, silex, chlorine, sulphur, phosphorus, and the oxide of iron, enough to produce good crops of *grass*, but not enough of all these minerals, to make good crops of wheat. If we analyze the ash of timothy, which grows so luxuriantly in this section, and that of a ripe wheat plant, we shall find that the simple minerals contained in both are precisely alike in character, but very unlike in *quantity*. Thus, if 100 ounces of dry wheat, carefully burnt till all the organic matter—carbon, nitrogen, and water—are driven off, there will remain some two ounces of ash. If we test this for phosphoric acid, it will yield, according to Boussingault, 47 per cent. of that substance. To make an acre of wheat plants sufficient to yield 20 bushels of grain, the seed must have 12 lbs., and the straw 5½ lbs. of phosphoric acid. A good crop of timothy will require only one third as much phosphorous. If the bone earth, (phosphate of lime)—which enters into the organization of two acres of grass, were added to an acre that already had one third enough to give a good crop of wheat, undoubtedly such a crop could be grown. Pure carbonate or caustic lime will not answer to form bones. And as the skeletons or bones of corals and shell fish do not abound in the shale and freestone rocks, which live south, and above the limestone strata in this state, we see why the soil in the southern tier of counties will yield an abundance of such plants and seeds as require but little bone earth, while such as need, like kernels of wheat, 47 per cent of phosphoric acid to combine with their alkaline minerals, can not flourish. Lime, potash, sulphur and ammonia, are very useful, nay, indispensable to the production of wheat, as well as corn, oats, grass, and potatoes; but they are all alike valueless and unavailing if the soil contain no *phosphorous*. Those lime and shale rocks that most abound in organic remains are richest in phosphates. Hence, in selecting lime stone to be burnt for agricultural purposes, such as contains most corals and shells should be preferred. All the salts which enter the mouths of our domestic animals should be saved as they escape from their bodies. The supply of these minerals, without which we could raise no food for man or his cattle, is not inexhaustible. Give me a plenty of bones, potash, common salt, and plaster of Paris, and I will find sand, clay, iron, nitrogen, and carbon enough in any soil in the state to grow good crops of any plant adapted to the climate.

More than one half of the ash of potatoes is pure *potash*. Acting on this hint, I have found in my tour scientific farmers, who by the use of unbleached ashes, lime and plaster mixed in equal parts and placed *in the hill* with the seed, and *on the hill* as soon as have wholly escaped the pototoe rot, and harvested for several years, from 500 to 690 bushels per acre.

In transforming carbon and water into starch, not only in potatoes, but in the seeds of all cultiveted plants, *potash* plays an important part. In changing vegetable acids in unripe fruits, like green grapes, cherries, and apples, into grape, and cane sugar, the agency of this alkali is no less controlling. A sugar maple, a grape vine, an apple tree, and a potatoe plant need a soil that abounds in potash. Take from your fields 200 bushels of potatoes this fall, and you will remove from it sixty three pounds of this mineral. One bushel of ashes, by those that have used them, are said to make ten extra bushels of potatoes.

I am happy to see a growing interest every where taken, by plain, working farmers in the science of their noble profession. They fully comprehend that it takes many *things* to form a single blade of grass; and that these things must exist *somewhere*. To be able to lay one's hand on to every substance that makes grass, grain, tubers, roots, milk, butter, cheese, wool, flesh, fat, and bone; and to know how to combine these substances in the best possible manner to accomplish the great purpose of the husbandman, are advantages of the highest importance to all practical farmers. The idea of creating potatoes, bread, or meat, out of nothing, by dint of blind, hard work, will soon give place to better notions of cause and effect. The light of modern science, which reveals the unerring laws of Nature, will soon force its way into the common sense and common practice of a large majority of New-York farmers. All admit that the laws of matter, which transform crude earth, air and water, into human food and raiment, are not to be despised by any tiller of the soil. Many study these laws, and work according to their dictates.

The frost has done much injury to timothy in this quarter, having killed acres so that it will not head out, nor yield anything but a light clip of mowing. Beech, and some other forest trees, have suffered pretty severely by the same blighting agent. There is no fruit except a few currants, that I have seen in the Chenango valley. This county gained only 17 in its population from 1835 to 1840. To give a few large sheep and dairy farms, many have sold and emigrated to the new countries of the west. Not a little flour which has crossed lake Erie is consumed in this county. Some are trying to raise wheat by the use of lime. If they would add salt, plaster and ashes, their success would be more signal. Urine should be applied to furnish the soil what phosphorus the lime and ashes might lack to make 30 bushels of wheat per acre. The plaster and urine ought to be applied together, and the salt, lime and ashes. Fifteen or twenty bushels of the latter compound would suffice for an acre, and three bushels of plaster. As a general rule a poor soil needs more than one, two, or three of the elements of plants, which number fourteen. Plaster and common salt yield four of these elementary bodies, and yet they furnish the hungry crop with no potash, no silica, no iron, and no phosphorous, which must be had, to say nothing of carbon, nitrogen, alumina, and magnesia.

D. Lee.

THE PEACH A DISTINCT SPECIES.

In *George Bancroft's* Address before our State Agricultural Society at Poughkeepsie, he asked, "Whose efforts led the way in changing the rough skin of the *almond* to the luscious sweetness of the *peach?*"

It is not surprising that the orator should have acquired this idea in the course of his miscellaneous reading, when such men as the late *Thomas Andrew Knight*, President of the Horticultural Society of London, was an advocate of this doctrine,—partly in consequence of some *hybrid* which he had produced between the peach and the *almond*, and partly because the *peach* is not mentioned in the Bible. He therefore concluded that the *latter* tree was only a variety of the *former*, and comparatively of modern origin.

Since the publication of President Knight's opinion, however, it has become known that ["the peach] is found *wild* in different parts of the Himalayas"*—the only country in which it is known to be wild; and also that a distinct kind—a new species—has been found in that region. These facts appear in my view to explain the silence of the Scriptures on this subject,—the peach not having found its way into Persia, nor the Jews become acquainted with it when those books were written.

The following arguments go to prove that the peach is a distinct species:

"Its *solitary* flowers constitute one of the most striking traits of its specific character,† while those of the almond are *in pairs*. These traits are given by botanists as constant; and though the inflorescence differs not, except in *number*,—yet *number* when constant, is freely and unexceptionably admitted into specific characters in other genera. In *Mitchella*, *Linnœa*, or *Xylosteum* no part of even the generic character is more unvarying than the *geminate* position of the flowers.

"A specific difference may also be shown from the numerous and multiform *varieties* into which the peach is annually spreading, when contrasted with the more permanent character of the almond. A case nearly parallel may be found between *Ribes rubrum* (the common currant) and *Ribes grossularia* (the garden gooseberry). The former, like the almond, has not produced more than six or eight well known *varieties*;—while those of the latter, like the *varieties* of the peach, are too numerous to be recorded." *American Farmer*, vol. 13, page 323.

Another circumstance, which appears to have been strangely overlooked, is, that the *shell* of the almond splits open to discharge the nut, while the *pulp* of the peach has no determinate opening. This is not only sufficient of itself to show that they are different species, but also that they scarcely belong to the same family; and *Persica* has been proposed or adopted by Royle as the name of the new *genus*.

David Thomas.

Greatfield, Cayuga County, 7 mo. 8, 1845.

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* *Royle's* Illustrations of the Natural History of the Himaylayan Mountains, &c.

† As given by botanists; but I consider the second argument not less conclusive than the first.

"HONOR TO WHOM HONOR."

In no part of the world is the effect of individual effort so signally illustrated, and in none is the encouragement so ample to make such effort as in our own country. The rewards of industry and perseverance are sure as they are great. Improvements in the various departments of useful labor are the happy result of such a state of things. These are seen in whatever pertains to agricultural and mechanical inventions; in the numerous *institutes*, *societies*, and *clubs*, all instinct with the desire and purpose to diffuse information and to devise expedients for increasing agricultural and mechanical industry and skill and thus add to the sum of individual and national wealth. But it may sometimes happen in relation to a given enterprise, that those who originally set the ball in motion, are overlooked in the ardor and *eclat* of subsequent advancement. This train of thoughts is the result of a recent interview with my friend Alexander Walsh, Esq., of Lansingburgh, who I was happy to find recovered, in some measure, from his severe attack of illness, and still regarding with his wonted interest the great cause of mechanical and agricultural improvement. Reminiscences of the past were freely indulged, especially interesting in relation to the rural department of the AMERICAN INSTITUTE. And the sentiment which I have placed at the head of this article, claims, in its application to Mr. Walsh that facts gathered from him be communicated to the public, as they exhibit his agency in originating or in giving an impulse to the rural department of the institute that has been increasingly felt from year to year until the present day, when the interest and value of those exhibitions are universally acknowledged.

About the year 1834, it appears Mr W. sent for exhibition by the Institute to S. Fleet, Esq., N. Y., now editor of the New-York Farmer and Mechanic, quite a number of rare plants. They came to hand in season, but perhaps because not properly brought to the attention of the Society, few examined them, and they were not publicly noticed.

From a conviction that Floral and Horticultural displays would greatly add to the public interest in the Fairs of the institute, another attempt was made by Mr. W. two years after the period last mentioned, to induce the managers to prepare a commodious room for the reception of plants, &c. At that time, such a room could not be obtained in any part of Niblo's garden, where the Exhibitions are held, but as a substitute some plank were nailed up among the pillars of the saloon, as being the only place that could be procured. The rough, unsightly fixture was immediately filled with the showy products of the gardens, and the display of fruits and flowers gave great satisfaction to the visitors. This prompted the society to efforts, at a subsequent festival, for obtaining a more suitable place for this part of their exhibition—and a room, in the language of Mr. W., "seven by nine," was eventually procured up stairs—invitations were freely sent out to many florists and gardeners to aid in the contemplated display, to which they promptly and cheerfully responded in a liberal supply of flowers, fruits, and vegetables. These were all arranged with as much taste and order as circumstances allowed, and the entire exhibition was an evident advance upon the one preceding; the small room was constantly crowded and its adornments received the most marked attention. The feeling thus manifested pleased the managers of the Institute, and they determined on the returning season to devote to this part of their exhibition, a large and handsome show room.

" Parva metu primo mox sese attollit in auras."

The time of the next annual festival came, such a room was selected, and Mr. W.'s highest taste and ingenuity were put in requisition for the display of the increased varieties presented of the products of the garden—fruits, flowers and vegetables, and of the farm, grain and roots. The arrangement of the products of the garden and farm, greatly enlarged in their number, and the variety of their species, was made with taste and neatness. Then in the centre of the room you beheld a beautiful fountain of several jets and continual flow during the exhibition, surrounded by several walks around which were orange trees adorned with fruit as well as other rare plants. There were also cast iron sofas, an article procured for the occasion, and that, on this account, became extended in their use, sun dials, resplendent vases, &c.; and the piano too was there, and music with her voluptuous swell, was heard chaunting the praises of agriculture, and singing the songs of Flora. These statements are but an outline. The scene was the favorite one of the exhibition—the resort of beauty and fashion—of wealth and intelligence. The increased number of visitors thus drawn to the fair, increased the inducements to agricultural and mechanical display in the succeeding year, and since that time, the fruits of human invention and discovery, in the shape of agricultural, gardening, and mechanical instruments, and apparatus of various kinds for uses almost without number, are now every year brought forward for display, and in the hope of obtaining premiums, and these with the fruits and flowers, poured in from far and near, form a most delightful commingling of art and nature, upon which thousands gaze with high satisfaction.

The *American Institute*, with its enterprising and public spirited managers, its conversational meetings, its useful publications, and its vigilant and fostering care of every useful improvement that is made in agriculture and the mechanic arts, has assumed a prominence and acquired an influence for good, doubtless, even beyond the most sanguine expectations of its early projectors and friends. While all must desire that its course may be onward to still greater influence and honor, it is fit also that the due meed of praise and of grateful remembrance be awarded to the men who early devoted their time and energies to its concerns, and whoever shall hereafter write a full history of its course, must include among their number, and honor with a prominent place the name of ALEXANDER WALSH. UTICA.

COARSE AND FINE WOOLS.

To DR. J. P. BEEKMAN—The difference in quantity between coarse and fine wool has been exaggerated—I mean the quantity of clean wool produced from the same amount of feed. It is well known that the heavy fleeced coarse wooled sheep are much larger than the Saxons, and require feed in proportion; but the weight of fleece is not greater in proportion to the size of the carcase. The Merinoes cut a heavier fleece, but not so clean wool; the difference in amount of clean wool from sheep of the same size, and from the same amount of keep, is not so great as has been supposed. It begins to be understood by wool-growers that a fine fleece is not necessarily very light. A long staple is looked upon now by manufacturers with more favor than formerly; and it is found that a long staple is perfectly consistent with a fine fibre, and that long wool is less affected by the weather than short, as the fibres are affected only near the outer ends. A thick fleece is also better: first, because there is more of it, and second, because being less exposed to the action of the weather, it is softer.

Now these good qualities may be found in some families of the Saxons. It is not unusual for large flocks to cut from two and a half to three pounds per fleece; and thus where there are no fat sheep, or wethers over three years old, but ewes and young sheep, kept chiefly for their wool, and of course as large a number kept as consistent with the thrifty condition of the sheep.

There are many bucks from the flocks of Thomas W. Swift, of this town, which cut from five to six pounds, and more. This flock has given an impress to most of the fine wool in this place, I have a buck of the same flock, whose fleece this year weighed seven pounds fourteen ounces of well washed wool; he had been tagged also as is usual in the spring; he is three years old, a pure bred Saxon, and his wool is nice.

The Merinos are undoubtedly an excellent breed of sheep, and those families are probably to be preferred which approach the Saxons nearest in the fineness and clearness of their wool, that which wastes least in clensing. But a heavy fleece, without regard to the size of carcase, or grossness of the wool is not the sure criterion of a profitable breed. It is a maxim with farmers, "As fine as you can, but heavy." Others reverse the maxim, but say the same thing—"As heavy as you can, but fine."

I visited the "wool depot" in Kinderhook with great pleasure. I venture to say that it would be difficult to collect seventy-five thousand pounds of nicer wool without making a particular selection. The manner in which it is washed, put up, and arranged, must make it an attraction to manufacturers.

I will only add that the sale of wool in this part of Dutchess county has been, for the best quality, not full blood, fifty cents per pound.

Yours respectfully, NEWTON REED.

Amenia, Dutchess County, July, 1845.

KILLING ALDERS.

We publish with pleasure the following article, though confessedly unprepared to admit the idea of lunar influence as therein expressed. The long experience of the writer, however, (he being, if we make no mistake in dates, in his *ninety-fifth* year!) renders his remarks valuable, and justly entitled to respectful consideration. We should also be pleased to receive any facts from others touching the same subject. If the result of cutting alders on any particular day has been demonstrated to be more effectual in eradicating them than when cut at any other time, it is obviously important that it be known. Establish the certainty of this result, and speculation in regard to the *cause* is unnecessary. The difference in the durability of timber cut at different times, is undoubtedly great. Our venerable correspondent intimates that he may "prescribe" a proper mode to be pursued. We should be happy to hear from him.

MR. TUCKER—In the Cultivator for June I observe, (page 195,) A. H. Halleck, Esq., says there is a certain time to cut alders to eradicate them. He might have added in *some years*, and rendered a reason. It is no new thing, for I have known it more than eighty years, and it is well known in Berkshire. My first twenty years I lived in Hatfield—(was Col. Partridge's ninth of thirteen children.) He had a pasture, two-thirds of which was almost level with the mill-pond—not miry, but as fine a place for alders as ever was, and also excellent for grass; so that on leisure days alders were cut, piled and burnt; but grow they would, and a perpetual war was waged against them. One day, (say in 1756, his two hired men cut near an acre, and not a sprout came. My father believed that it was owing to the time they were cut, but not noticed soon enough to be remembered. He being both a civil and military officer during the war with France for Canada, i. e., from 1755 to 1761, his house was ever thronged with company, and from all parts of the country; and he did not forget to inquire for a time to kill alders in his favorite horse pasture. In about two years, a man told him that Dr. Elliott, of Guilford, Ct., had, in a small treatise on husbandry said, to cut alders in the old (or wane) of the moon, having the sign in the heart, (i. e., when passing Leo,) *they would bleed to death*; and I have found if cut at that time the sap flows freely till they are exhausted, and no more grow.

In 1771, I came to Stockbridge, (a feeble stripling,) on account of my health; and Dr. Sargent, my friend, had in his twelve acre horse-pasture five acres of alders, so thick it was difficult to find even a horse among them; and since, I have owned four lots with alders in them, and all were years ago destroyed by one cutting at the aforesaid time. So long ago as when we had but one newspaper in Berkshire, I advertised that if people would cut off their alders on a certain day, I assured their destruction. Some considered it a trick, and even called me an impostor. Some, however, knew me, and the result was that plenty of alders were cut with the desired effect.

Yours, &c., O. P.

P. S. It is lamentable that there is no more attention paid to cutting timber and fencing-stuff. It is but a little more work to make a fence of wood that will last fifty or sixty years, than one that will rot down in twelve or fifteen years. I may, perhaps, prescribe.

Stockbridge, Mass., June, 1845.

SELF-ACTING PUMP.

LUTHER TUCKER, ESQ.—It is with much pleasure that I comply with the request of a gentleman connected with your journal, (Mr. Howard) in furnishing a few statements with regard to a new self-acting pump which I have lately set in operation, and which, I think, promises to be of some value to the public; and to no portion of it more so than to agriculturists. Notwithstanding the multitude of ingenious contrivances which have hitherto been devised for obtaining water for economical and ornamental purposes, the most valuable is the old and simple plan of bringing it from some neighboring spring or water-course which flows upon a higher level than that on which the supply is needed. This method, although frequently attended with considerable expense, is almost universally adopted where it is practicable, in preference to the best constructed pumps for raising water from a lower level to a higher. The situations, however, where this plan can be adopted are not numerous, except in mountainous regions. Buildings occupied as dwellings, or otherwise, except in such places, are generally located on high ground, where water cannot be procured by an aqueduct or conduit pipe. In such places it is universally obtained from wells situated on such high ground, and in innumerable instances in the immediate vicinity of ravines and small valleys deeper than those wells. In such cases it is obvious that a syphon might be led from the bottom of a well over into the low ground, the current through which syphon would afford a mechanical power, which, if it could be economically applied, would be sufficient to raise a steady and perpetual supply of water upon the elevated level where it was wanted.

These considerations induced me some months since to consider whether a syphon might not be so constructed as to discharge water at the summit of its curve, that is, at the highest point in the pipe of which it should be constructed. The idea at first appeared somewhat absurd, as those who are acquainted with the operation of the common syphon may suppose, inasmuch as in no point of a syphon is there so strong a resistance to any force tending to divert a portion of the enclosed fluid from the pipe than at the summit of the curve. The problem, however, is solved, and the contrivance which has accomplished the solution has been tested, and proved perfectly successful. The preponderance of the column of water in the longer leg of a syphon, which I have recently laid from a well fourteen feet deep, over into a neighboring ravine twenty-two feet deep, furnishes a sufficient mechanical power to deliver about one-third of all the water which enters the pipe at the bottom of the well, at the summit of the curve, two feet above the mouth of the well. The length of the pipe which goes down into the ravine is about ten rods, more than half of which distance it is laid in ground nearly level. The shorter leg of the syphon descends perpendicularly into the well, and is constructed of lead pipe of an inch calibre. At the summit of this pipe, and connected also with the pipe which passes down the hill-side, is the apparatus for discharging the water, of such dimensions that it might be enclosed in a cubical box ten inches square. I have omitted to mention that the pipe which passes into the ravine is about three-fourths the calibre of that which descends into the well.

The amount of water discharged by the apparatus, two feet above the level of the ground at the mouth of the well, through a half-inch pipe with a free aperture, is little more than a gallon per minute. If the pipe is laid upon the ground, and its adjutage contracted by a jet tube with an aperture of one-eighth of inch in diameter, the jet rises seven feet and a half above the mouth of the well; with another jet tube of one-sixteenth of an inch in diameter, it rises thirteen feet; and with another of one-twentieth of an inch diameter of adjutage, between eighteen and nineteen feet. Indeed there is no definite limit to the altitude to which water might be raised by this method, if the size of the syphon be increased, and a sufficient supply of water obtained for working it.

It may appear incredible that a syphon can be so constructed that no definite amount of pressure shall be sufficient to restrain the escape of a portion of water from an opening in the summit of the curve, while in the ordinary syphon, a very small aperture at that point, communicating with the open air, destroys its action instantly; yet this apparatus demonstrates that it can be accomplished, by an extremely simple and compact contrivance, and on any scale that may be required, from a miniature model that will discharge its gill per minute, to an engine that will elevate a hogshead of water in the same space of time.

The apparatus is, moreover, so extremely durable, and so constant and certain in its operation, that it furnishes all the advantages of an aqueduct which brings water from an elevated level. The invention is capable of application to any good well or water course, which admits of the operation of a syphon, even though such well or water course should be a hundred rods, or more, distant from the lower level which should furnish the working power.

When applied to wells, I think it cannot fail to improve the quality of the water, as it is constantly changed and kept in motion.

Such an invention, if successful, places at the disposal of thousands of farmers, manufacturers, and gentlemen who appreciate matters of taste and luxury as highly as those of mere utility, a supply of water for use or for ornament, which it would be impossible for them to obtain in a more simple, cheap, or economical manner.

When my arrangements are completed for offering my invention to the public, I shall be happy, with your permission, to avail myself of your valuable journal, for the publication of a more minute description of this syphon, accompanied, perhaps, with a drawing. In the meantime, I shall take pleasure in showing the practical operation of the one which I have already constructed, to any of your numerous subscribers who may be sufficiently interested in the foregoing statements to call and see it.

I am, sir, most respectfully yours,

ERASTUS W. ELLSWORTH.

East Windsor Hill, Conn., July 18th, 1845.

DR. LEE'S ADDRESS IN CORTLAND.

ED. CULTIVATOR—Pursuant to notice, Doct. DANIEL LEE, the lecturer of the State Ag. Society delivered an address to the farmers of this county, in the Court house, on the 19th inst.

Rufus Boies, Esq., of Cortlandville, Pres't. of the County Ag. Society, presided, aided by the following Ex-Pres'ts of the Society—Jesse Ives, Esq., Doct. John Miller, Jedediah Barber, Esq., and William Randall, Esq. [Only two of the Vice Prest's were absent; Judge Berry, who has removed to Wisconsin, and Dan Hibbard, Esq., who was confined at home by illness.] George Chamberlain, Esq., Sec'y of the Society, acted as Secretary.

The audience, all circumstances considered, was large, and it was a capital representation of the enterprize and intelligence of our county. The address occupied probably an hour and a half, and was listened to, evidently, with profound interest and attention. I speak advisedly when I say it gave high satisfaction to *all* present.

At the close of the address, on motion of P. Barber, Esq., of Homer, it was unanimously

Resolved, That the thanks of the farmers of Cortland county be tendered to Doct. Lee, for his able, interesting, and highly instructive address.

On motion of H. S. Randall, of Cortlandville, it was unanimously

Resolved, That we highly approve of the course of the N. Y. State Ag. Society, in employing a lecturer to arouse the attention of the farmers of this state to the subject of agricultural improvement, and to communicate to them the recent important discoveries which have been made in their art, by means of Agricultural chemistry.

Doct. John Miller, of Truxton, rose and addressed the meeting for a few minutes with characteristic energy of thought and expression—congratulated the farmers of this state on the important auxiliary influence which *science* was bringing to bear on the mere physical and mechanical manipulations of husbandry, and expressed the opinion that the time had come when the state should do something to cause the rising generation of farmers to be instructed in the *science* of their art. He could not say the time had yet come when agriculture could be taught profitably in our common schools. He feared not. But it could be taught in a State Ag. School to young men, who could ultimately teach it in the common schools and elsewhere. He was in favor of such an institution, and thought it should be endowed by the state.

Mr. Randall remarked that the society of this county had already taken action on these subjects. They had unanimously voted that a State Ag. School with a pattern farm, ought to be established by the state—that agricultural books should be introduced into the common school libraries, but they had also voted that the time had not yet come to introduce agriculture as a study into the common schools. As many were present who were not members of the society, he would be glad of an expression on the first named topic from this meeting.

Mr. P. Barber, argued that we should not only pass such a resolution, but that we should take care to elect members to the legislature who would carry out our views.

Rufus Boies, Esq., the President of the Society, in a few impressive remarks, concurred in the opinions of previous speakers on this subject.

At the instance of Dr. Miller, the following resolution was drawn up, and it passed unanimously:

Resolved, That the interests of the Agricultural population of this state demand the establishment of a State Agricultural School with a pattern farm, and that our next members of the legislature be requested to urge the passage of such a law.

The meeting then adjourned. R.

MANAGEMENT OF POULTRY.

MR. TUCKER—In the present July number of your Cultivator is an article headed "Fowls in yards," stating that hens kept in small yards often acquire the *habit* of plucking out each other's feathers, till the victims are stripped sometimes almost naked—in some cases even their crops and entrails torn out, &c., &c. The article closes with the following question. "Can any one explain the cause of this morbid appetite, or tell us the best way of keeping fowls in a yard?"

I have had but little experience in keeping fowls, but am in possession of some facts, which may perhaps furnish an answer to the first part of the question; the latter part of it is pretty fully answered by yourself in the article in question. I would remark, however, that hens require a plentiful supply of fresh water; they also need shade.

A yard with a spring in it is a desideratum. Willows may be planted about the water, affording the desirable retreat; and the moist ground will retain the grasses permanently; whereas, in a dry yard, unless it be quite large, the ground will be bare as a roadway from the constant tramping and scratching.

The facts alluded to are as follows. A friend of mine engaged in the poultry trade, and at the commencement of operations, he had several hundred fowls confined in a small yard. They did very well for a period, having been regularly fed and watered; but after some weeks confinement, the habit of plucking feathers manifested itself, and his hens appeared to be losing their good condition. One morning he discovered that one of his fowls had been nearly devoured, the skeleton and some fragments remaining. He supposed some animal had gained access to the yard, set about finding the evidences of the supposed visitor, but without success. At noon of the same day, on looking into the yard, he saw another of the fowls just run down, and a group of hens around it devouring it most voraciously. The next morning another victim suffered in the same way.

He took the hint by this time, and without delay procured and kept them supplied with fresh beef, mutton, &c., and he lost no more fowls in that way.

It is well known also with what avidity hens that are confined in yards will seize and devour insects, worms, mice, &c. These facts would seem to indicate that hens are not Grahamites—that the appetite alluded to is not a morbid one, but a constitutional necessity for animal food, and that if it cannot otherwise be obtained, they prey upon each other. Yours truly, C. S.

N. Am. Phalanx, *N. J.*, *July* 12, 1845.

MR. ALLEN'S HERD-BOOK.

(CIRCULAR.)

Sir—About a year ago, at the solicitation of a number of gentlemen interested in the breeding of short horn cattle, I published a notice in several of the agricultural papers of the United States, that I would get up an American Herd-Book, provided my efforts should be seconded by a respectable portion of those engaged in that pursuit. Although slow in their responses, a considerable number of breeders have forwarded the pedigrees of their herds for insertion according to the terms of my proposal. Many, however, and among them some of the early and distinguished promoters of this branch of agricultural improvement, remain unmindful of this opportunity of thus recording their valuable stock.

A sufficient number of individuals having already contributed the pedigrees of their cattle to insure its publication, the work will proceed as soon as circumstances will permit, which will be *within three months* from this time.

I presume no arguments will be necessary with any systematic short horn breeder to convince him of the necessity and convenience of an American registry of his cattle, other than such as will suggest themselves to his own mind, and those already advanced in my two several notices to breeders already published.

In case you think proper to register your cattle in the proposed work, you will please transmit your catalogue of thorough bred animals (none other being admitted) with as little delay as possible, to me (post paid) at this place, with the registry fees accompanying them, and stating also the number of copies of the work you wish for, when published.

I will here remark, that the month of October next *will be the latest period* at which pedigrees can be received, as the work will be put in press immediately after.

The terms for registry are as follows:

For a single animal, one dollar.

For any greater number, not exceeding ten, 50 cents each.

For a number exceeding ten, 40 cents each.

The work itself not to exceed three dollars a copy.

If any gentleman of your neighborhood or acquaintance be a breeder of short horns, and not in receipt of this notice, you will confer a mutual favor by giving him the above information.

Lewis F. Allen.

Black Rock, *N. Y. July*, 1845.

CULTURE OF THE GRAPE.

Mr. Editor—My plan of a vineyard, after the vines are scaffolded, is, in brief, to have no impediment to a free passage of men, cart, or team, beneath the scaffolding; nor nothing seen for several feet high but main stem of vines and posts; and swine always kept in the vineyard to help to keep the ground clear of grass and weeds. When necessary, I use the harrow, skimmer, plow, or cultivator. And especially before an expected frost or severe weather to cause the leaves to fall, I scarify the ground; and again after they fall, I run over the surface with some instrument to incorporate the leaves with the soil to prevent their blowing away, and to answer in lieu of manuring. Trimming in the summer and early in the fall is good for all vines, (so far as trimming is necessary,) but especially so for the Seuppernong. No danger of bleeding at these times; and these last named vines especially should have plenty of room to expand—say thirty feet apart;—not too great a distance when considered that ere long, with good attention, they will form a thick, complete canopy, at that or even greater distance. Other vines ten feet each way is the common distance. Ten feet also the common distance for all my my posts to support the scaffolding.

In haste, yours, &c. Sidney Weller.

Brinkleyville, *N. C.*, *June* 6, 1845.

REMEDY FOR A LIGHT CROP.

Mr. Tucker—As there is a general complaint that the grass crop will be a short one, I would advise farmers, when they mow away their wheat in the barn or stack, to spread over every course of sheaves three or four handsful of salt. The straw will always heat enough to absorb the salt, and wheat may be mowed damper with the salt than without it. The straw, when thrashed, if not returned into the barn, should be well stacked; and if a large stack and well settled, will need no fence round it. Cattle, horses and sheep will help themselves, and the farmer will need no straw cutter, and will soon find his straw made into manure, better than by any patent right yet invented. Last winter I fed my colts, cows and sheep hay but once a day till the first of February, with straw that had been salted in the above manner, and they kept as well as when they had hay all the time. Some of my neighbors fed no hay to their young cattle while their straw lasted. In western New-York vast mounds of straw are left in the field from the time of thrashing till the ground is wanted to be plowed, when they are removed by fire; and numbers burn their straw as soon as thrashed, to destroy the pigeon-weed or red-root; but as the seed of this weed ripens long before harvest and drops off, nothing is gained by burning the straw. R. Johnson.

East Groveland, *Livingston County*, *July* 11, 1845.

THE POTATOE ROT.

Mr. Editor—In almost every number of your Cultivator, I find something in relation to the rot in the potatoe, both as regards the cause and the mode of prevention.

This, with us, is a disease of comparatively rare occurrence; and may, I think, be justly attributed to our peculiar method of cultivation; and, indeed, so far as I can understand where this plan has been adopted, no case of the disease has ever made its appearance.

In the selection of our land we prefer a light sandy soil, without *great* regard to *the richness* of quality; this having been well pulverized, is drilled to the depth of from five to six inches and from 1¼ to 2 feet apart; at the bottom of these furrows and at the distance of eight inches are laid the potatoes, which we prefer being cut with from two to three eyes to a piece; the drills are then filled nearly to the top with the best well littered stable manure; a small portion of dirt is thrown on this so as to level the whole. The entire surface of the ground is then covered with leaves, (*we* prefer *pine* straw,) to the depth of from three to six inches.

It is to the adoption of this last method I particularly allude. The advantages of the straw are obvious; by its use is produced a more uniform moisture, as well as temperature of soil, which is kept perfectly free from grass and weeds, although no farther attention is required either from the plow or hoe, until the maturity of the potatoe; which for their size and number I have never seen surpassed, or equalled by any other method. This plan, with us, although not universal, is becoming much more general and will, I think, in a short time supercede that of any other. Thomas C. Hines.

Nansemond, *Va.*, *July* 12*th*, 1845.

SOAKING SEEDS.

There is an exception to the oft repeated directions to soak seeds before planting. It is *when the ground is so dry as to attract the moisture from the seed.* Then it delays rather than hastens the vegetation, if indeed it does not kill the seed. In all other cases, it is of great benefit to steep, and even scald, the seeds. I have tried all methods for some time, from soaking one hour to sprouting the various seeds, and the above is the result. During the severe drouth this spring, steeped seeds have generally died in the ground, and those only have vegetated that were planted dry. H.

THE CULTIVATOR.

ALBANY, AUGUST, 1845.

TO CORRESPONDENTS.

Communications have been received, since our last, from S. Tillotson, N. B. Cloud, Wm. Bacon, J. Townsend, C. N. Bement, H., David Thomas, H. W. S. C., D. G. Mitchell, S. N. Holmes, E. Hammond, R. Burritt, S. M. Ackerly, Agricola, A. R. D., R. Johnson, Utica, N. Reed, C. S., S. B. Buckley, W. Cushman, S. Robinson, Dr. Lee, Alex. M'Donald, J. C. Mather, T. C. Hines, C. H. R., J. W. G., G. A. Fiske, E. W. Ellsworth, V. Juvenis, A. Eastwood, R.

Our thanks are due to Mr. Downing, for a copy of his "Fruits and Fruit Trees of America"—To Lea & Blanchard, the publishers, Philadelphia, for the 5th and last vol. of the "United States Exploring Expedition"—To Greeley & M'Elrath, for the continuation of Lardner's Lectures on Science and Art—To A. G Summer, Esq., Columbia, S. C., for copies of Gov. Hammond's Letters on Slavery—to some unknown friend, for Judge Rost's Oration before the Agricultural and Mechanic's Association of Louisiana.

☞ We have copious notes of Connecticut Farming, &c., but a pressure of other matters oblige us to defer them for future numbers.

Transmutation Controversy.—We have received from Mr. Townsend, Zanesville, Ohio, a reply to the remarks of "L. F. A.," in our June number. We can hardly think it expedient to extend this controversy, and we hope Mr. Townsend will excuse our declining to publish his letter. The arguments he advances against transmutation are, in our view, correct, and they agree with the opinions we have already expressed. Mr. T. offers to pay all the expenses of an investigation which shall prove *positively* "that a single grain of wheat ever did, ever will, or ever can, turn into chess." Therefore, until some new evidence can be brought forward in favor of transmutation, we can see no necessity of further agitating the subject.

MONTHLY NOTICES.

Good Cows.—Mr. Wm. Cushman, of New Braintree, Mass., has a cow one-fourth Durham, which, he states, gave for ten days in June, from 54 to 63 pounds of milk per day—also a full blood Durham heifer which gave for the same time, 41 to 63 pounds per day. Those in want of Mackay pigs, South Down sheep, or a Durham bull, may be accommodated by applying to Mr. Cush-

Corn and Cob Cutter.—While at Rochester recently, we had an opportunity of witnessing the operation of a new machine for grinding corn on the cob, invented by Mr. Pitts, which appeared admirably adapted for the purpose. Mr. P. has been at work for some years upon it, and thinks he has now succeeded in perfecting a machine which will fully answer the requirements of the farming interest. It is very simple in its operation, permanent in its form, and not liable to get out of order. The teeth are so arranged as to be easily taken out and sharpened, when necessary. It may be worked with a one horse power.

Fine Merino Wool.—We have received specimens of the fleeces of Mr. L. A. Morrell's Merinos, purchased of Jacob N. Blakeslee, of Watertown, and of Stephen Atwood, Woodberry, Conn., and to which were awarded the first and second premiums at the last State Agricultural Fair held at Poughkeepsie, on sheep exhibited from without the State. One of these samples equals in fineness the best Merino wool we have ever seen, and the other is a very beautiful sample. Mr. Morrell informs us that these bucks were fed a little grain about a fortnight before they were placed with his ewes; after which none was given them. Their fleeces fully equalled his expectations as regards weight. Mr. Morrell's flock of high grade Saxons averaged last year a fraction over three pounds per head, and he appears sanguine that, by proper selections, he can bring it up to nearly four pounds, by means of his Merinos, and yet depart but little, if any, from the present quality of his wool. If he succeeds, his flock will be extremely valuable, and of course, equally profitable. We invite our friends to call and see these samples.

Syphon Pump.—We invite particular attention to the communication of Mr. Ellsworth on this subject, on another page of this number. We have lately had an opportunity of witnessing the operation of the apparatus mentioned, and can assure our readers of the entire correctness of Mr. E.'s description. The application of power in this case we believe to be altogether new, and in our opinion is highly creditable to the ingenuity and scientific knowledge of Mr. Ellsworth. We see no obstacle in the way of this invention becoming useful to a great extent.

Farm for Sale at Auburn.—We had the pleasure of walking over the farm advertised by Mr. Remer, at Auburn, a short time since, and can heartily recommend it to any one wishing for a country residence in the immediate vicinity of one of our pleasantest inland villages.

Fine Wool in Michigan.—"C. H. R.," Aurora, N. Y., informs us that several flocks of selected fine wooled sheep have been of late driven from this, and the states of Vermont and Connecticut, into Michigan. That Messrs. Daniel A. Mills and George Barker, of Manchester, Washtenaw county, Mich., have lately selected a very fine flock of about 700 ewes and 50 stock bucks, from the flocks of Mr. Scovill, Ct., Mr. Church, of Vernon, Oneida county, and Mr. Richmond, of Aurora, Cayuga county, N. Y. "C. H. R." thinks these sheep may be relied on as of pure Saxon blood, and as producing the finest quality of wool. He states that "over two hundred young ewes, and thirty stock bucks" of the 700 above mentioned, were taken from the flock of Mr. Richmond, which flock was "chiefly derived from the importations of Mr. Grove and have been kept with great care pure as when imported." "C. H. R." also thinks that Michigan is well calculated for the production of "fine wool," and that great inducements are offered the farmers there for engaging in this branch of husbandry; he is therefore desirous of informing them that "an opportunity is now presented in this flock of Mills and Barker, by which they can obtain those that are recommended as pure."

☞ We are indebted to Alexander Walsh, Esq., for specimens of the following plants:—Teazel; Madder; (manufactured;) Siberian crab-pplea: Staphylea trifolia, (three leaved Bladder-nut;) White Dwarf Horse-chestnut; Pink do.; Gymnocladus canadensis; Upright Honey-suckle; White, Yellow, and Green Mint; Senna; Sea Kale; a specimen of silk reeled in 1827.

American Quarterly Journal of Agriculture and Science.—The third number of this publication is before us. It contains various interesting articles, among which are—Agricultural Geology—Relations of Vegetables and Animals—Drifts and Changes in the Position of Soils—Manures—their action—How Plants absorb Carbonic Acid—Agricultural Science—Husbandry in Central New-York—Practical Directions for the Flower Garden—Animals useful to the Farmer, &c. Edited by Prof. E. Emmons and Dr. J. A. Prime, Albany. Terms, three dollars a year, in advance.

Lardner's Popular Lectures on Science, part vi., is received. Its contents are a continuation of remarks on Radiation of Heat—Meteoric stones, and Shooting stars—the Earth—Lunar Influences—Physical Constitution of Comets. Each succeeding part of these highly instructive and interesting lectures, seems more and more valuable. Price only 25 cents per number. Greeley and McElrath, New-York.

"**Catalogue of Camellia Japonicas**, green house and stove plants, etc., cultivated at the exotic nursery and horticultural gardens of Valk & Co., Flushing, Long Island." A handsome pamphlet of 92 pages octavo, with valuable directions for cultivating plants in houses and the open air.

OUR PLATE—MR. DONALDSON'S FARM.

We have the satisfaction of herewith presenting our readers with a fine steel engraving of the Durham bull "Prince Albert," bred by Mr. Whitaker, of Burley, Yorkshire, England, imported and now owned by Robert Donaldson, Esq., Blithewood, Dutchess county, N. York. In the estimation of good judges, few, if any of the fine bulls which have been either imported or bred in this country, can be considered as surpassing, or even equalling this. He is a bull of great substance, with remarkable symmetry and fineness of bone. The portrait fails to do him full justice in one or two particulars. The head, from the eyes downward, is not sufficiently fine, and does not show the characteristic lineaments of the animal; and there is hardly sufficient breadth and expansion shown to the chest and brisket. In other respects the delineation may be pronounced good.

Mr. Donaldson imported this bull about three years since. His principal object is to rear good milch cows. For this purpose he selected the best common cows to be had, and by crossing with this bull has obtained a small herd of young half-blood Durhams. The oldest stock he has of the cross, are two-year-olds. There are several heifers of fine promise as milkers, and they exhibit a great improvement in symmetry over their dams.

Many will doubtless recollect a native cow of Mr. Donaldson's, called "Kaatskill," which received the first premium in her class at the last show of the N. Y. State Ag. Society. She is a remarkable animal; but we shall not now speak particularly of this cow, as we have an excellent plate of her, done in the same style as that of Prince Albert, which we shall give, together with an account of her productions, in a future number. Mr. D. has also a very superior Ayrshire cow, six years old, which has an excellent heifer calf by this bull. We think well-bred Ayrshires even or a cross between them and the Durhams, would prove highly useful on this farm—an opinion which is certainly supported by the appearance of this Ayrshire cow and her calf.

Few places that we have ever seen exhibit such marked evidence of refined taste, and correct appreciations of rural beauty, as Blithewood. The spot itself is one possessing great natural attractions, and these have been heightened and improved to the greatest possible advantage. It is a promontory on the east bank of the Hudson, embracing the greatest variety of magnificent landscape scenery of any spot of the same extent within our knowledge. The river is here of unusual width, and there are several pretty islands nearly opposite, by which the force of the current is so broken that the water has the placid quietness of a sheltered lake, and reflects with mirror-like vividness, every object on its banks, or floating on its surface. On the west side of the river, a little to the north-west, the Kaatskill group of mountains appear in all their majestic beauty, forming a grand, but varied and picturesque outline to the view for a considerable extent in that direction.

The mansion of Mr. Donaldson, constitutes the frontispiece to Mr. Downing's elegant work on Landscape Gardening and Rural Architecture. Representations of several of the other buildings, as well as various sketches of the scenery at Blithewood are also given in Mr. Downing's work, to which we would refer for a more particular description. The scenery in the background of our engraving, is copied from nature—the building on the right being the gate-lodge, and the one on the left the gardener's cottage—the farm-yard buildings with a grove in the rear, showing between.

The credit of introducing to this country the Rural Gothic, or pointed style of architecture, belongs to Mr. Donaldson. The first specimen of this style was the gardener's cottage above-mentioned, which, for its taste and smiplicity, excels anything of the kind we have ever seen.* Mr. Donaldson was also, we believe, the first to introduce what is called the Bracketted style, several pretty specimens of which are shown among his numerous buildings.

Mr. D.'s garden has been but lately laid out—the present being the first season that the principal portion of it has been appropriated to plants. To secure a favorable site, he has been under the necessity of terracing the eastern declivity of a hill, and forming a soil somewhat artificially. The terraces are formed in a beautiful manner, supported by the most substantial stone walls. An extensive conservatory and grape-house has just been erected, in the most tasteful style. A rich profusion of flowers and shrubbery adorn the garden, and various labyrinthine walks and shady bowers.

The soil of Mr. Donaldson's farm has been much improved, and its productiveness vastly increased, since he came into possession of it, about nine years ago. His outside fences are mostly stone walls, laid in the most systematic and durable manner. His wet grounds, of which there is a considerable portion, have been mostly under-drained, and latterly he has commenced subsoiling, which promises to be of great benefit, particularly to the tenacious soil. A piece of oats on some of the under-drained land, is about the best we have seen this season. His barn is constructed on a convenient plan; his barn-yard is well protected by sheds, and is well contrived for making and saving manure. His young cattle are not pastured but soiled. They are fed in the sheds and yard, mostly with mowed grass, and are allowed the run of a small shady lot. They are in good order, and appear healthy and thrifty.

We saw here a superior machine for cleaning walks, invented by Mr. Donaldson. Its general form, is that of the frame of a wheel-barrow. Two bars of iron, representing the legs, reach down to the ground, and attached to the bottom of them is a transverse bar of steel, about two and a half inches wide, one edge of which is made sharp. Three or four inches of the lower end of the upright bars are also made sharp, in order to cut the sides of the walk. The handles are held by a man, and the machine is drawn by a horse. A space three-and-a-half feet wide is shaved at once, the man at the handles regulating the working of the implement so as effectually to cut up the weeds and grass. It is to be recommended for its simplicity and efficiency.*

NEW-YORK STATE AGRICULTURAL FAIR.

At a meeting of the Executive Committee of the State Agricultural Society was held at Bagg's Hotel, Utica, on the 10th July—present:

B. P. JOHNSON, President.

H. W. Doolittle, Herkimer; E. P. Prentice, Albany; H. S. Randall, Cortland, Vice Presidents. L. Tucker, Rec. Secretary, D. Lee, Cor. Secretary. George Vail, Troy; T. S. Faxton, Utica; Maj. Kirby, Brownville; J. M. Sherwood, Auburn; George Geddes, Onondaga, Managers.

The President of the Oneida County Agricultural Society, E. Comstock, and a number of the officers and members of that Society were present at the meeting.

Letters were read from Hon. Henry Clay, of Kentucky; Gov. Lincoln, of Massachusetts; and Messrs. Alex. Walsh, of Lansingburgh; Thos. Hillhouse, Albany; F. Knight, Publisher of Washington's Letters on Agriculture; and A. L. Fish, of Herkimer.

The following gentlemen were appointed a Committee of Arrangements for the Fair:

B. P. Johnson, Rome; Alex. Walsh, Lansingburgh; J. M. Sherwood, Auburn; George Geddes, Tyler, Onondaga co.; Luther Tucker, Albany; E. Comstock, Rome; T. S. Faxton, Utica; Spencer Kellogg, Utica.

The following gentlemen were appointed a Committee to confer with the railroad and boat companies, in relation to the transportation of stock and articles designed for exhibition:

J. M. Sherwood, Auburn; Horatio Seymour, Utica; M. D. Burnet, Syracuse; L. B. Langworthy, Rochester; Lewis F. Allen, Buffalo; George Vail, Troy; Thos. Hillhouse, Albany.

The following gentlemen were appointed a Committee on Finance:

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* For a larger cut of this cottage, see the review of Mr. Downing's work in the Cultivator for March last.

* For a correct drawing of this machine, see Appendix to Downing's Landscape Gradening and Rural Architecture.

The President, Messrs. J. S. Wadsworth, E. P. Prentice, Thos. Hillhouse, Geo. Vail, L. Tucker, and Geo. Geddes.

The Judges for the Fair were appointed, and the list will be published as soon as it shall be ascertained from the gentlemen appointed that they will serve.

The following additional premiums are to be given:

For the best corn and cob crusher, to be operated by horse power, $10.

For the best grade yearling heifer, $5.
" 2d " " Colman's Tour.
" 3d " " vol Transactions.
" best heifer calf, Colman's Tour.
" " native yearling heifer, $5.
" 2d " " " Colman's Tour.
" 3d " " " vol Transactions.
" " native heifer calf, Colman's Tour.
" " samples, (not less than three cheeses from each of 10 dairies in any one county,) $20; 2d best $10, 3d best, $5.

Mr. Geddes read a letter from Mr. F. Cooper, of Camillus, detailing a course of experiments on steeping seed corn, upon which a resolution was passed requesting Mr. Cooper to furnish the State Society with a report of his experiments when completed.

The Committee of Arrangements were directed to procure one large tent, and such number of small ones as they might deem advisable for the show grounds.

Dr. Lee, reported that he had been engaged between two and three weeks in delivering lectures in pursuance of his appointment by the Board, during which time he had visited the counties of Erie, Niagara, Monroe, Wyoming, Livingston and Oneida.

A Committee on behalf of the citizens of Utica, of which his Honor, E. A. Wetmore, Mayor of the city, was Chairman, waited upon the Executive Committee of the State Society. The several locations for the show grounds, which had been selected as proper places for the exhibition, were examined by the officers of the State Society, and they decided that the grounds on Mr. Thorn's farm, on the New Hartford Turnpike, was, upon the whole, best adapted for the exhibition of the Society, and the accommodation of the owners of stock who may attend.

The spirit manifested by the citizens of Utica, was most gratifying to the officers of the society, and gives assurance that every thing desirable to make the approaching Fair one of the most splendid exhibitions ever witnessed in this state, will be done so far as the citizens of Utica are concerned.

We will not for a moment doubt that the farmers of Oneida and of the adjoining counties, will present an exhibition of their stock, dairies and domestic manufactures, and worthy, not only of Central New-York, but of the Empire State.

The additional premiums offered for samples of the best 10 dairies in any one county, it is believed will secure an exhibition from the best dairy counties, more extensive than has ever before been seen at the Fairs of the Society.

Persons desirous of becoming members of the Society, and of competing for the premiums, are requested to enter their names at the stage office of J. Butterfield & Co., adjoining the National Hotel, Genesee st., Utica. The fees for membership are $1. Gentlemen may also become members on application to any of the officers of the Society.

NEW VARIETIES OF CORN.

Many of our readers may be familiar with the method which President Knight made use of to obtain new varieties of fruit by crossing previously existing sorts. The same means may be used to propagate new varieties of corn. Let the different kinds be planted in near proximity, as for instance in alternating rows, and they will intermix more or less freely. But this will be greatly facilitated by artificially removing parts of the flowers. It is well known that in order to render the ears fertile, that is, to cover the cob with grains, it is necessary that the pollen or fine dust from the staminate flowers which constitute *the tassels*, should impregnate the germ through the pistils or silk which covers the ears. To obtain a cross therefore, between two selected varieties, if we wish to transfer the grains of one to the cob of the other, let the latter be planted among the hills of the former, and then cut away the tassels, leaving the tassels or staminate flowers of the surrounding plants to impregnate the ears thus deprived of their own staminate flowers. Like most hybrids, the character of the new variety may not be developed until the second year.

Those who have different sorts favorably situated for such experiments, should be prepared to attend to them during the latter part of summer, taking care that impregnation has not already taken place before the staminate flowers are removed.

WESTERN NEW-YORK.

During the last month we had the pleasure of making a flying visit to several of our old friends in Western New-York. We were not a little gratified at the evidences we witnessed on every side, of the rapid progress which is making in rural improvement. These are to be seen in the increased attention paid to rural architecture—to the cultivation of fruits and gardens—to the cleaner and more thorough tillage of the farms—to the greater economy in the saving of manures, and in the general appearance of the farm buildings, fences, &c.

Col. Sherwood's Farming.

At Auburn, we spent a day with Col. J. M. Sherwood, who, three years since, purchased a farm of 300 acres, situated on the south side of Genesee-street, on the western border of this delightful village. This farm, though naturally of a good soil, had been so miserably managed by its former owner, who occupied it more than thirty years; that wheat could no longer be grown upon it, and other crops scarcely paid the expenses of cultivation—the fences and buildings worthless.

Col. Sherwood, having made his plans, located his buildings, fences, &c., proceeded, with the energy which so strongly marks his character, to the work of improvement, which, if we are not greatly mistaken, will soon make this worn-out farm one of the most beautiful and profitable in Western New-York. It lies in a compact body, with a slight ridge running nearly through the centre from north to south. A lane along this ridge divides the farm into two nearly equal parts—these parts are sub-divided into lots of about twenty acres each, with the exception of the two rear lots, which each consist of thirty acres. Having thus laid out his farm in the most convenient manner, every lot opening on to the lane, and enclosed it in the most substantial manner, with post and board fence, the next step was to prepare his fields for profitable tillage. Though draining had never been deemed necessary on this farm, he found more or less cold unproductive spots in almost every field, evidently caused by an excess of water. To remedy this evil, under drains were made, when a most thorough course of tillage was entered upon. The field was plowed as deep as it could be conveniently with the common plow, and this followed, so far as circumstances would admit, with the subsoil plow, loosening the soil six or eight inches deeper. Manures were then applied liberally, and the ground plowed and harrowed till thoroughly mellowed, and thus brought into the best possible condition for the reception of the seed. This course was pursued with each successive field brought under the plow, until he has now over 120 acres under cultivation, viz: 35 acres in wheat; 20 acres oats; 20 acres barley; 10 acres corn; potatoes and peas 5 acres each; 7 acres in carrots, ruta bagas and sugar beets, and 20 acres fallow for wheat. Better crops we no where saw than on this worn out farm. The wheat crop last year averaged over thirty bushels to the acre, and promises to at least equal that amount this year. The grass lands, which he has seeded, will produce from 2 to 2½ tons per acre.

The same judgment which has directed the labor bestowed on the farm, is manifest in the selection of the implements with which it is worked, and the animals with which it is stocked.

The implements were all of the best kinds. Among those we noticed, were two of Ruggles, Nourse & Mason's Worcester, and two of Prouty & Co.'s Centre Draft Plows—the Worcester Subsoil plow—Bement's Cultivator, Langdon's Horse-hoe, and a new Cultivator, recently manufactured at Troy, with which he was much pleased.

His stock consists of about forty head of Improved Durhams, selected from the best herds, and bred with great care, several of which have taken the highest prizes at the exhibitions of our State Agricultural Society, and others which, we venture to predict, will be found among the successful competitors at its next show. Of Sheep, he has about 60 pure bred South Downs, whose fleeces averaged this year 3½ lbs., and about 100 Merinos, or grades of Saxons and Merinos, whose fleeces averaged 3 lbs. 14 oz. One of his stock bucks, procured of Mr. Blakeley of Connecticut last autumn, sheared 8¼ lbs. of well washed and very superior wool, samples of which, and other fleeces from his flock, may be seen at our office. His Swine, with the exception of a pair of Leicesters, consists of Berkshires, and in his Poultry Yard, we found the Dorkings and Polands.

The buildings are in keeping with the other improvements. The barns and sheds surround the yard, and are admirably arranged and substantially built, with small lots on the west side reserved for single animals, calves—or for any purpose for which they may be wanted.

In building his residence, Col. S. adopted a plan admirably fitted for its purpose, both by its elegance and convenience of arrangement. It is a beautiful cottage in the pointed style, showing to great advantage from every point in which it is viewed. We shall not at present attempt a description of it, as we hope in some future number to present our readers with an engraved view of it, together with the plans of the floors, &c. This tasteful and commodious house, we venture to say cost less money than many of the less sightly but more pretending houses which are frequently seen in various parts of our country. Now that such works as Downing's Landscape Gardening and Cottage Architecture, are becoming more generally known, we shall doubtless soon see a decided improvement in our rural architecture—a consummation most devoutly to be desired.

We have seldom seen a farm more favorably situated for improvement, and as seldom have we seen one, in all respects, so thoroughly and judiciously managed. Col. S. has not been sparing of his outlay, though his expenditures have been directed with judgment and a strict regard to *profit.* It is obvious that in effecting so great an improvement in so short a time, a proportionate immediate income is not to be expected; but we feel perfectly satisfied that he will have no occasion to complain of the unproductiveness of his investment.

At Rochester, we saw a beautiful specimen of rural architecture in the Gothic cottage, just erected by T. H. Hyatt, Esq., on his farm at Elmwood, a view and plans of which we have now in the hands of the engraver.

Fine Seedling Strawberry.

While visiting our friend John J. Thomas, at Macedon, he proposed a visit to Palmyra, for the purpose of examining a bed of seedling Alpine Strawberries in the garden of Col. J. S. Stoddard of that place. Col. S. has directed much of his attention for several years past to the cultivation of the strawberry. Some years ago, he raised about 2000 new seedlings from the Alpine variety; one of which, a red variety, he selected and has since increased, which he regarded as the finest of the whole. The ground now occupied by this seedling is about 60 feet square, the plants standing in hills fourteen inches apart. We never witnessed so fine a display of fruit. The Alpine strawberries usually bear their fruit above the leaves; and in this case the masses of red berries presented so brilliant a glow as to be conspicuous at several rods distance. We measured some of the fruit of this variety which was one inch and a fifth long, and more than three quarters of an inch thick. Many specimens were about this size. The ground on which they grow is good garden soil, not rendered unusually rich by manure.

Col. Stoddard estimates that he will be able to pick from this plantation of sixty feet square, thirty-five bushels before the strawberry season is over. From this and another smaller bed he has taken two bushels of the finest fruit daily, and he thinks he will continue to gather that amount daily till the first of August, when he proposes to remove his plants for the purpose of increasing them. He sells them at $4,00 per bushel, or twelve and a half cents a quart, about one half the usual price of fruit of that quality in our cities. He suffers the fruit to remain on the stalk longer than usual, or until of a dark mahogany color. One person, with diligence, is able to pick two bushels in half a day.

This plantation was set out in the early part of last August, and now the plants completely cover the surface of the ground, which is kept clean and well cultivated.

Col. Stoddard showed us some young seedlings, obtained from seed planted last summer, and transplanted this spring. They were very small, the leaves being scarcely more than the quarter of an inch in diameter; and young experimenters would probably be discouraged at the outset, were they not to know the small size to be expected in young seedlings.

Crops in the Western part of the State.

The wheat crop, although seriously affected by the cold weather of early spring, and the subsequent severe drouth, has lately improved to a remarkable degree, and a good crop is now promised. In the counties of Monroe, Wayne, and Ontario, the product will undoubtedly equal the average; and in other adjoining counties there is a very fair prospect. It not unfrequently happens that unfavorable weather in spring is followed by the reverse in early summer; and early predictions of the result have consequently often proved erroneous. A small portion of the present crop appears to be injured by the Hessian fly; and the worm in the grain has been discovered, but it is believed its ravages will not be extensive. No appearance of rust has yet presented.

The corn crop was kept back by the unusually cold weather late in spring and early in summer, and some early plantings were destroyed by the frost. Most fields, however, are now assuming a fine appearance, and with the usual warm weather which is to succeed, little fear need be entertained for a good return.

The exceptions to success in these two important crops are, as a matter of course, on such lands as have been hard run with tillage without manure. In such cases the corn presents a small and sickly appearance; and wheat is small and thin, and chess, grass, and other weeds have thus been permitted to have free growth and to obtain the ascendancy.

The hay crop is light; probably not more than two-thirds of the usual product will be afforded. Those farmers who have made provision for crops of corn-stalk fodder by thick sowing, and for a full supply of roots, will probably escape the inconvenience, and in some cases the evident disaster which will result from a deficiency of food for cattle.

The Fruit Crop.

This year there is an extraordinary failure of fruit. The severe frosts of the latter part of spring, have cut off most of the crop in the central and western portions of the state. There will be a small crop of apples, perhaps not half the average, west of Cayuga; but from that county eastward, the crop appears to be nearly or entirely lost. The peach crop has been much thinned in the western counties; near the south shore of Lake Ontario, and in other favorable positions, there is however a fair promise. Cherries, strawberries, and even currants, have been also seriously injured, and the amount lessened. With the exception of a strip of land a few miles wide, bordering the south shore of Lake Erie, there appears to be a total loss throughout Ohio.

IMPROVING COARSE HAY.

It often happens that farmers have certain wet portions of their meadows occupied with coarse grass and weeds, which are cut after the rest of their hay is made and secured. It is of course only second or third rate in quality, and is intended for the hardiest class of cattle. I can be rendered very palatable, however, by a free application of salt, in frequent and successive layers as it is deposited in the stack or mow; the amount of which may vary from a peck to a half bushel of salt to a ton of hay. Coarse hay, thus prepared, is frequently preferred by cattle to fine hay not so prepared.

All hay should receive an application of salt when stacked or stored away, as the salt not only preserves it from injury in keeping, but domestic animals, which are frequently much neglected in salting in winter, thus obtain a constant and regular supply, administered to them in the best possible form.

DEATH OF DR. AKERLY.

Soon after the publication of our last number, we received the painful intelligence of the death of Dr. Samuel Akerly, well known through the medium of our columns for several years under the names of "*Richmond,*" and "*A Practical Farmer.*" He died at his residence on Staten Island, Sunday, July 6th. By this sad event we, in common with the readers of the Cultivator, have been deprived of a most valuable co-laborer in the field of agricultural improvement, and the community generally have suffered the loss of an estimable and highly useful citizen. Like his eminent brethren, Fessenden, Buel, and Gaylord, he was called away suddenly—having been in his accustomed state of health only twenty-four hours before his death. He was a learned and talented, as well as benevolent and philanthropic man; and his death will be sincerely lamented by numerous personal friends, and also by a wider circle to whom he had become known through the public press. We find in the New-York *Commercial Advertiser* a short notice of his life and labors, from which we give the following interesting extract:

"Doctor Akerly was born in this city, was a graduate of Columbia College, and having inherited from his father ample pecuniary means, he received the best medical education this country could furnish, under the superintendence of his distinguished brother-in-law, the late Doctor Samuel L. Mitchell. His habits of application and study, in the commencement of his professional life, brought on a disease which was the source of great annoyance through many years, and at length terminated his life at the age of sixty years. He has been a large contributor to medical and scientific journals—was for several years a member of the common council. During the late war between this country and Great Britain he was hospital surgeon—was mainly instrumental in getting up and sustaining, through the first years of its existence, the Institution for the Deaf and Dumb, and was the second president of that institution. He was, in like manner, instrumental in procuring the passage of the act of incorporation of the Institution for the Blind, of which he was the first president.

"A few years ago the state of his health compelled him to leave the city, and he established himself on a farm on the south side of Staten Island, where for several years, and to the day of his death, he devoted himself to agricultural pursuits with great ardor. He has given to the world during his retirement, through agricultural journals, many of the results of his observation and experience in his new pursuit.

"He has also been enabled, during that retirement, to prepare, or rather to complete, a full biography of his friend and relative, Doctor Mitchell. We have learned that the work was nearly ready for the press, and we presume that it will soon be published under the direction of his representatives."

PRESERVING EGGS.

Many receipts are given for preserving eggs, all strongly recommended, and many of them failing on trial. They may be successful in one case, but varying circumstances may cause a different result. For instance, lime water may be very successful when of the right degree of strength or causticity; but skill appears to be required in managing properly such preparations. Some have been very successful by packing them in salt, plaster of Paris, and other pulverulent substances, with different degrees of success. But the main point appears to be to pack them in some soft or powdery substances, with the *small end downwards*, in an exactly perpendicular position, and so embedded that they shall never touch each other. Provided these requisites are strictly attended to, it does not appear to be very important what they are packed in; we have been uniformly successful in the use of *salt*, never failing in keeping them for a year, and a neighbor in one case kept them three years in a perfectly sound state.

STATE OF THE CROPS.

We have received a letter from Col. A. McDonald, of Eufalla, Ala., dated Edgar county, Illinois, July 9. Mr. McD. is on a tour through the western states, and may, as he intimates, continue his journey to this state, and visit the show of our State Society, at Utica, where it will give us pleasure to meet him. He informs us that he left Eufalla on the 4th of June, that through all that portion of Alabama which he travelled, (a distance of 100 miles,) the crops were suffering much for want of rain. The corn crop in the richest sections, however, looked well. From all the information he could gather, the cotton crop would probably be a short one. In reference to Illinois and Indiana, he writes:—

"We have now travelled 130 miles in these states—the soil we find immensely rich—particularly in the valley of the Wabash. Here we travelled one hundred miles over the richest country in point of soil, I have ever seen. I thought by far a better farming country than middle Tennessee, that I examined last year; as the Wabash lands are not only rich but so level that we travelled sixty miles in this rich valley of lands, on almost a perfect level—passing over extensive prairies of the finest soil. On these extensive prairies we find large crops of wheat and corn. The report is that from forty to fifty bushels of corn to the acre is common, and that from twenty to thirty bushels of wheat per acre are here produced. I found the corn generally planted 4 feet each way, and 4 stalks in a hill. Owing to the immense quantity of rain that has fallen in the month of June, the wheat crop, it is thought, is somewhat injured. The corn crop is also injured in some places. It has been impossible to plow the fields here for the last three weeks."

We have also a letter from Dr. N. B. Cloud, of Macon co., Ala., dated June 19th. He informs us that the cold continued very late—frost having occurred south of 33 degrees, on the 17th of May. The cotton plant suffered not only from the cold and drouth, but from *lice*—(aphides.)

"The cotton crop," he states, "is not so forward as the last, yet the warm weather having set in with the present month, and showery weather for the last 10 or 12 days, the crop improves astonishingly. The stalk is not as tall as usual at this period, yet it is well formed and exceedingly promising. I counted on the 15th, upward of 100 blooms and squares on one stalk.

"The corn crop never promised finer in this section—the spring has just suited it—the great body of the crop has been in silk and tassel since the 1st of June, and the later corn looks equally well. I have seen but little of the crop in the prairies, but what I have seen promises fair, both corn and cotton, and I have been informed that their prospects have seldom been finer.

"The oat crop is fully fine through this immediate neighborhood, and with our present prospects, after the drouth of spring, (which, upon the whole, is favorable,) the rains having set in, I think the crop will prove, at least, a fair one."

Our correspondent, Solon Robinson, writes from Vincennes, Ia., July 6:

"Wheat was a pretty fine crop here, but there has been such a perfect deluge of rains that many fields are totally ruined in the shock; while in the northern part of the state we suffer with the drouth to that degree that wheat headed out not more than knee high in many places. The grain is good, but the quantity will not be large. Other crops are much injured there by drouth, while here, the drouth first injured crops, particularly corn upon the clayey lands, and now it is completely drowned. Upon some of the Wabash sandy bottom lands, the corn is fine; I saw many fields as I came along, where it was higher than my head."

M. Davis, Jr., Esq., Lynchburgh, Va., under date of July 11, states that vegetation was there suffering from a drouth of long continuance. The tobacco and corn of last year, were on some plantations a good deal injured, and there has not, he says, been rain enough since. The winter was uncommonly mild—in February, the wheat fields and grass lands had the appearance they commonly have in May. Cold weather recurred in March, and frosts followed at different times up to 1st June, "the result of all which is," says Mr. D., "we have literally *no* fruit, many garden vegetables failed, no clover hay, grass meadows very light, many oat fields not worth cutting, the pastures dried up, and the corn suffering; though if we have rain soon, we may have a tolerable crop of the latter. The wheat crop forms our only bright spot."

A letter from South Carolina, of the date July 11, states that the corn-crop "through the whole upper part of the state, is cut off perhaps one-half, by the unprecedented drouth." Our correspondent adds, "while I write, however, we are having a refreshing shower, and I hope we may yet do better with our late corn than we anticipated. Our wheat has been very good."

L. P., of Pa., informs us that there was a frost on the sixth of May which totally destroyed much of the wheat in Chester, Lancaster, and large portions of Montgomery and Delaware counties. The prospect there for corn and potatoes was said to be good on the 7th July. Oats short and thin, estimated at about half a crop, owing to drouth.

In a tour through a portion of Connecticut and Massachusetts, last month, we found the hay crop much lighter than usual, owing to drouth. Rye, which is cultivated quite extensively, is middling. Wheat is not largely cultivated; but the few fields we met with were very good—the straw beautifully bright aud the berry plump. This was particularly the case in the valley of Connecticut river, where wheat has latterly been considerably introduced—it following tobacco, (a staple crop there,) with good success. Apples and pears are not as promising as usual—cherries were plenty. Corn was rather backward, but the late extreme heat, where it has not suffered too much from drouth, has been favorable for it.

Hay Crop in Orange County.—A letter from Newburgh, dated July 2d, states that in consequence of the extraordinary drouth, and the total want of a heavy rain since April, that the hay crop will not average more than one-third, or according to the estimate of some, one quarter of the usual crop. Another correspondent from the interior of the county, considers the hay crop as insufficient to winter half the cattle of the farmers.

From various letters, we give the following summary:

Rochester, July 18.—Hay is not more than half a crop. Corn looks well, except where damaged by the wire worm, which in some cases has lessened the crop one third. Wheat never looked better—we saw in a three days tour, probably 20,000 acres, several fields of which will yield 40 bs. pr. acre. Potatoes and oats generally promising. T. H. Hyatt.

Canandaigua, July 18.—Wheat an average. Barley best ever known here. Hay on old meadows very light. Corn, potatoes, and oats pinched by drouth, but if rain comes soon, may be good crops. Weather hot—mercury 82 to 100 degrees. Oliver Phelps.

Elbridge, July 22.—Crops generally good, except hay—not much more than half a crop of that. Wheat good—barley and oats promising. S. M. Brown.

Syracuse, July 22.—Wheat is injured by rust, and in some cases will yield one half less than appearances four weeks since indicated. Barley and oats good. Corn backward. Grass light. Weather hot and dry till Sunday night, when we had two heavy showers.

E. Marks.

To Prevent Vermin on Poultry.—Scatter slacked lime on the perches and floors of the hen house, as often as once in ten days. It will effectually eradicate the lice and promote the health of the fowl. S. Barrows.

FOREIGN INTELLIGENCE.

By the Britannia we have our foreign exchanges to June 2. The prospect for crops in Great Britain was on the whole favorable. It was thought there would be a fair average yield of wheat. "Barley," it is said, "is in every point of view a promising crop, and where oats are grown they are also well spoken of; whilst beans and peas wear as healthy and vigorous an appearance in all parts of the kingdom as could possibly be desired. In addition to the generally auspicious promise of the grain crops, farmers have also reason to be well satisfied with their produce of hay." The weather during June was uncommonly warm.

Considerable sensation had been occasioned in consequence of sentiments expressed by Sir Robert Peel and Sir James Graham, favoring a total repeal of the corn laws. Of the policy of Sir Robert Peel, it is said—"his plan evidently is to make periodical changes, all in favor of the manufacturers and prejudicial to the farmers, and it is now abundantly evident that the occupiers of the soil have nothing to expect from the present ministry."

The wool trade was brisk, at fair prices, both in Great Britain and on the continent.

The *hop trade* was rather dull. It is observed—"The accounts from the plantations are exceedingly favorable on the average, and this checks business." Prices are given as from 7*l.* to 9*l.* per cwt.

Agricultural College at Cirencester.—This institution, it is expected, will go into operation in the course of the year. Prince Albert has become a Patron, and is also one of the governors of the college.

The Bakewell Long Horned Cattle.—A writer in the *Farmers' Journal* states, that in a late tour through the midland counties, he found to his great surprise, some extraordinary fine cattle of the once famous Bakewell or Dishley breed. Some of the best were at Mr. Twycross's, near Canby, the place where Mr. Bakewell obtained his two first celebrated breeding heifers. A fine herd of them are also spoken of as belonging to Hon. Mr. Nugent, of Hingham, Leicestershire. Six of these were to be exhibited at the great Shrewsbury show in July. The writer says—"My friend with me was struck with amazement to see long-horned cattle which had been said to be nearly extinct, so good and so heavy, with such fine, firm, thick flesh, good symmetry, strong constitutions, and at early maturity."

The Exhibition of Domestic Poultry, under the auspices of the Zoological Society, closed at Regent's Park on the 14th of June. The show appears not to have quite equalled anticipations. The first prize for Dorking fowls was awarded to Rev. G. C. Gillett. Prizes were also given for fowls of the Surrey, Old Sussex, Hamburgh, Black Spanish, Polish, Chinese, Malay, and several varieties of the Bantam breed. Also for ducks, geese, turkeys, pheasants, and pigeons. The black Spanish fowls are spoken of as of large size and very beautiful. The gold and silver spangled Bantams—a breed which originated with Sir John Sebright—are said to have formed decidedly the most beautiful part of the exhibition. The white Aylesburg ducks are said to have been very large.

Curing Bacon—¾ lb. of bay salt, ¼ lb. of saltpetre, 1 lb. of coarse sugar, and about 1 lb. of common salt. This is sufficient for the bacon and faces of a hog of 10 or 11 score. Pickle all together, and let it remain in the pickle a month, turning and rubbing it all every day. The flavor of bacon depends quite as much upon its being properly smoked and kept after it is made, as it does upon the curing.

Chinese Grass.—During the past week, Messrs. Hargreave and Brothers, flax spinners and power-loom linen manufacturers, of this town, called at our office and exhibited a sample of Chinese grass. This article is represented as possessing all the qualities of flax, but in a higher degree than any other known to our spinners or manufacturers—surpassing the best qualities in strength, fineness, and length of staple. These gentlemen also showed us a sample of fine linen manufactured by them from this article, which greatly resembled French cambric, but with a more silky appearance. It would appear that the Chinese grass can be supplied in unlimited quantity, and if that should be the case it must be a subject for congratulation that an article of such large consumption in this country should be presenting itself as another exchangeable commodity for our manufacturers, the rapidly extending consumption of which throughout China seems to be limited only by the means which they possess of making a suitable return for them.—*Leeds Mercury*.

WINTER GRAIN—STEEPS FOR SEED.

We should be in favor of sowing rye as early in September as practicable; and where there is no danger to be feared from the fly, we would observe the same rule in regard to wheat. There is a particular reason for early sowing rye this season, and that is the advantage it will afford for feed to sheep and young stock. The dry weather has lessened the hay-crop to a great extent, and the supply of grass in pastures must in many cases be very small. Rye, if allowed to get good root, may be pastured with light stock in the fall, and to some extent during winter. In some cases it may even be expedient to feed in spring. The diminution which results to the yield of grain is not equivalent to the advantages as pasture. The crop starts very early, and is particularly adapted to the dry lands on which the grass has suffered most. Would it not be judicious to sow this crop largely, to be used this fall and next spring as a substitute for hay and grass? In passing through the country, we notice in the barn-yards, and around the barns, or sometimes by the road-side, considerable piles of manure, exposed to waste by evaporation and washing of rains. If some of the fields where the grass is dried up were plowed, and all the manure now lying useless, was carefully collected and applied to them, a large amount of feed might be produced, which would be available before much grass would be had next season.

In the preparation of ground for winter grain, either wheat or rye, we doubt the propriety of bringing to the surface, the sward, and vegetable matter which had been buried but a few weeks before; especially where the soil is sufficiently porous and loose. Some tool should be used which will sufficiently mellow the soil, without reversing the furrows. A cultivator, if rightly constructed, and worked at first mostly lengthwise of the furrows, is found to answer a good purpose.

The preparation of the seed is an important matter. The cleanest and heaviest should be sown. If it contain seeds of pernicious plants, they should be taken out. It will amply pay to pick over by hand a peck or half bushel of wheat, or other grain, to be sown on a spot of good clean ground, purposely for seed. Chess, oats, and other seeds, lighter than wheat kernels, may be principally taken out by putting the grain in strong brine, a small quantity at a time, and stirring it with a stick. The foul seeds will rise, and may be skimmed off. When it has been finished, it may be put on a floor and dried off, or rendered fit for sowing, by mixing with it air slacked lime or plaster. Passing the grain slowly through a good winnowing mill, will clean it from nearly all the small seeds, such as wild pink, wild mustard, and seeds of most weeds, as well as the most shrivelled and imperfect kernels.

The various kinds of *smut* in grain have been well ascertained to be vegetable parasites of the fungi tribe. The species known as *Uredo fœtida*, commonly called "dust, or pepper brand," is the most injurious to wheat. Its seeds are so minute that they are believed to be taken in by the spungioles of the plant, and are with the sap carried up the pores into the cavity of the embryo kernel, where the fungus reproduces itself; causing an abortion of the grain, and giving in its place a black dust of most pungent and disagreeable odor and taste.

There is no longer any doubt that this substance may be eradicated from wheat by means of certain substances applied to the seed. So often has this been proved by actual experiment, that we "hold him no longer guiltless," who neglects the application of the remedy. The vegetative power of the fungus may be killed by lime, ashes, brine, solutions of arsenic, vitriol, &c. We have tried nearly all these substances, and give the preference to vitriol. Our mode of using it has been as follows: Dissolve in hot water two ounces of blue vitriol, (sulphate of copper,) for each bushel of wheat; add as much water as is necessary to cover the grain, stirring the solution well. Soak the wheat two or three hours, and dry it with plaster before sowing.

In regard to *fertilizing* steeps, we do not know that we can add anything to the suggestions given in our May No., page 158, to which we would refer those wishing to make experiments of this kind.

NEW PERIODICAL.

The Farmer's Library and Monthly Journal of Agriculture. Edited by John S. Skinner. Greeley and M'Elrath, publishers, Tribune Buildings, New-York—100 pages, monthly, at $5 per annum.

We hail with pleasure the re-appearance of Mr. Skinner in the editorial chair, and congratulate him as well as the public upon the favorable circumstances under which he again makes his bow to the friends of Agriculture, with all the vigor and enthusiasm of youth. He is most fortunate in securing such men as Greeley & M'Elrath for his publishers, as their well known enterprize and industry afford abundant assurance that the work over which he presides, will be issued in the best style, and take its place among the permanent publications of the day—an assurance highly necessary to the success of a work of this character.

We are much pleased with the plan of The Farmer's Library. Each number consists of two parts, one of which is to be devoted to the re-publication of new and valuable works on Agriculture—the other to constitute the Journal of Agriculture. The first part of the present number is occupied with a re-publication of Petzholdt's "Lectures to Farmers on Agricultural Chemistry," a work issued the last year in London, and which has been highly commended by the foreign agricultural press, but which we have as yet had no opportunity of examining.

The Monthly Journal opens with an appropriate and interesting biographical notice of the late Hon. Stephen Van Rensselaer, of this city, whose labors in behalf of agriculture are well known, accompanied by a well executed portrait on steel. This department shows that our friend Skinner has lost none of his enthusiasm for the cause, or ability to manage a journal of this description. Sixteen chapters are devoted to the consideration of various subjects, such as Deep Plowing—The Value and Progress of Agricultural Science—Claims of Agriculture on the Business Community—Southern Agriculture, &c., together with several pages of miscellaneous matters. A lithographic print is given of three of Mr. Gratham's prize South Down wethers, and another of the Silk Plant (apparently a species of "milk-weed,") from Tripoli.

GRAPE-VINES ATTACKED BY ROSE-BUGS.

In our answer in the July No., to an inquiry on this subject, we stated that we had not before heard of this insect having attacked grape-vines. Our attention has been recalled to the subject by a letter from "H. W. S. C.," of Oatlands, near Burlington, N. J. He remarks that his vines suffered from this cause some years since, and refers to a remedy given by Dr. Underhill, in the Cultivator, vol. 9, page 199, which we had overlooked. The remedy recommended by Dr. U., was to go over the vines every morning, and brush the bugs into cups containing water. H. W. S. C. thinks he has "found out a readier way to kill them. He takes a little spirits of turpentine, instead of water, in the cup, which he says saves the necessity of treading on them, as it kills them instantly. "The next season," he observes, "after having practiced this mode, there were certainly not half as many insects as the first, and this year there has been comparatively none, and my vines are now loaded with fruit, with scarce a berry injured by the rose-bugs. The fact stated by Dr. Underhill, that the rose-bugs breed in the ground, is clearly demonstrated by the following fact: I was last summer preparing a heap of compost near my grape vines, which in the fall was put into a green-house in which I was planting foreign grape vines. Early in May I was surprised to find rose-bugs on the young vines in the green-house. I immediately destroyed them, but they kept increasing for several days, though none were seen out of doors for full three weeks afterwards. The eggs, therefore, must have been laid in the compost heap the season before, and brought into the green-house with it, where the heat hatched them thus much sooner than their existence would have commenced in the open air."

THE CULTIVATOR ALMANAC FOR 1846.

This work, with Astronomical calculations for Boston, New-York, Baltimore, and Charleston, has just been issued. It is got up in a uniform style with the previous years, beautifully illustrated with a great variety of engravings, and contains much useful matter on gardening and farming, which we should be glad to see generally circulated throughout the country. Editions will be printed for Booksellers and Merchants, with the privilege of occupying the last page with advertisements, at $15.00 per 1000. Address the publisher of this paper.

☞ The Cultivator Almanac can now be obtained of M. H. Newman, 199 Broadway, and A. L. Halstead & Son, No. 7, Platt-street, New-York—Armstrong & Berry, booksellers, Baltimore—Wm. H. Moore & Co., booksellers, Cincinnati—D. Baker & Co., booksellers, 80 Camp-street, New-Orleans—Wm. Alling, bookseller, Rochester, and T. Morehead, Jr., Erie, Pa.

NARRATIVE OF THE UNITED STATES EXPLORING EXPEDITION.

All the volumes of this work, five in number, have been received. We have before spoken of the two first volumes—to the others we have not given the attention requisite to enable us to give a particular notice of their contents. The narrative appears to detail with all necessary minuteness every important incident, from the sailing of the squadron in 1838, to its arrival in New-York in 1842. In the fourth volume, which we have just been looking over, we find some interesting remarks relative to Oregon, a portion of which territory was examined by Captain Wilkes and some of his officers with considerable attention. A visit was made to Vancouver, a post on the Columbia river, occupied by a branch of the Hudson Bay Fur Company. Here considerable progress has been made in farming and in horticulture—a garden almost vieing with the Chiswick gardens of the Duke of Devonshire, belongs to the post, under the direction of Dr. McLaughlin. "The farm at Vancouver," says Captain Wilkes, "is about nine miles square. On this they have two dairies, and milk upwards of one hundred cows. There are also two other dairies, situated on Wapauta island, on the Williamette, where they have one hundred and fifty cows, whose milk is employed, under the direction of imported dairymen, in making butter and cheese for the Russian settlement. They have likewise a grist and saw-mill, both well constructed, about six miles above Vancouver, on the Columbia river."

"The stock on the Vancouver farm is about three thousand head of cattle, two thousand five hundred sheep, and about three hundred brood mares. At the dairy we were regaled with most excellent milk, and found the whole establishment well managed by a Canadian and his wife. They churn in barrel churns, of which there are several. All the cattle look extremely well, and are rapidly increasing in numbers. The cows give milk at the age of eighteen months. Those of the California breed give a very small quantity of milk, but when crossed with those from the United States and England, do very well. I saw two very fine bulls that had been imported from England. The sheep have lambs twice a year; those of the California breed yield a very inferior kind of wool, which is inclined to be hairy near the hide, and much matted. This breed has been crossed with the Leicester and other breeds, which has much improved it. The fleeces of the mixed breed are very heavy, weighing generally eight pounds, and some as much as twelve. Merinos have been tried, but they are not found to thrive. The California horses are not equal to those raised in Oregon; those bred near Vallanwatta are in most repute."

Of the kinds, quality and yield of the grain and grass grown at Vancouver, Capt. W. gives the following account: "The wheat averaged sixty-three pounds to the bushel; barley yields twenty bushels to the acre; buckwheat, in some seasons, gives a good crop, but it is by no means certain, owing to early frost. Oats do not thrive well. Peas, beans and potatoes yield abundantly. Little or no hay is made, the cattle being able to feed all the year round on the natural hay, which they find very nutritious, and fatten upon it. The grass grows up rapidly in the beginning of summer, and the subsequent heat and drouth convert it into hay, in which the juices are preserved. Besides this, they have on the farms along the river two luxuriant growths of grass; the first in the spring, and the second after the overflowing of the river subsides, which is generally in July and August. The last crop lasts the remainder of the season. Neither do they [the stock] require shelter, although they are penned in at night. The pens are moveable; and the use of them is not only for security against the wolves, but to manure the ground."

DISEASE IN POTATOES.

From several sections we hear there are already symptoms of this disease. B. P. Johnson, Esq., of Rome, writes us, July 18th:—

"I have examined, within the last few days, a number of fields, and find indications of the disease in almost every field. The upper leaves first show indications of the disease—the leaves shrivel or curl up, and it soon extends to the entire stalk. In some instances when the potatoes have been dug, on cutting them open, a small black spot is found in the centre. In others the potatoe appears sound and healthy.

"The disease is not confined, so far as my observations extends, to any particular variety of potatoe, or to any special location. Seed procured from the west, where no defect was apparent last year, suffers equally with seed selected from the crop raised in this section last year. I planted some this year, and made a preparation of salt, plaster and house ashes, of nearly equal quantities, though of ashes the most, and put about a handful in each hill before covering. The vines look remarkably well, and as yet are free from the curl in the leaves. Whether they will escape, a few days will determine.

"I am led to believe, that this disease is somewhat analogous to smut in wheat. As it has made its appearance so early in the season, I hope careful observations will be made, in order if possible to aim at some definite conclusions in relation to the cause of the disease and remedy."

Dr. Camp, of Windham, Greene co., has sent us a couple of insects, of a kind which he thinks causes the rot in potatoes. He states that the blight which precedes the rot, has already attacked the crop, and that on all the affected stalks, he finds more or less of these insects. The healthy vines, he states, have no insects on them.

Col. H. S. Randall's Merino Sheep.—Last season we noticed the enormous clip of the Merino sheep of Col. Henry S. Randall, of this village. This season we learn that his Paular stock, including two rams, averaged over six pounds of *well washed* wool per head! A three year old ram sheared 13 lbs. 8 oz., (the heaviest fleece, we believe, ever taken from a *three* year old Merino in the U. S.,) and a yearling 8 lbs. 8 oz. Many of the ewes sheared 6, 7 and 8 lbs. per head, and one the unparalleled weight of 9 lbs. 1 oz.! Col. R. received the first premium on rams, and the first and second on ewes, at the State Fair at Poughkeepsie, (1844,) and the gold medal of the Society, for the best managed and most profitable flock of sheep, at the annual winter meeting of the Society in Albany. Cortland against the world!—*Cortland Democrat.*

NOTES ON VERMONT FARMING.

(Continued from page 221.)

CATTLE.—Much less attention is paid to the improvement of cattle in this section than to sheep. Several years since some cattle from Connecticut, whose blood has not been duly ascertained, were brought here and considerably improved the stock. Some Durhams have been introduced, and herds are frequently met with in which traces of this blood are to be seen. Mr. PARIS FLETCHER, of Bridport, has a bull showing some fine points, purchased of George Vail, Esq., of Troy, and got by his bull Duke of Wellington. Mr. F. showed us some good yearlings and calves by this bull. Mr. Cha's. L. Smith, of Bristol, has several cows showing more or less Durham blood. Among them is a large, strong-framed, and well-made cow, said to have been imported as a full blood Durham. Several of his cows have the appearance of being large milkers. Mr. Wightman Chapman, of Weybridge, has an Ayrshire bull, presented him by J. P. Cushing, Esq., of Massachusetts.* He is a good bull—has a small, clean head, and clean limbs, a well-shaped body, and mellow skin. With the exception of Mr. Archibald's bull sent to the Poughkeepsie show from Montreal, he is decidedly the best Ayrshire bull we have ever seen. We saw in the neighborhood several very fine heifers by this bull, which have just come to milk. Their appearance is very promising, and we have no doubt they will make superior cows. Indeed we have no doubt that this bull has qualities which would greatly improve the stock of the neighborhood for all purposes.

At Mr. HYDER BARNES's, in the town of Addison, we saw an uncommonly large ox. He is six years old, has as yet only been fed with hay and grass, and was at pasture in only good store trim. His girth at the chine, by our admeasurement, was eight feet six inches. In July last, (a year ago,) he weighed twenty-six hundred and twenty pounds. He is one of the largest oxen we ever saw in the same state of flesh, and if thoroughly fatted, would probably come nearly or quite up to the weight of any which have been slaughtered in this country. Though not *fine* his shape is better than that of such very large animals usually, and he may fatten well. His blood is not known. His color is a rather light red, with a white face, and narrow strip of white along the back.

We saw some good stock in the vicinity of Vergennes. Mr. Rodman Chapman introduced a bull here several years since, that we understood was bred by Colonel Jaques, of Massachusetts, which, from what we saw and heard, evidently much improved the stock. Mr. Chapman now has a cow by this bull, which is one of the best animals we saw in Vermont. Mr. C. B. Cook, of Charlotte, has a young bull and two heifers, which appear to be nearly full blood Devons, purchased in Litchfield county, Ct. They are pretty animals, the bull particularly so.

It is a matter of no less surprise than regret, that farmers in general in this superior grazing section, should be so indifferent to the quality of their cattle. While they have become generally awakened to the improvement of their sheep, and have become possessed of a highly profitable variety, they seem not to be aware that equal advantages would accrue from a systematic and judicious cultivation of the breed of cattle. We will not attempt to say what particular breed would be best adapted to this location. We have no doubt the introduction of the best bulls of either the Durham, Hereford, Devon, or Ayrshire breeds, would be productive of improvement.

It may serve to correct an error, if we remark here that we were in some instances shown stock under the name of Durham, which were a *burlesque* on that celebrated breed. If certain blue-skinned, black-eyed, black-nosed, coarse-boned animals, are thought to be *Durhams*, we cannot wonder at the prejudice which appears to exist with some against the breed!

HORSES.—Vermont, in common with New-Hampshire, has been much celebrated for its excellent horses,—distinguished for the quality of activity, great strength in proportion to size, ability to live and labor on comparatively little food, with remarkable hardiness and endurance. We shall not attempt a minute history of the Vermont horse—this would be fruitless. He is undoubtedly a mixture of several breeds. The first settlers, who were principally from Massachusetts, Connecticut, and Rhode-Island, carried with them such stock as they had. Connecticut and Rhode Island were in possession of valuable horses at a period as far back as the commencement of the American revolution. The horse called *Ranger*,—afterwards known in Virginia as Lindsey's Arabian, said to have been an Arab, presented by the Emperor of Morocco to the commander of a British frigate, and by the latter subseqently given to the captain of an American vessel,—was brought to Connecticut, and became the sire of a numerous and very superior progeny. General Washington's celebrated grey charger, was said to have been got by this horse. The *Naragansetts* of Rhode Island, (so called from being bred in the vicinity of Naraganselt bay,) were famous at as early a day as the horses of Connecticut. What those Narragansetts were, we know not—it has been said they sprung from an imported English Hunter.

It is reasonable to suppose that the early emigrants to Vermont, took with them mares of these stocks; and from the contiguity of the state to the province of Lower Canada, there has always been a greater or less infusion of the blood of the Canadian French horse, which came originally from Normandy. The stock thus derived has been variously commingled, and mixed also with other blood introduced at different times. The rugged features of the country, the rigor of the climate, the mode of feeding, and the general management, have all tended to produce a hardy race, as well as to assimilate them in some degree to a general standard of points.

But the greatest celebrity of the Vermont horses has been unquestionably derived from a particular animal commonly known as the "old Justin Morgan horse." This horse is, we believe. universally admitted to have been the root of the famous race, to which the name of Morgans has been given, though there has been some diverse accounts of his origin. The most authentic history yet obtained, and which, so far as it goes is undoubtedly entitled to full belief, is given by a son of Justin Morgan, bearing his father's name, and now living in Stockbridge, Vt., [see Cultivator vol. IX, p. 99.] Mr. Morgan states that his father removed to Randolph, Vt., from Springfield, Mass.,—that in the year 1795 he visited Springfield, and on his return to Randolph took with him a "two years old colt, which was the same that has since been known all over New England as the Morgan horse." Mr. Morgan does not state anything in regard to the blood of the colt, but is confident his father obtained him in the vicinity of Springfield. This statement of Justin Morgan 2d, is confirmed by John Morgan of Lima, N. Y., [Cult., vol. IX. p. 110,] who states he was a near neighbor of Justice Morgan senior, previous to his removal to Vermont. He recollects the colt purchased by Justin Morgan, which he states was got "by a horse owned by Sealy Norton, of East Hartford, Conn., called the 'True Britton.'" This horse was said to have been stolen from Gen. Delancy, commander of the refugee troops on Long Island, during the Revolutionary war. The Delancy horse is said to have been nearly or quite thorough bred. [Skinner's Introduction to Youatt's Treatise on the Horse, p. 54.]

This we believe comprises all that is positively known in regard to the blood of the *first Morgan horse*. His immediate descendants were numerous, and remarkable for their good qualities, and striking resemblance to each other. Indeed so remarkable was their similarity that they were readily recognized by ordinary observers. Even when crossed with the common country stock, their peculiarities were often obvious to the second and third generation. A horse called "Sherman Morgan," got by the "old Morgan," and owned by Mr. Bellows, of Bellows'-Falls, Vermont, is generally believed to have done more towards giving "character and fame" to the Morgan stock, than any other horse, not excepting the first of that race and name. This horse lived to a great age, and his progeny, which were very numerous, were of unrivalled excellence as *roadsters*. Of the blood of the Sherman Morgan on the side of his dam, we know nothing, but hope to obtain more particulars in future. In 1831 this horse was kept by Col. Sam'l Jaques, at the Ten Hills farm, Charlestown, Mass. Col. J. considered him a horse having a rare combination of valuable qualities.

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* For a cut and description of this bull, see eighth vol. Cultivator, p. 101.

Though we never had the good fortone to see the Sherman Morgan, we saw many of his foals, and without disparaging other horses, can safely say, that they were, as *road horses*, superior to any other stock with which we have been acquainted. It will be recollected that Mr. Hill's horse Black Hawk, spoken of in our June number, is a son of the Sherman Morgan.

Perhaps there is not at the psesent time in existence, a horse which possesses more of the characteristics for which the Morgans are justly esteemed, than Black Hawk. He is certainly a noble and beautiful animal, and we cannot but think well calculated to produce a highly valuable stock. We say this from *conviction*, and with no other motive whatever than a wish to benefit the public.

And here our Vermont friends will permit us to suggest, that, in order to secure as far as possible, the valuable properties for which their horses have heretofore obtained such extensive notoriety, an Association for the Improvement of the Breed, be at once organized. The congeniality of the soil and climate of Vermont to produce the best of horses for certain purposes, has been shown and acknowledged by the high estimation in which many of them have been held wherever known. And had so valuable a stock as the Morgans originated in England, or in any country where superior animals are properly valued and the principles of breeding duly regarded, there can be no question that a successful effort would have been made to prevent its deterioration. But what, it may be asked, has been done in this case? Instead of efforts to preserve and improve their peculiar stock, is it not a fact that the practice in general has been quite akin to that of the boy, who, according to the fable, "killed the goose which laid the golden egg?" In the anxiety to realize *immediate* profits, ultimate consequences have too often, it is feared, been overlooked; and the tempting offers of a hundred, or a hundred and fifty dollars, have too frequently induced the farmer to part with a valuable mare, apparently regardless of the fact that by doing so he was depriving himself of an important pecuniary resource. In this way much of the best breeding stock has been taken away from Vermont, and worn out in the stages-coaches and other carriages of other states, without being allowed to "increase and multiply." This has so far operated to lessen the number of good horses in the state, that there are not now, probably, as many as there were a few years ago. The object of such an assoiciation as is suggested, should be to secure the best mares and stallions for breeding—an object which beyond all doubt might be effected with advantage to the individuals engaged in it, and still greater advantage to the public. We trust that the obvious necessity of the case will induce some effective action among those farmers who are desirous that Vermont should maintain her pre-eminence for rearing valuable horses.

At Addison, we saw the horse *Eclipse*, owned by Mr. E. Long, Cambridge, N. Y., which received the first premium of the New-York State Agricultural Society in 1842. This horse, we believe, is a son of the celebrated American Eclipse. We should suppose him to be an animal well calculated to produce horses of large size, with fine form and spirit.

We were shown some mares of excellent points. Among the best were those of Mr. Y. G. Drake and Mr. Jewett, Weybridge, and Mr. Langdon, of New Haven.

ORCHARDS, FRUITS &c.—Though the winters of Vermont are long and cold, the hardier fruits, as the apple, pear, and plum, thrive well. We have never seen finer apples than we tasted at several places. Some Spitzenbergs shown us by Mr. H. S. Morse, Shelburne, were superior examples of that noted fruit. Plum-trees appear very flourishing in many places, and we were told produced abundantly.

In the garden of the Hon. Ezra Meech, Shelburne, we found vegetation more forward than it was generally in the gardens of this city and Troy at the same time. At this we were somewhat surprised, especially, as besides being more than a hundred miles farther north than Albany, it was located immediately on the verge of Lake Champlain, naturally exposed to the full sweep of the coldest winds. We soon discovered, however, that the garden was completely protected by a belt of white ceder—the American *Arbor vitæ*. This had so broken off the cold winds that the effect was equivalent to a transfer of the spot several degrees to the south. This is a striking example of the advantages of protection from cold by means of evergreens—a means which ought to be generally adopted in the northern states, and all bleak, exposed sections. Mr. Meach has a pretty conservatory, well filled with plants, which, together with the garden, appear to be well managed. We regretted that circumstances prevented our examining Mr. Meech's extensive farm. We understood him to say that he kept two thousand sheep, and two hundred cattle, &c.

FACILITIES FOR MANUFACTURING.—Few sections of the country can compare in this respect with those portions of Vermont through which we passed. The valley of the Otter-creek, especially, possesses an almost incalculable water-power, but a small portion of which, comparatively, is yet improved. In the space of eleven miles, from the commencement of the rapids above Middlebury-falls, to the foot of the falls at Vergennes, there is an aggregate fall of three hundred and ten feet. For a large portion of this distance, the banks of the stream are solid, affording numerous level and excellent sites for the erection of manufacturing buildings. Establishments for the manufacture of wool, and for other purposes, are now in operation at Middlebury, Weybridge, and Vergennes. We were informed that they all do a successful business, and it is believed that a further investment of capital might be extensively and profitably made here. We would invite the attention of manufacturing capitalists to these facilities.

FARM OF HENRY S. MORSE.

Among the fine farms we visited during our excursion to Vermont, we were not more pleased with any than with that of Mr. HENRY S. MORSE, situated in Shelburne, Chittenden county, about six miles from Burlington. It consists of one thousand acres, lying in a body. Its location is beautiful, being on a large swell, commanding a fine view of the lake and the interesting scenery on either side, for a wide extent.

Mr. Morse devotes his farm principally to keeping sheep, though he is under the necessity of keeping considerable other stock, (horses and cattle,) to carry on all his operations. Cattle are also sometimes fatted for market, but this branch has latterly been found less profitable than wool-growing. He has two thousand sheep, nearly all of which are of the Merino and Saxon blood. The whole flock averaged last year a fraction over three pounds per fleece. He pursues a very judicious course with his wethers. He always feeds them well, and at three and four years old they receive high feeding through the winter, are sheared as early as the season will permit, and sold soon after, to be driven to Brighton for slaughter. Mr. Morse had, when we were there, two hundred weathers which would be ready for sale as soon as they could be shorn, and were considered worth $2,50 per head. They were the best lot we ever saw of that breed—fat and large. They yielded on an average last year five and a half pounds of wool, worth forty cents per pound, or $2,20 each. He has also another lot, younger than these, which will be ready for sale next season. He raises peas and potatoes for feeding his sheep and other stock in winter. He is much in favor of the pea for sheep. The crop is mowed, properly cured, put in the barn and fed out to the fatting sheep in winter, without threshing. He finds this the most valuable crop he can raise for that purpose. The store-sheep are likewise fed with peas in small quantities.

The potatoe is well liked, in connection with other food, for sheep, and particularly for fatting cattle. The stock fatten well on it, and the beef is of good quality. The only objection to the potatoe, is the difficulty of feeding it in cold weather.

Washing Sheep.—Mr. Morse's plan for doing this is worthy of notice. A dam is thrown across a small, clear and rapid stream, near his barns. The bottom of the pond thus raised, is so covered with small stones that it is impossible to make the water muddy or sandy in the least. A platform is laid from which the sheep are taken into the water, and when their wool is cleaned, they pass out by a hard, McAdamized bank, to a clean grass-lot on the opposite side. Four men can work in the water at once, and two thousand sheep may be completely washed here in one day.

Barns and winter shelter.—Mr. Morse's barn and fixtures for winter sheltering and feeding, are well arranged. The yards are well protected from the coldest winds by sheds attached to the barns. In the sheds are racks and feeding boxes sufficient to accommodate the sheep in bad weather. In fair weather they are mostly fed out of doors. When the yards are covered with snow and are hard and clean, they are sometimes foddered on the snow. Water is brought in an aqueduct, and there are troughs in each yard through which the water is constantly running.

Grass Lands.—Mr. Morse mows about three hundred acres annually. The average yield of hay is one and a half to two tons per acre. He has one field of sixty acres, beautifully set in grass. He prefers plowing his meadows or grass lands as little as possible. The first object is to get them as level and smooth as possible, and the grass thick and even. When the sward becomes bound or the grass declining, manure is spread on in autumn, made fine and worked in with a bush or harrow. The ground is naturally moist, and the manure being put on at this season of the year is not wasted by evaporation. The fields show that the system answers well.

Fencing, draining, &c.—A considerable part of Mr. Morse's farm, was naturally too wet. In the division of the farm by fences, he has had regard to remedying this defect. Trenches have been dug to the depth of two or three feet, (according to the nature of the ground as to wetness,) and filled with small stones, of which there have been considerable quantities on some parts of the farm. The trenches so filled answer the purpose of drains, and the fences are erected on them. What is called "half wall," is a kind of fence quite commonly made on the farm. It consists of stones, the largest of which would not probably weigh over two hundred pounds, laid up in a double row, to the height of two and a half to three feet, and the fence finished by two boards or rails, the posts for which are set before the stones are laid up. Besides these trenches other drains have been made and covered. In this way, many acres, which, when Mr. Morse came into possesssion of the farm, a few years ago, were nearly worthless, now constitute some of his best lands for hay.

Maple Sugar.—The manufacture of this article is carried on to a greater extent in Vermont than in any other part of the Union. It is now in many cases produced with profit, and no doubt may be made a source of considerable income. We were surprised at the quantity of sugar which is produced from a tree. We saw a handsome sample of a hundred and thirty-six pounds made from twelve trees, by Mr. Isaac Landon, Cornwall. Mr. Morse made a thousand pounds, and Mr. Lyman Hall, a neighbor of Mr. Morse's, made twelve hundred pounds last spring. We have samples of Mr. Morse's which are excellent. The whole lot would readily command ten cents per pound. The process of manufacture has been much improved of late. Mr. M. now boils the sap in shallow pans, and it is "stirred off" in graining. But as we do not fully understand the business, we hope Mr. Morse or Mr. Hall will furnish an article in relation to it.

The quantity of sugar that might be produced from an acre properly planted with the sugar maple, has never, perhaps, been ascertained; but we have no doubt that at least fifteen hundred pounds might be easily obtained. Allowing one tree to a square rod, or a hundred and sixty to the acre, and estimating the produce at ten pounds to the tree, (which is less than is frequently got,) the aggregate produce would be sixteen hundred pounds. The trees might often grow on land not valuable for other purposes, as on rocky hill-sides, and by the borders of fields and high ways—so set as not to keep the roads wet by their shade. What are called "second growth" trees are preferred for sugar. They have generally larger tops and more leaves, by which the sap is probably better elaborated.

TRIAL OF THE CENTRE DRAFT PLOWS.

Mr. James Pedder, general agent for the sale of Prouty and company's Centre Draft Plows, brought to this city in May last a number of these implements. They being comparatively but little known in this vicinity, several persons were desirous that a public trial should be made with them under the supervision of a judicious and impartial committee. This was more especially wished, as an unfavorable report had reached this country in regard to the performance of this plow, and that of Messrs. Ruggles, Nourse and Mason, at the exhibition of the Royal Agricultural Society of England last year. The work of the American plows at this trial was represented as *decidedly bad*—a result for which we are wholly unable to account, except on the ground of the plowmen not being well acquainted with the somewhat peculiar construction and operation of these plows. We have seen the operation of several of the most celebrated English and Scotch plows, which have been brought to this country, among which we will name that of the celebrated *Ransome* plow, which received the highest prize at the English trial referred to. With the exception of this, we are confident we have seen no imported plow, which, everything considered, can be deemed equal to the American plows mentioned. The Ransome plow which we saw, was imported a few years since. It is unquestionably a good one. Some late improvements are said to have been added, of which we cannot speak. We know not what would have been the result of a comparative trial of this with the best plows made in this country; we however hope that such trial will yet be made—but at present we can only express our concurrence generally with the conclusions of the committee in regard to the work of the Centre Draft Plow, as set forth in the following report:

REPORT OF THE COMMITTEE.

We whose names are underwritten were solicited to examine the Centre Draught Plow and witness its performance, at the farm of T. Hillhouse, Esq. The performance of this duty was certainly far from being courted by any one of us. But having been selected for that purpose, it would have been uncourteous to have declined; and having performed the duty, it is incumbent upon us to report the result of our examination. We have no desire, we must state in the outset, unduly to magnify the Centre Draught Plow, nor to praise unduly its performance. Neither can we be prevailed upon (even if desired so to do) to undervalue all or any of the various new and improved plows now before the agricultural community, which are brought in competition with it. But we nevertheless willingly report truly and fairly the facts in the case.

The committee are almost strangers to each other—inhabitants of different parts of the state—chiefly, if not entirely, practical men, and accustomed to use (and perhaps prejudiced in favor of) other plows. Yet, with entire unanimity, we concur in the opinion that the Centre Draft Plow is not surpassed by any plow with which any of us are acquainted. The work performed by it is equal in excellence to any thing we have ever seen, and performed with as little labor and fatigue by both plowman and team, as it could, in our opinion, possibly be done.

Perhaps nothing more than the above need be said, as it comprises in general terms all that we can say, or that it can be desirable to say. However we will add:

This plow can be adjusted with the greatest nicety, both as respects the depth of the furrow and the width of furrow slice, with perfect facility and ease.

We are quite sure that it runs very light and is of course easy for the team. But we did not make any trials with the dynamometer, and therefore are unable to make any comparative statement, between the draught of this plow and that of others. All we pretend to offer upon this point, is the result of our observation upon the apparent effort and fatigue of the team; a conclusion which can be relied on to some extent, though we admit, far from being conclusive. We however would remark, by way of fortifying our opinion, that at the celebrated trial of plows, made at Worcester, a year or two since, this plow bore off the premium of one hundred dollars, after a very severe competition with some of the most celebrated plows. So far as the plowman is concerned, we can with certainty assert, that severe labor and strenuous effort on his part is almost entirely done away. Even skill is comparatively useless in working with this plow.

This may seem a strong position to take; but in confirmation of it we must state, that we saw furrow after furrow plowed with great nicety, the hand of the plowman having been laid to the plow only to enter it at the commencement of the furrow. As to the style of work performed, we can only say, that some of the plows lap the furrow slice, (and they are those which we prefer,) and to which our report mainly refers, while another (the one to which the one hundred dollar premium was awarded at Worcester,) turns the furrows flat.

The workmanship of the plow is excellent, and we beg specially to commend the casting of the share from a composition which is much harder than ordinary cast iron, thus ensuring a great degree of durability to the plowshare. If to this it be added that the share is also constructed upon the self-sharpening principle, it can easily be conceived that the purchasers of these plows are ensured against the too frequent recurrence of the vexation that results from the rapid and often *unexpected* wear of the share.

In conclusion, we would remark that this plow has obtained great celebrity, and has received and is daily receiving the cordial approbation of men whose opinion, have far greater weight than ours. We believe that is has lost none of its celebrity by the trial which we witnessed, for out of the numerous company present there was not one who did not seem to be both surprised and delighted with the performance of the plow.

It may be asked how it comes that both this plow and the Worcester county plows, Messrs. Ruggles, Nourse & Mason's, were condemned at the fair of the English Agricultural Society last year. Nor is it easy to answer the question. Prejudice, national prejudice may have had something to do with it. All we can say is, that some of the committee at least were practical men; we have reported only that which we saw. Moreover, there was present on the ground an English plowman, recently arrived, whose judgment was perfectly unbiased, who pronounced this equal to any English plow he had ever handled, and fully concurred with the committee in the opinion expressed by them.

J. B. Nott, Albany Co.
T. Hillhouse, "
John McVean, Monroe Co.
C. Hannam, Genesee Co.

PLOWING FOR WHEAT.

But few farmers are willing to undertake the purchase and use of the subsoil plow, but all may adopt the practice of *deep plowing* by the ordinary method. In many parts of the country, the soil may be much improved in its wheat-raising qualities, by throwing up and mixing with the surface, a small portion of the subsoil. In some instances this has been attended with strikingly successful effects. In others, where the subsoil has been thrown on the surface, the increase in the growth of wheat has been almost incredible. A neighbor scattered the earth taken from a ditch over the surface for many feet on each side. Afterwards when the crop of wheat averaged on the rest of the field scarcely five bushels per acre, the portion which had been thus covered with subsoil, yielded from twenty to twenty-five bushels per acre. In this case, the soil was light, and the subsoil somewhat clayey, and contained a small portion of carbonate of lime, effervescing slightly in acid; the operation rendered the soil stronger, firmer, and better adapted to the growth of wheat. Doubtless large portions of our country might be thus greatly, and perhaps permanently improved, by the use of such manure, thus lying in immense quantities just beneath the surface. But there may be other subsoils not only useless, but actually detrimental; hence the necessity of discrimination and care.

PEAT AND POND MUD.

In many localities, it is not practicable to obtain these enriching substances except at the driest seasons of the year, when the water is evaporated which usually covers them. The vast quantities of them which abound in many parts of the country, especially of peat and swamp muck, while the scant crops of the adjoining fields show how much their presence is needed, ought to stimulate a greater number of our farmers to seize the present opportunity to cart them upon their fields.

Many have been disappointed from the use of swamp muck or peat. Its results are much less striking than those of farm yard manure, not only because it possesses less inherent richness, but because it contains far less of soluble parts, and consequently imparts its strength more slowly to growing plants. This quality however only makes it more enduring. Chemists have found that by decoction in water, vegetable mould loses a small portion of its weight by solution; but if the remaining insoluble portion is exposed to air and moisture a few months, another part may be again dissolved. Thus, peat, muck, and all decayed vegetable fibre, becomes a slow, but lasting source of nourishment to plants.

Disappointment also results from the want of thorough intermixture with the soil. If peat or muck is merely spread in masses upon the surface of the soil, and then plowed in, it rarely proves of much benefit, until, by several years tillage, it becomes thoroughly intermixed. To prevent such failure, it should be very thoroughly and repeatedly harrowed, so as to promote a thorough admixture with the surface soil, before it is turned under by the plow.

By such treatment as this, heavy soils may often be greatly improved, and rendered lighter and more free, as well as more fertile.

But it is when shovelled out and dried, to be mixed with farm yard manure, as a recipient for its volatile or liquid parts, that peat or muck becomes pre-eminently valuable. We say *dried* because if it is already saturated with water, of which it will often take in *five-sixths of its own weight*, it cannot absorb the liquid portions of the manure. But if well dried before hand, that is, if these five-sixths of water are expelled, it will then absorb five-sixths of its weight in liquid manure, and it then becomes eminently fertilizing. The chief reason that the application of peat to barn-yards has not proved of greater value, is, that farmers have applied it when it was already filled with water, and consequently it could take in little of any thing else.

When peat or muck is to be drawn to a distance, it is obvious that a great saving would be made by shovelling it out under large coarse sheds, some months before drawing, that the water may be well evaporated, and so obviate the necessity of drawing several tons of water to every ton of peat.

Pond mud is sometimes a highly fertilizing substance. Where the materials which streams deposit, consist of road-washings, or the drainings of farm yards or of manured fields, they constitute frequently a compost of the richest kind. The same remark will apply to stagnant ponds which have been much frequented by animals, and which have become dry. In the latter part of summer and early in autumn, these valuable materials may be easily carted out on the adjacent lands, and they form one of the best and most suitable manures for wheat, being free from the objections which exist in cases of unfermented or long farm-yard manure.

SHELTER FOR SHEEP.

Every one has perhaps heard of the man whose roof remained unrepaired to the perpetual detriment of all dry articles and sound lungs within doors,—because when it rained he could not repair it, and when the weather was fair he did not need the repair. For a similar reason, many flocks of sheep pass year after year, unprotected because shelters are not needed in summer, and cannot be made in the depth of winter. To induce their owners to adopt an improvement, and provide, in time, suitable shelter for their flocks, we wish to state a few facts in the case.

Lewis A. Morell, of Tompkins county, N. Y., before he had provided shelter for his flock of Saxon sheep, 1200 in number, lost from 70 to 100, during winter, and once lost 150. For the four successive years after protection, the average number wintered being 1,800, the average yearly loss amounted to only 31, being less than 1¾ per cent.

J. W. Childers, of the English Agricultural Society, brought his sheep to shelter about Christmas, and found before two days that they did not eat so much as when exposed, by the proportion of five to three. When in the field, his flock required fifty baskets full of turneps a day; but when sheltered they needed only thirty a day. "Yet such great progress," said he, "did they make, that you would have thought they had been eating fifty baskets a day, when shut up, and only thirty when in the field." In another experiment, which was accompanied by accurate weighing and measuring, where turneps and oil-cake were given as food, the quantity of turneps diminished in a few weeks nearly one quarter, and the oil-cake diminished about one-third; while the increase of weight resulting from shelter was more than one-third. The Editor of the English Agricultural Gazette, inferred from actual experiments, performed by himself, that twice as many sheep might be kept in a fatting condition on the same quantity of food under perfect shelter, as under entire exposure. If these results were obtained in the mild climate of England, what may not be expected in our severe winters?

L. A. Morell is satisfied that at least one ton of hay to the hundred sheep is saved by protection every winter. "Of oats, which I fed liberally before protection, the amount saved is equivalent to 500 bushels each year, and yet my sheep have been in finer order than when they were grained; showing, notwithstanding the virtue of grain, that there is *more virtue in warm shelter.*" The same successful manager has also found that the aggregate increase in four clips of wool from his flock, resulting from protection, amounted to 1250 lbs.; and that the *increased* number of lambs exceeded one hundred a year.

In view of these facts, we wish every farmer to make a calculation of the whole amount of food thus saved every winter, the increase in the weight of his sheep, the saving of life, the increase of wool, and the increase in the number of his flock.

If it will cost one dollar per head, to winter sheep by the ordinary way, then to winter 1000 would cost $1,000.

One third of this saved would be..................	$333
The difference in loss by wintering, according to L. A. Morell, would be about 50 sheep, which at $2 each, would amount to.....................	100
Putting the increased value of his sheep, by increase of weight, at one tenth the value of the flock, ...	200
Increase in the fleece, say 160 lbs.,................	60
Increase in lambs, say 60,........................	50
	$743

equal the total saving every year, by the use of suitable shelter, at a very moderate estimate, and which would abundantly pay for suitable sheds, if they required erecting every year.

Now is the time of year to make preparation, to prevent the disastrous results, which must always attend exposure through our long, stormy, and freezing winters. For directions in the construction of sheep sheds, see the Cultivator, vol. 7, p. 15.

LECTURES ON THE CHEMISTRY OF VEGETATION.

We have been exceedingly interested in reading the reported sketches of Dr. Playfair's lectures on this subject, lately published in our foreign exchange papers. We have, however, only room for a brief notice of the most interesting portions. The point to which he first called particular attention, was the great care displayed by nature in the introduction and protection of seeds. Some were surrounded with a hard scaly armour of flint as in the seeds of corn; some have thick coats, such as beans and peas; others are protected by hard shells, and placed in the midst of a pulpy, fleshy covering, destined as manure for the seed, such as the peach. In all, the greatest care was taken to protect the seed from injury until the period of germination. Three parts were distinguished in all seeds; 1st, the *cotyledon*, which forms much the largest portion of the kernel, and which is in fact the magazine of food for the young plant; 2nd, the *plumule*, plume or *gemmule*, which is the young embryo that is afterwards to become the stem of the plant; 3rd, the *radicle*, or part which is to become the roots. In the common garden bean the cotyledon is divided into two portions called lobes; the plumule or embryo stem is the small white point observed at the upper part of the divisions or lobes, and the radicle is the curved white cone which is found at the base. The most frequent form in seeds was two cotyledons; but in other seeds, for example the grasses, in which the food is only in one cotyledon, and in other seeds, there were compartments for the primary food. Consequently, botanists divided plants into two great divisions; those having the food of the embryo stored in one magazine—the monoctyledonous plant; and those having two or more compartments—the dicotyledonous or polycotyledonous plants. These two plants possess capital differences. As soon as those essential parts of a seed, the plumule, radicle, and cotyledon, are formed, it loses all activity, and life apparently becomes suspended, until called forth for the purpose of re-production. Under favorble circumstances, seeds may be kept for a very long time in this inactive state. He had himself seen, in Mr. Miles' garden, at Bristol, wheat growing, the seeds of which had been found in a mummy; Pliny states a case where he had known wheat to grow after 100 years; and Home mentions an instance in which rye grew after 149 years. Coffee beans are the seeds which most easily lose their suspended vitality; for they refuse to grow, unless planted immediately after being taken from the bush. But expose a seed to the combined influence of light, air and moisture, and the suspended vitality becomes active. The embryo plant feeds upon the nutriment in the cotyledon; the radicle protrudes from the seed, descends into the ground, and forms roots; the little plumule ascends, and forms a stem, and the cotyledon shrivels up and disappears. The little plant now feeds itself from the air and the soil, and grows apace. The stem increases in height and throws out branches, and leaves, and the roots diverge in search of food. It was long a question of dispute to what force the form of a tree was owing. Some philosophers said the roots descended into the earth, because they loved moisture, and the stem ascended because it loved the air. But Detrochet showed this was not the case; for he took a box and bored holes in the bottom of it, placing beans over each hole, and some moist earth on top of the bean. The roots should have grown up in the moist earth and the stems downward into the air, if that opinion had been correct. But this is not the case; for the radicles went downwards into the air, and the stems ascended into the earth; and in a short time they shriveled away and died. Be the force, then, what it may, roots have a natural tendency to descend, and the stems to ascend. That this has some intimate connection with gravitation, Knight has shown by his beautiful experiment. Mr. Knight arranged wheels driven by water, in such a way that he could either drive them horizontally or vertically, and regulate their speed. He then planted beans on the rim of the wheel, in conditions favorable to growth, and then set his wheels in motion. The effect of this was, that, when the wheel attained a certain degree of speed, which, in the case of the wheel in question, was two hundred and fifty rotations in a minute, a new force came into operation—the centrifugal force—and overcame that of gravitation. The roots, instead of descending, obeyed this new force, growing outwards, forming in fact, prolongations of the radii of the wheel; while the stems took the opposite direction, until they came in contact with the axis. But when the wheel revolved less rapidly, so that the force of gravitation was not overcome but merely modified, the radicles pointed downwards, about ten degrees from the horizon, and the plumules pointed upwards at the same angle, and the inclination was greater or less, according as the wheel revolved more or less rapidly. By this capital experiment, Mr. Knight proved that the descent of the roots into the soil, is essentially connected with gravitation. Botanists then considered that the lateral branches were due to the same cause; their natural tendency being to proceed upwards, but gravitation pulling them downwards. To a certain degree only, is this correct. Parasites do not obey the law of the earth's attraction; for they always grow at right angles to the plant to which they are attached, whether that be upwards, downwards, or laterally. Now, branches given off from the stem may be considered parasites, which would grow at right angles from the stem horizontally; but they were also influenced by the upward direction, so that they grow upwards and outwards, and to a certain extent also by attraction, so that their direction is varied. The directions of the stem and leaves, in fact all the green parts, are much influenced by light, which is therefore one great cause of their upward direction, as shown even in the case of a root; when its tip becomes green it grows upwards like a branch; and a stem, put under the ground away from light, grows downwards like a root. Similar love for light is seen in the leaf; the upper part of a leaf is deeper green than the lower surface, and bends upwards to the sky; while the latter is directed to the earth. In some cases, both the upper and under surfaces of the leaf are equally green, and then its edges point to the sky. This was strikingly seen in the plant called bent grass. It had its rough or unpolished side upwards, and its beautiful smooth green side downwards, and it twisted up its leaves to the sun so that the polished side should turn upwards to the light.

The first point in the growth of plants is the germination of the seed, the cotyledon of which contains a stored-up nutriment for the embryo—consisting of some mineral matter, with starch, gum, cheese, and fatty oils; although in some seeds, as in the anise and cummin, the fixed fat is substituted by a volatile oil. The analysis of Boussingault gave 27 per cent. of cheese in peas; his (Dr. Playfair's) own gave 29 per cent.; the two varieties obviously differing. The analysis of the French chemists gave 10 per cent. of this cheesing matter in oats; those made by the lecturer himself, yield between 11 and 12 per cent. The oily matters also vary: some seeds, as that of the colewort, contain 40 per cent of oil; while that of wheat does not contain one per cent. It would be seen then, that in order that a seed should germinate, the concurrence of a proper temperature of moisture and of air was absolutely essential. Formerly, physiologists believed that light was injurious to germination; this error originating in the fact, that seeds germinate best at a certain distance beneath the surface of the ground. But Saussure showed that the apparently injurious effect of light was owing to the drying of the seed when too near the surface. He took two seeds, placed one of them in an opaque, the other in a transparent glass; watering them both alike; and he found that the seeds in the transparent glass germinated first. When seeds are placed under a jar of air, and properly supplied with water, the radicles and the stem soon appear. Supposing that there is no alteration in temperature or in conditions, Saussure, in his first experiments, found that the bulk of the air remained unchanged, although a quantity of the oxygen had been abstracted, and replaced by carbonic acid. This led Saussure to believe, that the first act of germination was simply the extraction of carbon by means of oxygen. Oxygen is quite essential to germination, which cannot be made to take place in any gas not mixed with this element. But what is very curious, carbonic acid gas, which is the primary food of plants is positively injurious to germination. In fact, germination proceeds more rapidly, if fragments of lime are placed along with the seeds to absorb the carbonic acid. Saussure was not quite correct in his first experiments; for, on inspecting them with minute accuracy, he found that some plants actually did increase the bulk of the air, while others diminished the bulk. To Boussingault belongs the honor of having explained this phenomena. That distinguished philosopher, during the last year, had made some excellent experiments on germination. He analysed some seeds before germimation, and set others to germinate. When the plumule and radicle began to appear, he analysed them again, and so on until the stems and the leaves were distinctly formed. The results of his experiments were, as Saussure had perceived, that there is a quantity of carbon abstracted by oxygen; but the loss of weight is greater than can be accounted for by the carbon removed. Some of the oxygen in the seed has also disappeared, so that it was obvious that part of the carbon had become burned at the expense of the oxygen existing in the seed itself; and this circumstance completely accounts for the alteration in the volume of air observed by Saussure. But, after all, this is only the ultimate view of the process; for there can be little doubt, that the operations in progress are much more complex than the immediate extraction of carbon. If seeds in the act of germination be put upon blue litmus paper, the blue color becomes changed into a red, showing distinctly that an acid is produced during the act. Becquenel thought this was acetic acid; but Boussingault suggests with much more plausibility, that it is the acid obtained from milk—the lactic acid. Be that as it may, the formation of the acid indicates that there are intermediate steps in germination; respecting which the chemist is entirely ignorant. When the seeds are examined after the first act of germination, the process is very difficult to follow. The act of germination still progresses; but the act of vegetation does so too, and both are in antagonism. Germination abstracts carbon from the seed; vegetation adds carbon by drawing it from the atmosphere, in the form of carbonic acid. One thing, however, is certain, from Boussingault's analysis, that ammonia now disappears from the seed. These were merely indications how to proceed in our investigations, in order to develope this most interesting act of passive into active life. At present our information might be considered almost *nil;* but the recent researches are full of hope; and if carried on with the united care of the physiologists and the chemist, will doubtless lead us nearer to truth. The uncertainty as to the nutrition of the embryo, ends with the development of the leaves; the young plant has been ushered into being, and we can now clearly follow its course to maturity. In conclusion, he would draw attention to this singular first act of life. The physical function of animals was to expire carbonic acid; that of plants to expire oxygen. But the first act of the embryo was to assume this high function of animals. Reason on this as we might, there was some curious mystery to develope in the extraordinary relations of life. The first act of vegetable existence was one possessed by the most elevated of animals; but then again it assimilated itself to similar functions in the lowest order of vegetables. The fungi do the same; they do not live on the air, but on decaying substances, and breathe out carbonic acid. Was the first act of vegetation a lofty or low act of life? If the exhalation of oxygen from plants were one of the most important purposes of their life (as it doubtless was,) how came it that the lowest order of animals, the animalcules, also possess this function? These were strange anomalies, which however inexplicable at present, philosophers should not relax in their endeavors to penetrate. In fact, as he proceeded he thought he should be able to trace out, in this apparent contradiction, the most beautiful harmony and most exquisite design of means to end—a harmony and design which make us only the more regret that our own ignorance and want of power prevent us giving to them at present a more intimate comprehension.

INQUIRIES.

Artichokes, &c.—G. A. F. (Spartanburg Dist., S. C.) Clover hay, corn fodder, or straw, would do well to feed with artichokes. Some kind of dry food is required to counteract the laxative tendency of the roots. The *tops* make quite good fodder cut and dried before being injured by frost. A mode of planting which appears to do well is, to plant in drills three to four feet apart and ten to twelve inches in the row. We should hardly think any crop would grow to good advantage on the same ground with the artichokes.

Tobacco.—J. P. (New-York.) An able article on the subject to which your inquiries are directed, will be found in our last volume, page 89.

Walls of cobble stones.—"A Subscriber," living in a section where this material is extremely plenty, wishes to know in what manner it could be best made into a permanent wall—what would be the necessary cost per rod, &c. The information will be thankfully received from any who is acquainted with the subject.

Shepherd's Dogs.—Any person having this breed of dogs to dispose of, may find purchasers by giving us notice to that effect, with the price.

VEGETABLES FOR SEED.

Early sown beets, carrots, turneps, parsnips, &c., are not thought so good for seed as those which are sown later, because the advanced ripeness of the vegetable tends to decay, and from the defect of the roots, the seed-shoots are less vigorous than when the plant is allowed less growth the first year. It is therefore recommended that such of those vegetables as are intended for seed, should not be sown till June. The roots will then keep perfectly sound through the winter, and will throw up vigorous sprouts in the spring which will bear good seed.

It has been said that unripe potatoes are also best for seed. We have never tested this by experiment, but it is not unlikely that they may partake somewhat of the same qualities as the vegetables above mentioned, and that the green or unripe ones might sprout and grow the most vigorously.

DONATION IN AID OF AGRICULTURE.

The Hon. Zadoc Pratt has presented to the Greene County Agricultural Society the sum of $250, "to be distributed," in the language of the donor, "along with their other funds, in suitable premiums, at such time and in such manner as the society may judge most advantageous to the cause of domestic industry." It, is, however, suggested that a liberal portion of the premiums might be advantageously bestowed for encouraging attention to the breeds of cattle and horses best suited to that highland region, and for exciting emulation in the making of butter and cheese. Mr. Pratt also further remarks:

"Without wishing to obtrude my opinions on men more familiar with the subject, I would also respectfully suggest that the premium list be arranged so as to excite more attention to the improvement of our native breed of cattle and horses as probably calculated to weather our climate better than some of the imported cattle. Though I would not be understood as underrating the very valuable qualities developed by careful experienced culture in the management of live stock, as well as of the soil."

On the reception of the above donation, resolutions expressive of the thanks of the society were unanimously passed, and "the Executive Committee also resolved, that in arranging the premium list for the next annual fair, premium would be given as far as it could consistently be done, in accordance with the suggestions of the letter accompanying the donation."

Early Progeny.—The *Buckeye Eagle*, (Marion, O.) says a Durham heifer belonging to J. S. Copeland, of that place, aged only 15 months and 26 days, gave birth, on the 13th ult, to a well grown, living calf! Both mother and calf were doing well.

CATTLE SHOWS THIS YEAR.

New-York State, at Utica, Sept. 16, 17, 18—Dutchess County at Poughkeepsie, Oct. 1—Montgomery County, at Canajoharie, Oct. 5—Madison County, at Hamilton, Oct. 1, 2—Otsego County, at Cooperstown, Oct. 1, 2—Oneida County, at Rome, Sept. 9, 10—Greene County, at Cairo, Sept. 24, 25.

Hartford, Ct., Oct. 1, 2, 3—New-Haven, Oct. 1, 2.
Hampden, Mass., at Springfield, Oct. 8, 9.

FAMILY ALMANAC.

Mr. Editor—In addition to the notice in Cultivator of last mo.; (p. 225,) offering premiums for the best mode of *keeping accounts*, &c., the writer further states that he wishes to give in the forthcoming *Family Almanac*, as complete a list of the *Agricultural*, *Religious*, and *Scientific* periodicals of the U. S. as possible. Publishers of such are therefore requested to forward one or more of their nos. to the undersigned by 1st September.

It is intended to publish in this work, a table of *distances, freights*, and *fares*, on all the great thoroughfares of the country, by steam, rail, and stage; as accurate and extensive as practicable. Correct and definite information in furtherance of this object, will be thankfully received, especially from the "great west."

The above work being adapted to, and circulating in all parts of the country, will, it is believed, afford a proper medium for advertisements and circulars of general interest. Such will be inserted at the close of the work, on the same terms as charged in the Cultivator—$1, for 100 words. Address, (post paid), A. F. W., Washington, D. C.

SCRAPS,

Condensed from various Exchange Papers.

Soap suds as manure.—A writer in the London Gardener's Journal, says he found the suds from a tank, when applied to hyacinths in pots, to produce extraordinary effects,—more so than the application of Potter's liquid guano. They also produced very satisfactory results when applied to strawberries and French beans. Circumstances, however, may render it eminently successful only in peculiar cases.

Carrots for horses.—The proprietor of an extensive livery stable feeds his horses on carrots with oats, and considers a peck of carrots and a peck of oats as better for a horse than half a bushel of oats alone.

To get rid of logs, on new lands, and make use of them for manure, some persons pursue the following course: Plow a deep furrow alongside the log, and deepen it by two or three successive furrows, and roll the log in, covering it with one or two more furrows. It completely rots in a very few years, and is then gradually mixed with soil by subsequent cultivation.

Eggs.—A moderate computation would place the number of eggs, consumed annually in the United States, according to Commissioner Ellsworth, at 1,400,000,000; which at an average of 6 cents a dozen, would amount to $7,000,000.

To frighten Crows.—A correspondent of the Boston Cultivator, says nothing is better than to place a few empty barrels in different parts of the field—that the crows are afraid of nothing in plain view, but the fear of an ambscade is sufficient to keep them away. "As to placing effigies in a field for the above purpose, it is only an insult to their common sense; it was but yesterday I saw one of those black-coated gentlemen, perched on a limb of a tree to which one of these pretended scarecrows was suspended making the most ridiculous cawings imginable, either at the image or its maker, most probably the latter."

Productive apple tree.—The Boston Cultivator says, a tree on the farm of Morris Eames. Dover, Mass., grafted in 1835, produced 7 barrels in 1838; 11 barrels in 1840; and 14 barrels in 1842. Nearly all the small limbs were grafted, two hands being a day and a half in doing it. By this means, the top was speedily and entirely changed.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, July 23, 1845.

COTTON.—Ten to twelve thousand bales were destroyed by the great fire in New-York of 19th ult. Prices, 7½a7¾.

BUTTER.—Goshen Orange County, 14a17—Western, 10 a 12.

CHEESE—new, 5½a6.

FLOUR—Genesee, $4.37½—Ohio and Michigan, $4a$4.31¼.

GRAIN—Wheat, dull—Rye, 65—Corn 49a50c.

HEMP—Dew rotted, per ton, $68a$70—water rotted, $90a$110.

HOPS—per lb. 13a14 cents.

HAMS—Pickled, per lb. 6a6½—smoked, 8a8½.

BEEF—City Mess, $9.50a$9.75—Tierce beef, suitable for shipping to England, scarce and wanted.

LARD—(good) 8a8½.

PORK—Per bbl. mess $12a$13—prime, $9.37½a$9.81.

TOBACCO—Kentucky, per lb. 3 cents—Connecticut seed leaf, 8a10.

WOOL—We give Boston prices according to the New-England Farmer of July 16.

Prime or Saxony fleeces, washed per lb.......	$0.40a0.42
American full blood fleeces,...................	37a0.38
" three-fourths blood fleeces,.........	35a0.36
" half blood do	32a0.33
" one-fourth blood and common,.....	30a0.31

FARM FOR SALE.

THE subscriber offers for sale the farm upon which he now resides, situate in the village of Auburn, in the county of Cayuga, and containing 100½ acres.

This farm lies upon the south side of the western turnpike, (now Genesee-st., Auburn,) and is well known as having been the residence of Hon. Nathaniel Garrow, deceased, for many years.

The buildings, fences and other erections thereon, are ample and in good repair; the soil will vie with that of any other farm in Western New-York, for fertility, variety and earliness of vegetation. Great attention has been paid as well by the former as also by the present owner, to the selection and cultivation of choice fruit, and there is now upon the farm, in full bearing, a great abundance of the best varieties of apples, pears, cherries, peaches, grapes, &c. &c. The farm is well watered, durable springs, which give a never failing and ample supply.

The location is believed to be as desirable as that of any other farm in the state, as well for farming purposes as also for the residence of the gentleman or a man of business, being withing a few minutes walk from the Rail Road Depot, and within a few rods of the Female Seminary.

A credit will be given, if desired, for a large portion of the purchase money, for a term of years upon payment of interest annually. Inquiries may be made of the subscriber upon the premises, of Luther Tucker, Esq., Editor Cultivator, Albany, or of David Wright, Esq, Auburn. JOHN REMER.

Auburn, N. Y., July 14, 1845.—3t.

A LAKE FARM FOR SALE.

THE subscriber offers for sale the Farm owned by Hon. Jedediah Morgan at the time of his death, situate on the east side of, and adjoining, the Cayuga Lake, about two miles south of the village of Aurora, in the town of Ledyard, (formerly Scipio,) containing about 360 acres, with a good porportion ot Timber Land, on which the oak and hickory predominate. The road leading from Auburn to Ithaca, via Aurora, passes through the Farm, dividing it into two nearly equal parts.

The land is of an excellent quality, as well for wheat and other grain as also for grass.

The situation and location is believed to be as eligible, and to combine as may advantages, as any other farm in the county. The first point of land which makes into the Cayuga Lake, above the village of Aurora, is a part of the farm.

A large proportion of the purchase money can remain, secured by bond and mortgage, upon annual interest. Any person wishing to view the farm, can do so by applying to C. C. WHITE, the tenant upon the premises. The whole will be sold together, or in parcels, to suit purchasers. Letters of inquiry addressed to the subscriber, *post paid*, will be promptly answered.

DAVID WRIGHT,
Trustee of the Estate of Jed'h Morgan, dec'd.

Auburn, July 14, 1845.—August 1—3t.

FARM FOR SALE.

THE subscribers will offer for sale at Public Auction, on Thursday, the 21st day of August next, at 12 oclock M., on the premises, that valuable farm in the town of Bethlehem, formerly the residence of John H. Burhans deceased, 3½ miles south from the city of Albany, and one mile from the river; containing about 104 acres of land, some 30 acres of which is covered with wood; a good orchard of about 100 bearing apple trees; the dwelling house, barn and other buildings in good order.

Said farm has a never failing stream running through it, and an excellent well affording an abundant supply of water at all times.

Persons desirous of purchasing, will call on the subscriber, H. H. Burhans, on the premises, who will show them the superior qualities and location of the place.

Also, a quantity of household furniture, and farming utensils will be sold. Terms made known at the sale.

H. H. BURHANS, }
P. G. TEN EYCK, } Assignees.

Bethlehem, July 22, 1845.—1t*

LINNÆAN BOTANIC GARDEN AND NURSERY,

Late Prince's, Flushing, L. I., near New-York.

THE new proprietors of this ancient and celebrated Nursery, late of William Prince deceased, and exclusively designated by the above title for nearly fifty years, offer for sale, *at reduced prices*, a more extensive variety of FRUIT AND ORNAMENTAL TREES, Shrubs, Vines, Plants, &c., than can be found in any Nursery in the United States, and the *genuineness* of which may be depended upon; and they will unremittingly endeavor to merit the Confidence and Patronage of the Public, by Integrity and Liberality in dealing, and Moderaton in charges.

Descriptive Catalogues, with *directions* for *planting* and *culture*, furnished *gratis* on application to the *New Propristors*, by mail, *post-paid*, and *Orders* promptly executed. WINTER & Co.,

Flushing, L. I, August 1, 1845.—2t* Proprietors.

TO EXECUTORS ADMINISTRATORS AND GUARDIANS.

New and Important Law Book Just Published.

THE "*Executor's, Administrator's and Guardian's Guide*," containing a summary of the Laws of New-York, regulating the appointment, powers, duties, rights, and obligations of Executors, Administrators, and Guardians, with general directions appertaining thereto, to which is added an Appendix, containing many of the practical forms necessary to be used by them in the transaction of the business relating to their several trusts, &c., by David Wright, Esq., Counsellor at Law.

Published and for sale wholesale and retail, by

J. C. DERBY & Co.,
Law Booksellers, 107 Gen. St.

Price $1,50. Auburn, N. Y.

N. B. Persons at a distance, wishing a copy or more of the above new and valuable work, can have them sent by Express, *free of expense*, (upon remitting the amount by the same way) to the different Depots on the line of Rail-Road, as we are the Express Agents of Livingston & Wells, at Auburn.

☞ Agricultural Books of all kinds kept constantly for sale by

August 1—1t. J. C. DERBY & Co.

DR. VAN BUREN'S RHEUMATIC EMBROCATION.

RHEUMATISM ANNIHILATED.

THE proprietor of the Rheumatic Embrocation, comes before the public with increased confidence in the healing virtues of his remedy; for since he first offered it to the public, it has been tried in the worst possible, and most aggravated cases, over which it has completely triumphed; in some instances, indeed where the patient had been given up by the attending physician as incurable; and in many cases where all the remedies placed before the Public for the cure of rheumatism, had been faithfully used, without the least effect; thus proving its transcendent superiority. It will allay the pain and soreness, (sometimes in a few minutes,) and reduce the swelling in a much shorter time than can possibly be effected by any other means; in fact, will relieve when all others fail; nor can injury result from exposure after its application. The patient will also be less liable to another attack after being cured by this remedy, than by other appliances; as it cannot effect the constitution in the slightest degree, nor impair the parts immediately involved; but on the contrary, will restore them to their original healthy condition and usefulness. One of the most important advantages this possesses over all other remedies is, that where it is properly applied, no contraction of the tendons can possibly ensue; and where contraction does exist, will effectually remove it; thus preventing any distortion of the extremities, and the patient from becoming a cripple for life, as is the case in thousands of instances, where other modes of treatment are adopted. The proprietor has received from various parts of the United States, and is receiving almost daily, the most flattering testimony to the curative powers of his Rheumatic Embrocation; and he feels now more justified than ever in asserting, that it is a never failing cure, in all the various forms of Rheumatism, Chronic or Inflammatory, and in all complaints of an analogous character, such as contracted tendons, stiff or weak joints and back, sprains, bruises &c., when faithfully and perseveringly employed. He cannot occupy the necessary space in an advertisement, or he would place before the public, the documentary evidence of the truth of his assertion. But though he cannot do this, he is willing at any time, to show them to all who may call upon him at his principal office, No. 56 Sand-st., Brooklyn, Long-Island, N. Y.

Agents solicited from all parts of the United States and the Canadas, and dealt with on favorable terms. Price $1 per bottle.

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FOR SALE.

THE farm of Robert White, Jun., Shrewsbury, N. J., highly improved, and in the immediate vicinity of excellent marl. See N. Y. Journal of Commerce.

July 1—2t*

SEED STORE AND AGRICULTURAL WARE-HOUSE.

OUR Spring supply of seeds is now ready, and we shall be happy to receive orders for Field or Garden Seeds, of every description, Black Sea, Italian and Siberian Spring Wheat, Barley, Peas, Clover Seed, Timothy Seed, Seed Corn, Shaker and other Garden seeds, &c. Also, a full assortment of farming tools selected from the best manufacturers in the country. Hoes, Scythes, Forks, &c. cheap by the dozen. E. COMSTOCK.

Rome, Oneida county, March 1, 1845.

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☞ **ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

DR. FEUCHTWANGER'S SCOLICOTOXICON.

RATS, Mice, Cockroaches, Flies, Bed Bugs, Ants, Moths, &c.—The following certificates out of thousands, may give the public an idea of the usefulness of the various preparations, viz:

The room in the building 70 Wall street was badly infested with Cockroaches, and one application entirely dispersed them.
Signed, CHS. MOUNT.

I have used Dr. F.'s preparation to exterminate Rats and Mice, and have wonderfully succeeded in clearing them from house and yard after the first trial. Signed, JOSEPH GRAHAM.

Dr. Feuchtwanger's Fly Paper has been used by me with great success, and near one quart of slain flies has been collected out of curiosity in four days. Signed, A. C. VAN SCHOONHOVEN.

The bed bugs have been cleared out from my store, 211 Hudson-st., effectually. Signed, JOHN SOLOMONS.

The yard in the rear of the Courier & Enquirer office has been for years infestsd by rats, and one application has destroyed them.

The subscriber feels perfectly assured that he is in all instances capable of clearing fields, barns, plantations, granaries, houses, &c., from every species of Vermin, Rats, the large Ants, Weavels, Mice, Cockroaches &c., and believes to say with confidence, that he will and can warrant all his various preparations.

He solicits orders from the country, and promises no person shall be dissatisfied; in short, he can assure his friends that he is performing wonders with his Fly Paper, and Rat and Cockroach Poison. Apply to the oringal discoverer,

Dr. LEWIS FEUCHTWANGER,
August 1—1t. 23 Liberty-st., New-York.

FARM IN ILLINOIS.

FOR SALE—A good farm, with valuable improvements. The subscriber being about changing his business, will sell a great bargain. Also has in immediate vicinity, 2,000 acres choice land, which he will sell at a discount from government price. Address ISAAC HINCKLEY, P. M., Audubon, Montgomery Co., Illinois.

BOOKS FOR SALE.

AMERICAN Farmer's Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale at the office of "The Cultivator."

MR. DOWNING'S NEW WORK.

WILEY & PUTNAM, 161 Broadway, New-York, have just published "The Fruits and Fruit Trees of America, or, the Culture, Propagation and Management, in the Garden and Orchard, of Fruit Trees generally; with Descriptions of all the Finest Varieties of Fruit, native or foreign, cultivated in the gardens of this country. Illustrated with numerous engravings and outlines of fruit. By A. J. Downing. 1 vol. 12 mo., (and also 8 vo.)"

This is the most complete work ever published on the subject, and will, it is hoped, supply a desideratum long felt by amateurs and cultivators. July 1—1t.

HOVEY'S STRAW CUTTER.

THIS machine has received the highest premiums of the Agricultural Societies of Massachusetts and New-York, and has given the most entire satisfaction wherever known. Some improvements which it has lately undergone, it is believed, render it as perfect an implement for its destined purpose, as can be desired. There are six different sizes—the prices of which, range from $12 to $35. The two largest sizes are suited to the application of horse-power, &c For sale in this city. Inquire at the office of "THE CULTIVATOR." July 1—tf.

VIRGINIA FARMS FOR SALE.

I HAVE for sale several good farms, being portions of the estate called Oak Hill, in Loudon county, Virginia, late the residence of President Monroe. It is about 30 miles from Washington, Alexandria and Georgetown—in a most healthy region, well watered and peculiarly calculated for raising stock of all kinds. To industrious and enterprising applicants, very liberal terms of payment will be given. S. L. GOUVERNEUR.

Washington, July 1, 1845—july 1—5t.

FARM FOR SALE.

IT consists of two lots, situated on opposite sides of the Albany and Schenectady turnpike, four miles from Albany. The lot on the north of the road, comprises forty, and that on the south, sixty acres. Both are enclosed by a good fence of boards with chestnut posts, erected a little more than a year ago. The lot on the south side has a small house, a stable with shed, and a good yard for manure, or stock. It is also provided with a well of excellent water. There are permanent streams of water on both lots. The stream called the Patroon's brook runs across the whole width of the south lot With the exception of about a third of an acre on the north lot, both have been entirely cleared, drained where necessary, thoroughly plowed, seeded last year with clover and grasses, and will yield this season nearly or quite an average of two tons of hay to the acre. The two lots are suitable either for one farm or two farms, but will be sold together or separately, to suit purchasers. The natural position, as well as the soil of both lots is good, and cannot fail to give satisfaction. Every thing considered, a more desirable situation could scarcely be found in this vicinity.

For particulars, inquire at this office, or of JOHN McCARDELL, corner of Nassau and Pine-streets, New-York.

July 1—3t.

CENTRE DRAFT PLOWS.

D. PROUTY & Co., Nos. 19, 20, & 22, North Market-st. Boston, manufacture and keep for sale, a large assortment of the most improved Implements of Agriculture, including their celebrated Centre Draft Plows, Cultivators, Harrows, Straw-Cutters, Seed Sowers, Vegetable Cutters, Corn-Mills, Ox-Yokes, &c. &c. For the character of their plows, they have only to refer to those who have used them. The demand for them for a few years past, has been great—they having been sold extensively over the country from Maine to Louisiana, and the western States, as well as in the British Provinces; and have not failed to satisfy all purchasers of their great superiority in the qualities of neatness of workmanship, strength, durability, ease of draft, and complete execution of the work.

N. B. A few of these plows are for sale in Albany. Inquire at the office of The Cuttivator.

July 1—tf.

ROME PLOW FACTORY.

THE Diamond Plow which received the first premium at the State Fair at Poughkeepsie, as well as at every County Fair where it has been shown, is manufactured by the subscribers in the very best style, and for sale at wholesale or retail. Also, some eight or ten patterns of approved plans, as well as Scrapers, Cultivators, Cradles, Mott's Agricultural Furnaces, &c. Orders from abroad promptly filled, aad a liberal discount to dealers.

March 1, 1845. BRAINERD & CO STOCK.
Rome, Oneida county.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

Vol. II. ALBANY, SEPTEMBER, 1845. No. 9.

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

Seven copies for $5—Fifteen copies for $10,00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

OFFICE IN NEW-YORK CITY, AT
M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,
where single numbers, or complete sets of the back volumes, can always be obtained.

☞ "The Cultivator" is subject to newspaper postage only.

Foreign Correspondence.

MR. NORTON'S LETTERS—No. XV.

Laboratory of Ag. Chem. Association,
Edinburgh, July 15, 1845.

L. Tucker, Esq.—During the last month, my changes of habitation were so frequent, in the course of various journeys through the eastern part of England, that I did not find time to write you. My object in visiting England was to attend the annual meeting of the British Association for the Advancement of Science, held this year at Cambridge. At the close of this meeting, Prof. Johnston and myself determined to take a short agricultural tour through Norfolk and Lincoln. We were so fortunate as to meet with companions well acquainted with every branch of farming as practiced in that section. Mr. Breckenridge, one of these gentlemen, is an agent for extensive estates in Yorkshire and Northumberland, and the other, Mr. Johnson, a Yorkshire farmer, who has lately won the prize for the best farm in that county.

We found posting the most convenient way of traveling, as we could then stop when and where we pleased, or turn off from the main road in any direction.

From Cambridge to Newmarket was our first stage. The road is nearly the whole distance upon a low ridge, elevated above the fenny hollows. The soil near the road seemed thin and light, and many fields, in the failure of grass, were overrun with weeds. The soil of the fens is much better, but there is a difficulty in draining, as some of them are nearly on a level with the sea. I am inclined to think, however, that this is not insuperable, and am sure that the higher levels can be perfectly drained. The water from each level is carried round the edge of that below it.

Some miles before reaching Newmarket, we passed from the oalite limestone formation to the chalk, and after leaving that place, we found in a field where they were plowing, the chalk about 6 inches from the surface. The furrow was four inches in depth. The plow was of a very antiquated construction, having but one handle and a wooden mold-board. Much of the farming upon these thin chalk soils is very bad; they are afraid to go down, and keep on skimming the five or six inches of surface soil year after year, without any attempt to deepen it. Their name for barn-yard manure is muck, and they never put it upon this light land. The rotation upon one of these farms was thus given us. It was near Thetford, on the borders of Suffolk. 1, turneps; 2, rye; 3, 4, and 5, any grass that will grow. This completes the rotation; and then come turneps again. No muck is applied, but occasionally a dressing of marl. I do not give this as a type of Suffolk farming, but as showing what may easily and frequently be found there. On the better farms we noticed many fine fields of trefoil and sainfoin, they growing more readily and stronger than clover.

We now entered Norfolk, and kept almost directly north to Walton, passing through some wretched farms. Here we saw the Norfolk plow, a very singular implement, having a pair of wheels three or four feet in diameter, with the plow beam rising above their axle, and fastened in a kind of rack by a chain. It looks very awkward, and I should not think that it had much power.

From Walton to Deerham, we noticed a very decided improvement, especially in the wheat and grasses. The sheep from Newmarket to Walton were almost starving in the pastures. The dry weather of last summer was fatal to immense quantities of the seeds, sown for mowing and pastures. About Deerham the country became rich and beautiful; the village itself is one of the prettiest I have seen in this country.

A few miles on our way to Fakenham, we stopped to visit the farm of Mr. Hastings, where we again found a rather light soil on the largest part of his farm. Some of his land however is clay, and this he has drained in a way which is called herring-bone draining. Deep main drains run down the slope, and short drains slanting across the fields enter into them on each side, like the small bones of a fish into its back bone, whence the name. This method has not proved effective, either here or on several other farms where we found it in use; wet spots are left, and the ground not dried so quickly as it ought to be. We astonished Mr. Hastings by saying, that much of his light land also required draining. "Why," said he, "it is too dry already." Our reasons were these; he plows from 4 to 5 inches deep, and under that, in some fields, is a hard, concrete mass of sand cemented by iron; no root can enter it, and when the roots of the grain reach it, the plant suddenly stops growing, and a crop which promises at first to yield 30 bushels of wheat per acre falls off to 20. Now, drains put into this land, would not be to carry off water, but to purify the subsoil, from which, broken up by the subsoil plow, the rains would gradually wash down into the drains the iron, leaving a wholesome soil for the roots to descend into; being thus able to go down, they would also better resist drouth; this assumption experience has amply confirmed in Scotland, within the last two years. Before leaving Mr. Hastings, it is due to him to say that his farm is well worked, his implements are excellent, and his manuring very liberal. He clays his light soils quite heavily. Since taking the farm he has laid at least 200 cubic yards per acre, over many fields.

From this place we proceeded to Fakenham; and thence to Holkham, for the night. Holkham Hall is a magnificent place of the Earl of Leicester's, and the home farm of about 1200 acres, has been quite celebrated in former years. At present there is nothing worthy of much note in the cultivation. The implement sheds contained a greater display than I have ever before seen on one farm.

Eight miles from Holkham, we called on Mr. Blythe, at Sussex Farm, named after himself by the Duke of Sussex, as a token of his approbation. Heavy rain prevented us from visiting many fields here, but we were delighted by what we saw, as well as by the frank, courteous demeanor and practical wisdom of Mr. Blythe.

He has about 700 acres, chiefly a light shallow soil, resting on the chalk. His wheat crop is from 24 to 38 bushels per acre, about the average that we found throughout the country, on the best farms. He top dresses his wheat with nitrate of soda. Bones also he uses very largely, and now dissolves them all by sulphuric acid; indeed, we met with evidence as to the good effects of this mixture on all sides. Twelve lbs. of acid per bushel seems a good quantity to apply; but it must in all cases be previously diluted with once or twice its bulk of water. An excellent way of applying it, is to place the bones in a conical heap on a bed of ashes, and slowly pour on the diluted acid. They will absorb nearly the whole; the outside bones should then be turned inside, and the whole will in a short time become soft and fit to mix with ashes for drilling or sowing.

We were compelled to hurry away from Mr. Blythe, in order to accomplish a visit to Mr. Overman, at Weasenham, distant about 12 miles. Here we found another excellent practical man. He has a fine dairy of about 30 pure Ayrshires, for the butter of which he realizes from £200 to £250 per annum, or from $950 to $1200. His old grass lands were the best we had seen, and were not managed on the impoverishing system too common in Norfolk, of grazing by day, and folding at night on the fallow fields. He also clays his light land heavily, and what is unusual in that quarter, uses the subsoil plow. It was so nearly dark when we left him that we saw but little of the country between his place and Lynn, where we stopped for the night. JOHN P. NORTON.

NOTES OF TRAVEL IN IRELAND.—RURAL AND AGRICULTURAL—No. I.

Dublin, February, 1846.

MY DEAR FRIEND—I risk nothing when I say that the notes of my sojourn in his island, that gave birth to my excellent and revered parents, and that has almost claimed me too as a native, will not only interest you deeply, but assist and instruct you in your present pursuits as a farmer.

First impressions they say are very lasting; if my first impressions are to continue, and there is any truth in the saying of "laugh and grow fat," you may expect to see my dimensions considerably increased by the time I return, for my sides ache with continued laughter since my landing. Porters, jaunting-car boys, waiters, and even the beggars, are constantly cracking their jokes at either your expense or their own. There is a natural wit and drollery about them, that is constantly oozing out at some point or other. I shall not attempt to describe to you the beauty of this city, or of its indescribably beautiful bay and surrounding scenery, but refer you to the various published accounts of them, which you may read with as excited an imagination of their beauties as you please, without the least fear of exaggerating the reality; words cannot, canvass alone may, convey some idea of the magnificence of the bay of Dublin and the surrounding country, gently rising in terraces from the shore to the Wicklow hills and mountains in the back ground, and thickly studded with the villas and country residences of the Dublin merchants and gentry.

Having often heard my father speak of Billy Murphy, the cattle salesmaster of Smithfield, I was anxious to see his old stand, (the space occupied by the stock sold by any particular salesman, is called his stand,) and the market, if not the man himself. On going to bed I ordered the porter to call me at half-past 6, A. M., and to have a jaunting-car at the door at 7 precisely, which was obeyed to the moment; and off I set on this most extraordinary but convenient and agreeable conveyance, (that I shall take another opportunity to describe,) back to back with my driver, who quickly discovered I was a stranger, and who with the inquisitiveness of a yankee, but with great and deferential politeness, soon pumped out of me the country from whence I came; it would be difficult to describe to you the pleasure he evinced on finding I was from America; the numerous questions he successively put to me about certain places where relatives and friends of his own were settled, and the earnestness with which he respectfully insisted on waiting on me with his vehicle during my stay in the city, which I consented to, and certainly I was afterwards not sorry for it, for he proved to be a most intelligent fellow, intimately acquainted with every locality in and around the city, as well as with the persons and character of every man of any note whatever, which he took great pains in pointing out to me as we went along, and much pleasure in always accompanying his remarks with some detail of the history of the man, either good or bad, as his acts might have deserved through life. He was of great service to me, for I gained more information through him in one week, of persons, places, and things generally, than I could have done in two months, without his invaluable aid. Neither was this an isolated instance of the integrity and intelligence to be met with amongst this class of men. I was told, and believe it, that as a body, they are strictly honest, truly intelligent, full of fun and good humor, and temperate to a man. Arrived at Queen-street, which is nearly at the western extremity of the city, I soon discovered I was at the market, and alighted from my jaunting-car. The sight that here presented itself, truly astonished me. At this end, extending the length of two of our squares, is the pig market, (you hardly can hear the word hog used here,) all put into pens in separate lots, which pens are movable, and laid by when market is over, leaving the street quite unimpeded after. A fairer specimen of *fat* hogs I never saw; even in size, not averaging over 200 lbs., in shape equal to the best Berkshires, all milk white, with blooming red skins, it is remarkable that out of several thousands there were not certainly 10 black hogs in the pens. Strange as it may seem to you, I find that they are here only in the commencement of their pork-packing, the first of the season commencing with the New-Year. All these hogs are brought up to market by jobbers or dealers, who make a business of buying them up in the country markets, in ones and twos, from the persons who fatten and raise them, for I am given to understand, that it would be difficult to find more than *two* or *at most three* hogs fattened by any one person, and all fed exclusively on *cooked* potatoes, the refuse of the poor man's table, from the time they are pigged. When you recollect that Ireland supplies England and her navy with *all* her salted provisions, besides fully one half, I am told, of her fresh meat, the fact here stated, of how these hogs are supplied, will give you some faint idea of the extent and importance of the potatoe crop in this country, as well as the immense number of humbler cottagers and householders. When we recollect too, the quality and character of Irish lard and pork in every part of the world that it has ever reached, what becomes of the theory and assertions of all those who have so boldly stated that potatoes possess no fattening qualities, and that good meat could never be made from them? Passing through the pig market, you get into a street fully five squares long, and about 300 feet wide; the center of which, say 100 feet wide the whole way through, is occupied by sheep, which from their likeness to each other, you would suppose belonged to one man, all without exception, of the long wooled Leicester or Bakewell breed, weighing I was told on an average, (the wethers) from 30 to 35 lbs. a quarter, nett. Each lot was neatly and clearly branded with the initials of the owner, and the ewes marked with a small star or dot of tar over the tails, so that the butchers could at once distinguish them as they passed along,; I find that wether mutton is fully one penny or two cents per pound greater value than ewe mutton, and that the latter is generally withheld altogether from market during the two fall months, October and November, it being the rutting season. The sexes even belonging to the same man are in separate pens. I can hardly estimate the number in market, but from 5,000 to 8,000 at least. On either side of the sheep pens, were thickly ranged the cattle, right over the side walks up to the very windows, all of which, on a level with the street, have iron bars, and outside half-shuts, to prevent their being broken in by the cattle. Easily distinguishable from amongst the many persons around, are the shepherds and their trusty dogs, who have brought up the stock from various parts of the country; all, a stout, healthy, well looking set of men, with their frieze (the poor man's home-made cloth,) great coats and large capes, but singularly enough differing in color, according to the province they come from; but the Leinster light grey color preponderating in number by far, as from this province, particularly in the spring of the year, I am informed, that Smithfield receives its chief supply of fat stock; however, I was occasionally pointed to the dark-brown frieze from the far west, (Connaught,) and was surprised to find that few of the shepherds from there, speak any other language than the Irish; they are truly a primitive but most intelligent race of people, and their shepherd dogs little less so than themselves. I never saw finer or fatter cattle in my life, and by far the greater number, and those the fattest and most sought after, were, I was informed, fattened *exclusively* on grass, having had but a little hay given to them since the hard weather commenced about Christmas. I was here again astonished at the great disparity in numbers between heifers and bullocks; there were certainly ten heifers for the one bullock in the market, accounted for to me, by the fact, that heifers were so much more easily fattened than bullocks; the calculation is, that you can fatten five heifers for four bullocks, and that the heifer beef is much superior and of more value. Of the prices they brought, you could form no right estimate without seeing the animals, but you may *guess* as you please when I tell you, I saw many heifers driven out that were sold for over $100 each, our money, and many fat weathers that brought from $12 to $15 each, in lots of tens and twenties. The market is well supplied too with veal, brought in in long two wheeled, one-horse spring carts, with cages in the place of the bed, and carrying from six to ten calves each, many of which I saw sold for $15, and some few very prime ones as high as $20. Veal at this season, is worth on the stall from 7*d.* to 8*d.*, (14 to 16 cents,) per pound. There was also a good supply of early fat lamb, brought in cages similarly constructed, but with three tiers, one over the other, and containing from 30 to 40 lambs each—which readily sold at from 15*s.* to one guinea each; ($3 to $5 our money.) Lamb at this season here, is the greatest delicacy that can appear on the table. At the extreme end of this, is the "Springer market," where the in-calf cows, and those that have calved, stand, and are sold separately. Every thing that comes into the market, is consigned to some "salesman," of which there may be ten in all, but the aforesaid Billy Murphy sells nearly as much as all the rest together. He is the master-spirit and father of the market, having been now over half a century in that business, on the same stand, and in the same house; never, it is said, having failed to attend every Thursday during that period. (Mondays and Thursdays are cattle market days.) Though he seldom comes in on Monday for years back, leaving the sales on that day, to be attended by his assistants, of whom he has three, and a very fine young man, a son, all of whom have a minor interest in the business. Shortly after I got into the market, a man went up and down ringing a bell loud and sharp. I asked a gentleman near what it was for. "Sir, that is 8 o'clock he is ringing." "And does he ring every hour?" said I. "Oh, no, sir; you are a stranger I see. There is a rule of some 25 years standing, entered into between the salesmasters and butchers, that no cattle are to be sold to the Liverpool dealers until after 6 o'clock, in summer, and 8 o'clock in winter, at which hour notice is given, as you see, by the bell-man. This is done to insure the Dublin butchers time to make their selections, for the home consumption."

After walking up and down in silent amazement for some time, I ventured to inquire of a gentleman near me, which was Mr. Murphy's stand. "You are on it, sir," was the reply; "there he stands yonder himself, leaning on that butcher's shoulder. I viewed him for some time, and could not help admitting to myself that he was a great man;—great in stature, great in mind and intellect, great in business, *was* great, very great in politics, (he has not interfered in them though since Grattan's time,) —last year he offered to pay O'Connell's fine, $10,000, himself, for which he got great praise. He is great in wealth, too, being, it is said, worth fully one million sterling, all made in Smithfield as a cattle salesman. My father often told me that when he (Mr. Murphy,) had to fly the country in '98, for his life, on account of his tainted principles, he had but 200 guineas in the world, and since his return in 1800, he has amassed his present wealth. He is now turned of 70, tall, straight as a whip, not well looking, a very marked though pleasing and most intellectual countenance, stern to a degree when he pleases, surmounted by a head of strong, bushy, grizzly hair, not unlike that of our own General Jackson. When I found him for a moment disengaged, I went up and addressed him saying, "I am the son of John ———, your old friend and companion, sir." He drew back and viewed me sternly for a minute, and then came to me with outstretched arms, and eyes filled with tears, and shook me heartily by both hands, saying, "I know you now, I see the likeness; what is your name, my boy?" He quickly turned round, and beckoned to an elderly gentleman near by, to come to him, and said, "John Rorke, allow me to introduce you to the son of our good old friend, John ———, from America; take him into breakfast," and addressing me, said, "let me see you, my boy, before you leave the market. I want you home with me; but now I must attend to business, the business of others." I find my sheet is full, and must conclude, leaving for my next, a discription of the sumptuous breakfast table, prepared every market day by the salesmaster, for his friends and customers, and where in less than half an hour, I was introduced to some 40 or 50 of the élite of the Leinster graziers. I shall also astonish you with an account of Mr. Rorke's farm, where under one roof, he has 350 cows tied up, giving milk, and 200 heifers tied up fattening. Think of that for an Irish farmer!

Adieu. F. I. F.

LETTERS FROM MR. HORSFORD—No. VII.

Having failed to receive our regular letter from Mr. HORSFORD, our correspondent in Germany, we have been kindly permitted to make the following extracts from one of his private letters, addressed to a gentleman of this city, dated Heidelberg, April 7, 1845:

"Through the kindness of the friend who has accompanied me constantly in my tour, I was introduced to the Grand Dukes' Director of Agriculture for the Duchy of Baden. A presentation of several numbers of the Cultivator, opened his heart to the show of every thing that he thought could interest me. Precisely what he is in office, I have not yet learned sufficiently well to define. The University of Heidleberg has a professor of Botany, and also a professor of Agriculture, and a professor of what is called Forest Science. Besides these,—(from all of whom an econom, or perhaps generally teachers of agriculture only, receive a three years' course of instruction,)—there is the so called Director. He watches over seeds, fruits, roots, and the various implements that are introduced among the peasantry, and is manifestly a man of vast service to the nation. I could not help remarking in my excursions with him, that all the peasantry listened to what he said as to an oracle. His residence is in one of the University gardens, which includes perhaps four acres. The grounds are covered with every variety of horticultural product, and immediately in the rear of his house, enjoying a southern exposure, is an extensive green house, abounding in tropical plants. His salary, like those of the professors generally, is paid directly from the government, and he has nothing to do but make science practical—an avocation to which he has devoted himself with genuine German assiduity. He is the author of several works, two little ones of which I intend to translate, if I can find time. They are upon gardening and fruit-growing, written in a beautiful, simple style, for children, and are employed throughout the

Dukedom in the village schools. He has also written a work upon the Cerealia, unexampled in Europe; and has already a work ready for the press upon cottage and out-house architecture, adapting the plans to every grade of want and means of the peasant.

"At seven o'clock, Monday morning, I accompanied the Director, a blacksmith, and a student in agriculture, to witness a trial of four plows; among which was one of American model After a ride of four miles in one of the most inconvenient farm wagons, we reached the place of acti n. It was a tract of land in the valley of the Rhine, about three-quarters of a mile square, owned or worked by four peasants. Near were eight pair of fine, large, fat horses, all trailing plows of the ordinary construction here; every plow having either a pair of wheels, or a kind of shoe near the clevis, regulating the depth. The plows were severally tried and condemned or approved, as the peasants thought proper. The American plow was adapted to much deeper work than they considered necessary, and its behavior created no little amusement. Uncontrolled by wheels, it shook the plowman and his pipe so inordinately that he condemned it in less than twenty yards of trial. Improvement in agricultural implements is just being introduced here, and these different models of plows will be tried by at least four or five peasants, and their form altered, if necessary to meet the unanimous opinion of them; and a manufacture commenced. I will give you in a short space, a summary of much that I learned during my visit.

"They do not plow deep here—generally not more than six inches. The soil is a clayey loam, fine texture for tillage. The cultivation most thorough, notwithstanding the imperfection of the instruments compared with those of America. No pasture-land is here permitted. The cows, which are profitably worked by the humbler peasantry, being stall-fed. There are somewhat extensive tracts of government land, enjoying a system of irrigation from a stream of ten feet wide by two in depth, the waters of which are conducted, when the season is dry, to every twenty square yards, exclusively given to grass.

"The potatoe sickness is well known here, and guarded against by perpetual changes of varieties and soils—bringing from up-land to low-land, and *vice versa*, besides replacing from the seed. Every variety of plant having its period of existence, they look forward to its ultimate extinction, and provide for its replacement. Geology gave us this great truth some time since. This is, however, too wide a field to broach.

"Whole potatoes do better than parts, and potatoes to be planted should be spread out during the winter and kept dry, to prevent the development of the shoots before planting. If the eyes are grown at all, they should be handled with much care so as not to break them off.

"All fruit is grafted. Apples and pears are the chief fruits grown by the peasantry. The trees all appear to me stinted, as if the propagated fruit was already old. They think there are identical fruits here, already 600 years old. I doubt it. The nursery is owned by a kind of county agricultural society, from which the best specimens, after five years' growth, (those from the graft,) are taken by individual members. Of the remainder, the imperfect ones are destroyed, and from the balance, all the peasants who wish them, are supplied, at the mere expense of taking them up. A man having a new variety of tobacco, or of seed which he wishes to try, sends it to the Director, and he gives it to peasants near, directing as to its treatment. The result of the experiment is communicated to the original owner, without charge.

"Agricultural meetings of the *economs* are held monthly, at which questions about every thing connected with agriculture are submitted, and among themselves committees appointed upon them. Of these, and many other matters, I took brief notes, which I will preserve, for they may yet be of service in America. The Director has paid a visit to England to compare agriculture there with that of Baden. In cattle, sheep, and swine, the English are far before the Germans; in cultivation, decidedly behind, he thinks."

Mr. Horsford happened to be at the city of Frankfort at the time of its great Fair, at which he thinks there were engaged in disposing of various articles, about 3,000 people. In this place three of the celebrated family of Rothschilds reside, in reference to whom Mr. H. makes the following remark:

"In walking about town, I passed the residences of the three Rothschilds who permanently reside here. They are fine dwellings, but eclipsed by many in Broadway. (The younger brother, whom we happened to meet, reminded me most forcibly of my friend Mr. S. just beyond the Normans-kill.) The mother of these sons, whose united wealth is supposed to equal 500,000,000 florins, or $200,000,000, still lives in the house that gave them birth, in the so called Jew-street, which is without exception the most wretched avenue I ever passed through. I refer to its external appearance. The first story is occupied by old women and men, in loathsome apparel, engaged in buying or selling old coats, old shoes, broken andirons, nails, bits of chains, &c., every thing exhibiting the most squalid features. This is, however, I was told, a safe guard, for above are indices of the wealth which enables the Jew to do so much toward controlling the commerce of Europe."

Concerning the state of morals and religion, Mr. Horsford observes,

"In Heidleberg the Protestant and Catholic churches worship in the same house, and so they do also in Frankfort—alternately, in the latter town—while in the former, they have thrown up a wall midway between. So far as I have yet seen there is very little church-going here. Indeed the fact that the best operas are always on Sunday evening, would establish what is by no means a question, that the Sabbath is a mere suspension of labor for amusement. In looking over my experience of the Sabbath thus far in this land, where science sheds so much light, my heart turns to New England and the Northern portion of the United States, as my friend Norton in Edinburgh remarks, as the hope of the world."

MR. MITCHELL'S LETTERS—No. IX.

Paris, 23d July, 1845.

LUTHER TUCKER, Esq.—Of the capital of France there is little to be said agriculturally, except to mention the abundant supply of vegetables of every variety—of meats and of fruits. Apricots, peaches, plums, and figs, are in all the fruiterer's windows, and are no less grateful in taste than fair in appearance. Prices for such are less than in English markets, and do not greatly differ from prices at home.

Flowers form no inconsiderable object of sale in the Paris markets, and upon some particular days the value of these exposed for sale has been estimated at 45,000 francs. One or two markets are exclusively devoted to their sale.

Meats range at even higher prices than in the larger number of the English markets; this arises not so much from scarcity, as from the high duties which attend its introduction into the city, and the charges of the slaughter houses. The city duties, or *octroi*, are levied upon every article of farm produce, or home or foreign manufacture, which comes within the city barriers. No private gentleman can go out of the city for an evening ride without stopping at the gates upon his return and submitting to the examination of the officers of the city customs. The poorest peasant with his donkey, or the highest officer of the crown—all but the king—are exposed to the same treatment. Oxen pay per head, 24 francs; cows, 15 francs; calves, 6 francs; sheep, 1 franc and 10 sous. The slaughter houses, or *abattoirs*, are city property, built by order of Napoleon. There are five, and no cattle are allowed to be slaughtered elsewhere in the city. Three are on the northern border, two on the south. The duties paid for admission within the abattoirs are 6 francs on an ox; 4 francs a cow, &c. I was at the largest of these—the Abattoir de Popincourt, yesterday. The buildings, which are built in most serviceable order, consisting of stalls, slaughter houses, attics for drying skins, lofts for hay, tallow houses, &c., are within a high stone enclosure, 640 feet long, by 570 broad. 400 oxen are butchered a week, 600 cows, and 2000 sheep. The bodies of beeves are inflated with bellows made for the purpose, before removing the hide. This renders the skinning a much easier process, and leaves the fat upon the muscle light and fleecy. The meat is taken to the shops at night. An inspector is constantly in attendance, who examines the meat, and if the slightest taint is discernible, it is forthwith sent to the *Jardin des Plantes* to feed the animals of the menagerie. The courts are all paved, and by means of large reservoirs of water, are kept constantly clean. The system is unknown in England, but is worthy of imitation by any country. Paris is indebted for it, to the same mind to which she owes all her great works—the greatest mind that ever belonged to one who called himself a Frenchman.

The beef I saw was miserably poor; and all the arts of French dressing and inflation, and Parisian cookery, cannot make it for one moment compare with the roast beef of Old England. What is true of the beef is more true of the mutton. French art is in the dressing, but English art is in the making of the meat. It is the height of a Frenchman's pride to make a poor beast seem a fat one; it is the pride of an Englishman to make a poor one be a fat one. The different styles of dressing are classified and improved upon, while little attention is paid to breeds. Most of the cattle are hard fleshed and raw boned. The color and shape are of every variety. Average price of oxen is from 300 to 330 francs per head; of cows, 200 francs per head; calves 80 to 90 francs. The principal cattle market is held at Poissy, six leagues from Paris; there is nothing similar to the Smithfield market of London.

There are schools in Paris for nearly every thing but Agriculture. I am not aware of any institution existing to favor its interests.

Whoever imagines all France a sand plain, with little to interest an agricultural eye, has never been along the banks of the Seine. Putting aside all notice of the pictures given of that river valley, which would be uninteresting to your readers—there is yet a show of crops which for variety and richness, I do not remember to be surpassed by any similar extent of surface in England. It is, however, owing more to the richness of soil, than to practice of the arts of cultivation. I saw no evidence of drilling or draining, though my view was necessarily very superficial; and such implements as came under notice, were of the most clumsy and antiquated construction. The lands passed were farmed in small parcels, and not unfrequently five or six crops were seen growing in the same fields. Rye, barley, oats, wheat, and potatoes, are grown in nearly equal quantities. With the exception of some of the alluvial flats devoted to grass, I do not remember to have seen more than five or six acres devoted to a single crop. This minute subdivision of lands, presenting each its peculiar product, gives a singular appearance to the country, and as the road ran over some eminences, along the banks of the river, offering to view a wide extent of territory, the effect was wonderful. The wheat heads are just catching the color of gold, the oats had taken on the whitish delicate green of full bloom, the rye was white, and here and there the reapers, men and women, were cutting or binding it; contrasting with it, was the glossy hue of long lines of Swedes, or the rich deep green of the tangled tares, or the waving and bristling beards of the barley. All these colored crops, in stripes or in squares, covered the whole banks; sometimes stretching down to the very brink of the water, and sometimes running away—their distinctive shades not lost in the distance, far over the opposite hills.

Of the character of the farm buildings, and the domestic habits of the laborers, I can speak more fully in future. One thing is at the outset discernible—great lack of that rural taste which belongs so peculiarly to the English country liver.

My letters are written from the spot, and of the spot I happen to be in; hence little method is observed. While traveling, the same scattered notes must be expected. Should circumstances direct an after continuance of correspondence more order will be used. Meantime, I remain Yours, truly, D. G. M.

Domestic Correspondence.

A WORD OR TWO ABOUT BEE HIVES.

Luther Tucker, Esq.—In making hives for bees, there appear to be two important objects to be gained—viz: Security against the moth, and to obtain the honey without injuring the bees. Almost every new invention attempts to perfect one or the other of these objects. Upon observing these little insects in their wild state, we find them content with almost any clean cavity which contains sufficient space and affords them security against the weather. Learning this fact, it behooves us to give them as simple a contrivance as possible to combine comfort, security, profit, and neatness. They want no "patent fortified palaces," but a home. Give them a convenient and neat one, and they will fortify it themselves against all intruders. I have for several years kept bees, and have taken an interest in obtaining suitable hives for them, have examined a great many patent constructions and believe the following simple one, which is free to all, combines all the advantages of any of the complex patents.

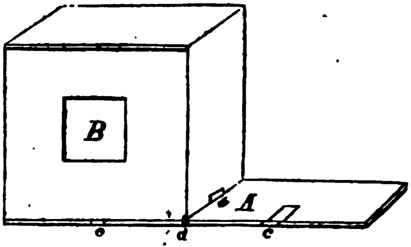

Fig. 80.

Fig 80 represents the stock hive placed upon a movable bottom A, which can be taken out and cleaned at pleasure—B B B, are glass windows, with shutters—c c, show the entrances which are in the bottom board—d, slide made of small hoop iron, working in a saw-cut in the side of the stock hive and controlling the door e, which connects the two hives. When the stock hive is filled, place a brick against the entrance c, set another hive on A, as in fig. 81; draw out the slide d, and the bees finding no outlet excepting through the new hive by the door e, will pass out that way and soon commence building in the additional hive.

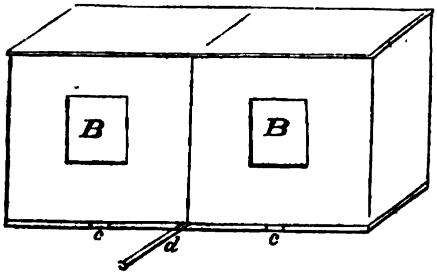

Fig. 81.

These hives are ten inches in the clear in length, breadth, and height, and if made in a workmanlike manner, and painted, are an ornament to any grounds, and will secure all the honey the swarm can spare, to the owner, without injury to one bee.

In regard to the moth, I would remark, there has not one hive come under my observation which offers much security against them. To stop their ravages we must prevent them from laying their eggs about the hive; to effect which the following simple plan (which I see some of your correspondents have noticed,) and which I have tried for the last three years, is perfectly effective:

Take a vessel with precipitous sides, a tin cup or porringer for instance; fill it about half full of mild vinegar or cider, place them at nightfall on the benches or hives, about one to each, and remove them early in the morning. Every miller that passes that way will be found in the liquid. By persevering in this course during the months in which the moth lays her eggs, all loss from er ravages may be prevented. BARCLAY WHITE.

Pemberton, N. J., 6 *mo.* 13, 1845.

SOUTHERN AGRICULTURE.

L. TUCKER, Esq.—Our new postage bill, will, I hope, enable you to receive even more communications than heretofore, though we cannot complain of you in that respect. Hereafter many will pay their ten cents who have never written you, because unwilling to meet the heavier tax.

I am always gratified to read the articles from your southern correspondents, and hope your paper, though located so far north, will prove as much a southern as a northern conveyance of information. The benefit it has already conferred on the agricultural community, is now duly appreciated, but we hope ere long, in addition to such matters as are common to all who are engaged in agriculture, to find valuable information adapted to our own soil and climate.

The agriculture of the south and north, must, under present circumstances, be essentially different. At the north, you hold for instance, a certain quantity of land, and having to hire the labor necessary to cultivate it, and to conduct all proceedings by regular calculation of cost and probable return, you can thus ascertain what amount of land you can work to profit. With us it is different. Land is much cheaper. We have a certain number of negroes, and by this we regulate our animal force. Now we wish to employ these laborers and horses or mules to the best advantage, and at this time it is a question of some difficulty and doubt. If, for instance, we plant only such a quantity of land as we can manure, we must turn some of this force into other channels, and it is a matter of but little doubt, that until some of this labor can be profitably abstracted and applied to manufactures, the improvement in the yield of our cleared lands will necessarily be slow, and the bad system of continual clearing land and waste of timber for fencing, will probably continue. The attention given to collecting manure, is certainly becoming more extensive, and some force is now applied to this purpose which heretofore has been given to working the crops; but this is necessarily limited, and it is not possible to manure any large proportion of our land as it should be. A little sketch of our method may not be amiss.

We keep then, as large a stock of cattle as we suppose we can winter on the offal of our crops, viz: The shucks, straw, &c. (The blades or fodder as we call it being necessary for our horses, and where near a market for sale,) and in the fall, when our corn is gathered in, they glean the fields of the tassels, bits of blades, late and unripe stalks, &c., and the little grass and pea vines, that may be found. These cattle are generally penned at night and given access to the corn shucks and straw, and supplied (by good farmers) with plenty of oak leaves, pine straw, corn stalks, and any litter they may find.

The stables are cleared out now and then, and the manure spread in the cow pen, and fresh leaves given to cover it. It is piled up some time in January, and in March hauled out to our cotton and corn crops; to the latter applied at the rate of about three loads (two horse loads) to the acre, which admits of a good double handful to the hill, the corn being planted 4 by 4, or 5 by 3, or some such distance. This, after being applied to the land every year, will in the course of a few years improve it somewhat. My own practice is to put what manure I have in the spring as mentioned above, and all that I can collect in the fall is given to the same field for wheat. After the wheat is cut, a considerable growth of weeds and grass takes place, and is left to decay upon the ground, to be turned in, if opportunity offers in the fall, though but rarely before spring. I plant no cotton, (but little made in this district,) and the land again has to be put in corn; sometimes in oats. We plant the cow pea between the hills of corn; generally at the second plowing, and this I think a very important addition to our crop. The peas are picked, and the leaves and vines, I think, if not eaten down by cattle, tend to improve the land. The cow pea is a dangerous article of food to all stock when fed in too great a quantity in a raw state; but after the field has been picked over, and only such quantity left as the stock must *travel* a good deal to obtain a meal of, it is very fattening; and helps to put our hogs in fine condition before putting up to fatten.

Those that we are able to gather in by hand are used for feeding our milch cows. They are boiled and eaten very greedily by most, increase the quantity of milk very much, but (what is not generally known,) ruin the butter. For hogs, *boiled*, they are unsurpassed even by corn itself.

I always devote a piece of good ground on which I drill the cow pea—often after rye or wheat has been taken, and when the pod begins to mature, have the vines cut or pulled up and cured as the finest food for our milch cows that can possibly be obtained by us; but they must be properly cured so as to save the leaves, which like clover and lucerne are extremely likely to be lost.

We find that we are so limited in our articles of culture, not being able to cultivate clover or any of the grasses, that a system of rotation for more than three years, cannot well be carried into effect. The quantity of land planted in cotton or corn at the south being necessarily so much larger than small grain, roots, &c., will always interfere in this respect. We find it difficult then, to arrange any regular scheme on paper, but must alternate as convenient. Corn, cotton, wheat, rye, oats, and rest, must be managed as judiciously as we can. The last year I sowed a piece of ground broadcast in cow peas intending it to be turned in for the benefit of the land; but upon reflection, in the fall, when ready to plow it in—reflection caused by casting an eye upon my cows, who would have said, if they could speak—"Ah why not pull these, we would thank you much, and return them to you again in the stable yard, besides getting the benefit of them ourselves." As you may suppose, they were pulled, and my cattle benefited much by the exchange. Whether it would have been more judicious to turn them in, or use them as I did, I think exceedingly questionable. Now sir, if we are disposed to devote a little labor and seed peas towards improving our lands by sowing them on our fields in the year of rest, or after wheat, would it be better to gather the produce to feed to our stock, and even increase our stock to consume it, or plow it in? It would hardly require an increase of stock on even our best plantations, as we all keep more than we can *well* feed in winter. In summer they do well in old fields and swamps.

There are many other considerations that I would suggest, as going to show the essential difference between the north and south, as incidental to our peculiar institution, in contrast with the hired labor of the north, the merits and demerits of which institution, I hope will never be discussed in your paper.

I have extended this to an unwarrantable length, but if you think it worth an insertion I may address you again; if not, it is but a spare moment wasted, of which my health throws many upon my hands within doors.

Greenville Dist., S. C., July, 1845. J. W. G.

CURE FOR SCOURS IN SHEEP.—First take your sheep-shears and tag them, as the filth that adheres to them in such cases, seems to augment the disease. Secondly, pick up a piece of straw or hay, and pick open the issues, as you will find one on the front of each foot, immediately above the division of the hoof, which is generally if not always closed when the animal is thus diseased. Be very careful not to break the skin. It may in some cases be necessary to open them twice a day for two or three days, but once will generally effect a cure. Should it be necessary to administer medicine internally, take good rennet prepared just as the cheese-makers use it to set their curd for cheese, and give from four to six table spoonsful, according to the size or age of the sheep. To a lamb eight or ten months old, I give four spoonsful, and if it is not well in twenty-four hours, I repeat it, and I always cure. I keep the article on hand in a bottle at all times. REED BURRITT.

Burdett, Tompkins Co., N. Y., July, 1845.

NOTES OF TRAVEL IN THE SOUTHWEST—No. VI.

BY SOLON ROBINSON.

[Mr. Robinson commences this letter, by informing his readers, that on the 12th day of February, the date of his letter, the peach and plum trees in the part of the country from which he writes, (the north portion of Mississippi,) are in full bloom. He states that the region is quite new, it being "the much talked of Chickasaw purchase," and that the people live mostly in log cabins. The land is described as being generally good for cotton, but in Mr. R.'s opinion, an investment of more than 37 cents per acre, for a large portion of it, would not prove profitable, on account of the extremely low price of cotton. The course of cultivation generally practiced, is represented as very deteriorating. The land is mostly hilly, and by injudicious management, is said to be greatly injured by washing. Mr. R. says he passed a field in the north part of Yallabusha county, in which he saw "twenty plows, each drawn by a single horse or mule, and some of them pretty poor at that." This land, he says, "was to be planted to corn without any further plowing, and this certainly was not two inches deep in the average." The soil is said to have been originally about six inches deep, but by this mode of barely "scratching" and loosening the surface, it is in many cases nearly all washed away, leaving the fields cut up by deep gullies. But that this wasteful cultivation, which Mr. R. so much deplores, is by no means universal, will appear from his description of some beautiful and well-managed plantations—to one of which he introduces us by a relation of the following pleasant incident, which, though somewhat *elongated*, we think our readers will be interested to peruse in his own language.—Ed.]

Finding so little of the spirit of improved husbandry, and so few with whom I could feel as though I was with old acquaintances, the pleasure of a circumstance that happened to me on this evening cannot be realized by my readers, by any description that I can give; and can only be judged of by other travellers who after toiling despondingly through darkness and difficulty, suddenly find themselves by the warm hearthstone of a new found and unexpected friend.

The day had been warm and balmy as a New-England mid May day, the roads good from the effect of good weather. The blossoms, as I have before remarked, making the air fragrant; garden vegetables green growing in luxuriance; while hundreds of negro laborers, busy in the fields, made the world seem gladsome with their cheerful laugh and jovial song. Yet amid all, I could not feel gladsome myself, for I could not but see ruin following in the footsteps of such a system of cultivation as I too frequently witnessed. In this mood of mind, I passed Coffeeville, the county seat of Yallabusha, just before sun down, and as the town, which is built upon almost as many hills as ancient Rome, offers but little inducement to a stranger to spend a night, I passed on with the intention of stopping at some rodeside house, a mile or two on; but after passing that distance and seeing no more pleasant prospect ahead, I made inquiry of a passing negro, and was assured that I should find no stopping place "this side of Tom Hardiman's, and dat was six mile mighty bad road," which I was bound to get over or stick fast in, with a tired team and in a dark night. On, on, I went, over hills, stumps, gulleys, streams, mud, and in the expectancy of a very poor supper. How I was at length disappointed! Although I found the house a low log cabin, built after the universal, never varying pattern, of two rooms with a broad hall between, I was struck with surprise, and at once impressed with the idea that I should find something out of the common course of things within. Reader, would you know why I received this impression in advance, and that so suddenly, and only from the glimpse I caught by candlelight, as the host advanced to answer my call. Here it is. From the house, yes, from that rude, block log cabin to the front gate, extended a neat arbor for the support of twining flowers, climbing vines and roses. Did you ever see such an outward sign, without feeling at once assured that taste, intelligence, neatness, and comfort dwelt within? At all events I found it true in this instance. In far less time than usual, when waiting upon a negro cook, I was seated at the supper table. The neatness and profuse variety of the dishes with which it was loaded, were rendered still more palatable by the presence of just such a woman as might have been expected from the outside sign which I have mentioned, and the beauty of whose face was undoubtedly improved by the healthful glow that she had acquired that very day by her personal superintendence of the cultivation of her flowers. But weary as she may have been, and late as was the hour, she did not feel herself at liberty to neglect the tired and hungry traveller; and I ate a far better supper that night in "Tom Hardiman's" log cabin, than I had before eaten in far better houses, where better things might have been looked for, only that the lady did not cultivate a flower garden.

Although I am no great believer in clairvoyance, I certainly witnessed here a wonderful case of "guessing," considering the guesser was a Tennesseean instead of one of the "guessing nation."

During supper I observed that I was undergoing a most rigid scrutiny by Mr. Hardiman, who on observing that I noticed him, began to excuse himself by saying that he was struck by a very singular impression which he could not account for, and he had been examining my face to see if he could not recognize the features of "an old acquaintance," whom he had never seen or known, except as he had seen his features in his letters to the Cultivator and other agricultural papers; and though he had never received any intimation that the person he alluded to was in that part of the U. S., he was irresistibly impressed with the idea that I was the man.

My curiosity was excited; my toilsome evening's ride was not forgotten, but looked back upon with pleasure. I had at length found an "old acquaintance," and I did not hesitate to ask him "who he took me for?" And when I assured him that I was the very individual he had guessed I was, I have never met with a warmer reception or apparently given more pleasure by a visit to any real old acquaintance in my life. Somewhere along toward the last end of the night I laid down to take a nap, and in the morning after breakfast, saddle horses were brought to the door, upon one of which I spent the forenoon in looking over the plantation and examining the first specimens I had seen of "side hill ditching," and "horizontal plowing," of which I shall speak further hereafer.

Mr. Hardiman has discovered a fact that the former proprietor of the place was not aware of, and I speak of it here because there are a great many others who have not yet discovered it. And that is, that land lying at the foot of the hills, that receives all the soil that is worked down from them, if once cleared of timber and brush and brought into cultivation, will actually produce cotton. True, it does require a little more labor to clear it than it does the thin timbered and thinner soiled hills; and another thing, it wont wear out, and give the owner an excuse to migrate. When Mr. Hardiman first commenced, he was laughed at by some of his neighbors for trying to cultivate a swamp. But a few ditches to straighten the branches and lead off the standing water, soon proved how much more valuable this kind of neglected land is, than the poor washing hills. Here I saw another curiosity. Hands employed scraping every hole and corner around the buildings and yards for manure.

The food for the field hands is all cooked at the kitchen, and dealt out without weight or measure, and they have all the bacon, corn bread, and vegetables that they need.

At dinner to-day, Feb. 15, I feasted upon some of the largest and best heads of lettuce I ever saw, grown in the open air, and a greater variety of vegetables than I have seen since I left St. Louis, one of which was the Jerusalem artichoke, which, boiled and mashed up like turneps, makes an excellent dish. I presume many of your eastern readers do not understand that the *Jerusalem* artichoke is a kind of vegetable that they have long been acquainted with, and which can be found in some by-corner on half the New England farms. They are a valuable crop, being raised for hogs. Mr. Hardiman has raised Irish potatoes from the same seed, for eight years, and thereby proved that it is not necessary to get new seed from the North every year, "'cause it runs out.' He plants in November, and they ripen in May, but he lets them remain through the summer in the hills.

One fact in regard to his management of negroes might be pursued by parents toward children, as well as masters towards servants. *He keeps them at home;* and he very rarely has occasion to punish.

Having learned that the name of the post-office here was "Okachickama," I found by reference to a memorandum, that I was in the neighborhood of another old acquaintance, John T. Leigh, Esq., and in the afternoon we rode over to his house, and found him reading the S. W. Farmer, where he had just discovered that I was on my way to Mississippi, and expressing his regret to his family that he should not probably meet with me, as he lived off of any leading road. His astonishment and pleasure may be "guessed" at, when Mr. Hardiman introduced the very individual whose name was then upon his lips.

I had only come for a short call. *I stayed two nights.* Who ever escaped Virginia hospitality in less time. How these meetings and joyous welcomes, and show of respect from every member of a family, do sink into the heart and search out every kind feeling, and strengthen every emotion that prompts in the labor of doing good, and promoting the happiness of our fellow creatures. What other recompense can be so dear to one devoting time and talents to increase the knowledge, and consequently add joy to the mind of his universal brethren, as such interviews as the one I have just described and am now describing. Have patience with me, my northern friends, if I appear tedious, but I am anxious to paint you a picture of a Mississippi planter, in which you may see all the little minutiæ of his household; so different, so wonderfully different from your own.

Mr. Leigh works about 35 field hands, including blacksmiths, carpenters, spinners, and weavers; the latter only working in the field in "picking time"—that is, when the cotton is ripe and ready to gather, which in the way of hurry, answers to the time of your harvest. He owns about ninety negroes, old and young, all of whom live in families by themselves, in very comfortable log cabins, some of which are neatly furnished and provided with household matters and things, and others that are exactly the reverse, and look just like some white folks' houses. These families have a weekly ration of three and a half pounds of bacon, clear of bone, for each member, except small children, who are furnished with food in proportion to size and numbers. About a peck and a half of meal is also given, and more, if they can use it without waste, and sweet potatoes, turneps, squashes, onions, green corn, and various other vegetables, as well as melons and peaches, by untold quantities; and all show by their looks that they are full fed and well clothed.

"The quarters," that is the place where the negro cabins stand, are away from the dwelling house, and are so arranged as to be in sight of the overseer's house, so that he can always have an eye to anything going wrong. For negroes, like children, want a deal of careful watching at all times.

When the hands go to their work in the morning, all the children are taken to the nursery, where they are taken care of and fed by a woman who does nothing else. Women never go to the field until the child is a month old, and from then till weaning time, return to nurse them at stated times. Hands either take their breakfast and dinner to the field with them, or have it sent out in little tin buckets, kept for the purpose.

Mr. Leigh has 640 acres of land in cultivation, including about 80 acres taken up in yards, gardens, orchard, &c. Of the balance, he puts 200 acres in corn, 60 or 70 acres in oats, and the remainder in cotton, upon which he made for the last three years, from 125 to 135 bales a year. [A bale of cotton is always 400 lbs.] He put up last year, 16,000 lbs. of bacon, for the use of the plantation, and intends in future, to keep up a supply. This being the first year of the ten since the commencement of the plantation that it has provided its own meat.

He still continues to clear some land every year, and particularly to clear up all the "hard spots" that were left at the first clearing; straightening the crooked channels of branches, and filling up and cultivating the old channels; draining little ponds, &c. But what is of vast importance and necessity for every Mississippi farmer to learn and practice, he has the whole plantation under a complete system of hill-side ditches, by which he wholly prevents the light soil from washing away, and adds greatly to the value of the land, and the annual amount of the crops.

Now if any body should ask "what are hill-side ditches?" I have to say, that the whole of all the numerous hill-sides are ditched with one or more ditches, as may be necessary to take up and carry off all the falling water, almost on a level, and winding round till an outlet can be found to discharge it without injury to the land. These ditches are laid off by a level, and are intended to remain permanent fixtures; and all the plowing has to conform to their shape, and as a matter of course, utterly annihilating "straight rows." This great and indispensable improvement upon Mr. Leigh's farm, was done by his very intelligent son, Randolph, who until the present year has had the sole charge of overseeing the plantation; thereby proving, that one rich planter's son could make himself a useful member of society. I wish I could say all sons were like this estimable young man—particularly my own. In this connection, I must not forget to mention Mr. Leigh's son-in-law, Dr. Town, whose plantation is adjoining, and cultivated under the same system, and which he wholly oversees himself.

Mr. Leigh works 17 mules and horses, and three yoke of oxen; has about 200 hogs, 50 head of cattle, 70 sheep, which are sheared twice a year, and from which he makes all the light negro clothing,—he also makes all the cotton clothing used.

He hauls his cotton about seven miles, where it is shipped on steamboats in high water, upon the Yallabusha river, which empties into the Yazoo, and thence into the Mississippi, above Vicksburgh. All his supplies come through the same source, even a year's stock of flour, which he gets from Richmond, that being the only kind that will keep good through the summer. Who can tell why? It is important to Ohio millers, whose flour can always be had considerably cheaper.

Mr. Leigh has what but few others in this region have, an abundance of stone. It is a mixture of iron and sand, very hard, and is found in layers, with natural smooth fractures, that fit it for building purposes. It stands fire when the edge is exposed to the heat, but if reversed from the position that it is found in, it scales off and flies all over the house like grape shot.

Mr. Leigh is very successful in keeping his sweet potatoes packed in cotton seed, in a well ventilated room; and as a very strong evidence that his negroes do not suffer much want for food, I observed that this potatoe house had no fastening to prevent them from helping themselves if badly pinched with hunger.

Now I think I hear some of my eastern fair readers exclaim, "Well now, I do wish he would tell us what sort of a house this Mississippi nabob lives in?—very splendid, I dare say. Oh, I wish I could see it." Well, madam, it is a common double log cabin, with a hall between. "Why, you don't mean to say, that a man with such a farm, and so many negroes, lives in such a house as *that*?"

Oh yes I do, and very comfortably and nicely he does live too, for he has a wife—ah, a *wife*, madam; not a mere piece of household furniture, such as your boarding school bred farmer's daughter will make—totally unfit for a farmer's wife. "Well now, do tell me where they all stay in such a house as that?" Why, madam, there is another cabin back in the yard—that is the kitchen—no matter that it is so far off the eating room—it is Mississippi fashion; and there are plenty of negroes to run back and forth; and here is another building—that is the smoke house; and there is another, that is the store room; and there are two or three more, those are lodging rooms. No matter that they are ten rods from the house—it is the fashion—and as for that, convenience and comfort is ten times worse sacrificed every day than it is in these household arrangements. True, such arrangements would not suit us at the north, but here use and negro labor make the difference. I have seen in more than one instance, the wood pile more than 40 rods from the house, and "the spring" twice that distance—two inconveniences that a yankee could never put up with. He would sooner have "the well," as well as the wood pile, both in the road, right in front of the door of the house, that almost stands in the road too, to say nothing of all the carts, plows, and sleds, also in the road, "between the house and barn," it is so convenient.

But we have much more yet to see of Mississippi life; and circumstances compel me to take a hasty leave of this fine family—this "fine old Virginia gentleman,"—and now for a little season I again bid you a kind adieu.

SOLON ROBINSON.

TRANSACTIONS OF THE N. Y. S. AG. SOCIETY.

"We will not be understood as condemning the volumes before us. On the contrary, we give great credit to the State Society for the work. At the same time we unhesitatingly say, that they contain much that had better been left out, for it has no connection with agriculture; and some which had better never been written, for it is full of error, and as such renders the authors and the Society liable to censure. The latter appears under the sanction of science, whilst true science will reject it.

"We think the Society have erred in the choice of men to deliver the addresses at the annual Fair. Not but they are men amply sufficient to do justice to the high claims of agriculture; but it is a subject which needs not eulogium nor praise. These it receives from all men, and its highest honor is the prosperity and happiness it confers upon a nation. The farmer needs instruction, not praise; and we submit it as our humble opinion that an address filled with good practical information—examining briefly the principles and the practice of agriculture, and setting forth inducements to advancement in knowledge of the art, would be vastly more useful to the thousands of hearers, than poetic rhapsodies. And in saying this we are conscious that we do not speak unadvisedly. We know it to be the opinion of a large—we might perhaps say—the largest portion of the farming community who attend these Fairs. They are common sense men and want to hear common sense."

MR. EDITOR—The above are extracts from a review in the last number of the "American Quarterly Journal of Agriculture and Science," of the "Transactions of the New-York State Agricultural Society, for 1844." I would refer the reader to the entire article, which he will find in the number for July, August and September, page 109, and at page 114 he will see the portions of the article alluded to.

If I have the right to review a *reviewer*, as a disinterested person standing between the reviewer and the work he comments upon, I must say that I have not discovered, to the extent he has, the defects alluded to; but that as a whole, I have read the last volume of "Transactions of the New-York State Agricultural Society," with both pleasure and profit; and being a practical man, I have no fears but the farmers of New-York will receive it with an interest equal to mine. It is true that every article in it is not unexceptionable, and I would like the reviewer to point out a book as a whole, that is so; still, although I will not say that it could not have been made better, yet I do say that after having began the volume, I could not lay it down until I had read it carefully through, and many of the articles I satisfactorily re-perused. The reviewer admits that as a whole, it may be well enough, although he does not use these words; but this is rather the conclusion to which he arrives; but if he bases his judgment upon the opinion he has formed, of which the above extracts are the exponents, then I have something to say in reply. In the first place he says—"that they," (meaning some of the articles,) "had better never been written, for they are full of error, and as such render the authors and the society liable to censure. The latter appears under the sanction of science, while true science will reject it." Now I object, totally object, to these wholesale remarks, as condemnatory of a single article in the book, and in my opinion, they are much more liable to "censure" than any thing in it. To which particular article or articles, he alludes, you are left to conjecture. If there is any one which true science rejects, it was his duty, standing in the position he does, to have pointed out, not only the article, but the error, and thus made us at least the wiser for his labor; but he assumes too much the attitude of the schoolmaster—to which, possibly, his situation as an editor of a Quarterly Journal of Agriculture may entitle him—who, upon entering his school, thinks he had better begin with a flourish of the whip, and at the same time condemn and praise just sufficiently to put the boys in proper awe of their teacher. I have no objection to assign this place to the Journal, if its editors wish to assume it; but I insist upon it, that they are bound as critics, as well as men of science, to point out defects in communications they comment upon, and thus give the authors of them an opportunity to sustain their opinions if tenable,—if not, to become at least wiser from the instruction that ought thus to be imparted. Until, therefore, the errors in these communications are pointed out and controverted beyond a doubt, I shall have to remain of the same opinion in regard to the Transactions as a whole, that I had formed previous to having seen the remarks of the reviewer.

As to the opinion he expresses, "that the Society have erred in the choice of men to deliver the Addresses at the annual Fair," I must say that I think *he*, not the Society, have erred. I was surprised at the whole tenor of his remarks on this subject, and least of all did I expect it from a man who has placed himself on an elevation, and must admire talent wherever it is exhibited. The address of Mr. Bancroft, to which the reviewer seems to have particularly alluded, at the last Fair at Poughkeepsie, seems to him to have been highly exceptionable, because it was not sufficiently practical to suit his taste. And upon this subject he is "conscious he does not speak unadvisedly." Now I assert, just as confidently, that the address was highly acceptable—was exactly suited to the occasion, and was received with much more than common gratification. Surely he could not have been present at its delivery, nor witnessed nor heard the enthusiasm with which it was received. I, fortunately, was present, and have often since reverted to the scene and the occasion, with unmingled pleasure—nay, more, I have read the address at least twice since its delivery, and have come to the conclusion that no man who attempts an address at a coming state Fair will make it until he has carefully read over Mr. Bancroft's. It was, in my opinion, just what it ought to be, both in matter and form of expression, and it is saying not too much of it, that as a piece of composition, it is a model of beauty, force and elegance. That address will be read wherever the English language is admired.

But the reviewer thinks it was not sufficiently practical as to matter. Now, permit me to ask, if upon an occasion of a State Fair, any remarks but general ones would be acceptable to the thousands assembled? and what part of that address would he have omitted without marring the whole? The subjects touched upon were highly proper in their kind, and there was enough of illustration to make it highly acceptable to the audience. If the reviewer objects to the whole matter and manner of the address, conceding it high merit simply as a performance, then I take issue with him, and say he is mistaken, and upon his own grounds as a practical man. What is the object of these Fairs? In the first place, to draw an audience. Then the object is to obtain a man to deliver the address whom the people generally would like to hear, and whose name will aid in attracting an audience. With that view, Dr. Nott, an accomplished and well known rhetorician, was called upon to deliver the address at Syracuse. Gov. Seward that of the succeeding year at Albany. Daniel Webster and John Quincy Adams were requested to speak the year after at Rochester, and acting under the same impulse, Mr. Bancroft consented to deliver the address at Poughkeepsie. Now, although we were disappointed in not hearing either Webster or Adams in Rochester, still there is no doubt the reputation of all these gentlemen aided very much to give eclat to these fairs. And it must not be objected that because they were not *practical* farmers, that therefore they were not the proper persons to officiate on these occasions. Their reception by the multitudes assembled, and the results, show that they were the very men of all others that should have been selected, and as long as the Society consults its real interests at the State fairs, its officers will select the most prominent men they can find, whether they are farmers or not, to deliver the addresses. But I totally object to the delivery of a practical address at such a time and on such an occasion. When I attend State Fairs and see collected around me the best of every thing the earth or man can produce, I want an orator who is competent to describe the scene, and who can wake up my enthusiasm to a proper conception of the dignity of my employment, and show how much I owe to the talent and ingenuity of others. At a time like this, when the choicest productions of nature and art are around you, with all the embellishments that taste or genius can add, who would think of listening to a man who was lecturing upon the number of potatoes you should put into a hill, the size of a barn door, or the qualities of a pig, in preference to one who, with better judgment and with greater intellect, spoke in glowing terms of what man had done to renovate the soil and improve his condition. At the meeting of Farmer's Clubs, in social converse, or County Fairs, give more practical and useful lessons; but at State Fairs, I would join the *dulce* with the *utile*, and engraft pleasure on profit. If we at all times and on all occasions are to have nothing but the useful, three-fourths of the interest of our State Fairs is gone. By this rule we must exclude all the beautiful productions of our Maker and his agent, man, and confine ourselves to the exhibitions of vegetables, or of animals only. I cannot believe the editor of the Journal such a cynic, nor that he, when he reflects and looks around him, can be disposed to find fault with the beautiful productions of our Creator. Surely he meant these for the enjoyment of man, and on proper occasions, and when we have around us these beautiful displays of his goodness and munificence, it is proper and rignt that the beauty and force of oratory shall swell our hearts and warm our feelings to a just comprehension of our manifold and rapturous blessings. SENEX.

NOTES OF A BOTANICAL TOUR—NO. III.

MR. TUCKER—On the 24th April, 1842, we started on horseback for the Smoky mountains, at whose distant tops over which the clouds were almost continually rolling, I had often gazed during the past few days with longing eyes. I was anxious to be on those tops, to have the glorious mountain prospect—to become acquainted with their structure and vegetation—and above all, I hoped to discover something new. None but the botanist knows, none but the botanist can feel the joy which the sight of a new plant gives, especially if he be its discoverer. At such times he sees beauties unseen by others—tastes pleasures unfelt and unknown to others. What wonder then, that those who have a taste for natural history, rarely, if ever, are addicted to idle or dissipated habits, and for that very reason above all others, parents should cherish a love of nature in their children, resting assured that such love will make them happier and better.

We were provided with pack-saddlebags filled with paper for containing the plants; also port-folios and tin boxes. Dr. Rugel had a large, square tin box strapped to his shoulders and a straw hat tied beneath his chin. Rugel's horse was named Fox. I mounted first and rode on, but soon heard the clattering of hoofs, and Fox dashed by, with Rugel crying "whoa, Fox! whoa, Fox!" his hair streaming in the wind, with tin box and hat dashing up and down at every jump the horse made. I was reminded of John Gilpin's famous race, yet fearful of the result, refrained from laughing, until about a mile farther I overtook Rugel, who had stopped Fox in ascending a steep hill. Equipped as we were, the people along the route probably supposed we were pedlers, who often travel on horseback through the south-western states. The agriculture of this state was in a low state—the people seeming to care for little else than to raise enough bread stuff for their own consumption, depending mostly on raising domestic animals to obtain money. We spent the night at Sevierville.

Early next morning we continued on in company with Drs. Hill and Hammer, who had kindly volunteered their services, and laid in a good store of bacon, corn bread, biscuit, flour, and coffee, with blankets for encamping at night. Our route was along the clear waters of the Little Pigeon river, which forms a fertile and picturesque valley among the mountains, and unites itself with the Big Pigeon river at Sevierville. We crossed the stream some 25 or 30 times, along whose banks the large shrub *Stuartia pentagynia* grew abundantly, with the last year's fruit still attached to its limbs. The *Hamiltonia oleifera*, (oil nut,) in flower, occurred frequently, and on small islands in the stream we first observed *Diervilla sessilifolia* (nobis.) Specimens of this shrub in flower had previously been sent to Torrey & Gray, by the Rev. M. A. Curtis, of N. C., and by them it was considered a variety of *D. trifida*. An examination of the capsules convinced Dr. Gray that it is a different species, and at his suggestion, I published it. We arrived at Stephen Hoskin's Log cabin, 18 miles from Sevierville, about noon, when the thermometer stood at 81 degrees in the shade. Here we left our horses and proceeded on foot by a path along the wild, foaming, noisy Little Pigeon, whose rocky bed was often forded. Six miles from where we left our horses we struck a path to the left, quitting the river when two miles farther; by ascending a good deal and descending some, we reached a small cove where epsom salts were made the preceding summer. On the route we found the true *Phacelia fimbriata* of Michaux, which had not been found by Botanists since Michaux collected it on the mountains of North Carolina. In several places it grew in great profusion, having delicate white fimbriate flowers. Pursh supposed a very common but different species (*P. Purshii nobis*) with blue flowers, to be Michaux's plant, and subsequent botanists were led into the same error. Along the small mountain streams grew the *Diphylleia cymosa*, (Mich.,) in flower. This is very common in similar situations through the mountains of North Carolina. The same is true of the *Saxifraga erosa*, which we first met here. Along the mountain sides were several trees, two to three feet in diameter, of *Halesia tetraptera*, in flower, attaining a much larger size than *H. diptera*, (snow drop) which is common in the vicinity of streams, through the south-western states. It was sunset when we reached the small hut which had been used by the workmen while experimenting on the manufacture of epsom salts. We soon had a blazing fire, and with mountain appetites partook of an excellent supper. The thermometer had fallen to 32 degrees. The open cracks of our dwelling and two blankets afforded but a poor protection from the cold. However, I managed to get in the middle, and slept well, on a stone floor, with one blanket above and one beneath.

26th. A cold, misty, rainy day. We were greatly disappointed on account of the weather. The cove was surrounded by high, rugged mountains, whose rocky summits were often destitute of vegetation, over which the stormy clouds were continually rolling. It was only through occasional openings in the clouds that we had a glimpse of the rugged peaks. During a short cessation of the storm we ascended about two-thirds of the way up the mountain, to the place where the sulphate of magnesia was obtained for the manufacture of salts. Here beneath a high ledge of mica slate we obtained beautiful specimens of sulphate of alumina in botryoidal masses and capillary crystals. This beautiful mineral was very abundant, and the sight of this alone was a sufficient compensation for the toil of ascending the mountain, through the cold, misty rain. We were up among the clouds, which came tumbling over the mountains, down whose sides they descended until the air was sufficiently dense, when they floated, to be dissolved in rain or driven by the wind against the adjacent mountains. We returned to the encampment cold, wet, and hungry. In the afternoon, Dr. Hammer and I attempted to ascend a long, narrow, rocky ridge, leading up to one of the main summits. After much toil in crawling over and under dense thickets of *Rhododendron maximum* and *Kalmia latifolia*, with which the lower portion of the mountain was covered, we emerged into an open space consisting of loose mica slate rocks, partly covered by a low branched shrub, (*Zelophyllum serphyllifolium, D. C.*) It grew from one to two feet high, and was covered with white and pale red flowers, a distant view of which had caused us to ascend the mountain. Here my companion looking round and seeing large gulfs on both sides, said he was afraid to proceed farther, and descended. The ridge was so narrow that at a point some 15 or 20 rods farther, there was a large hole through it, which we had seen during our forenoon's excursion. To reach this point I proceeded, collecting mosses, lichens, and specimens of *Leiophyllum*, until finally I found myself on a narrow ledge of loose rocks with precipices several hundred feet deep on both sides. It was a fearful place. With a palpitating heart I crept back, and hastened down the mountain.

27th. The day was cool and pleasant. Drs. Hill and Hammer returned home, and Rugel and I determined if possible, to reach the top of some of the highest peaks.* After much toil over many dangerous places where a mis-step would have thrown us down precipices on the rocks beneath, we reached a long narrow ridge above the rock which overhangs the sulphate of magnesia locality. Here we met with a few straggling small trees, *Betula lenta*, (sweet birch,) *Pinus fraseri*, (balsam fir,) which answers well to the description of Pursh, and is certainly very distinct from the *Pinus balsamea* of New-England. Such deep gulfs were between the ridges that it was almost impossible to proceed from one to another; besides it was too early in the season to obtain specimens in flower in that elevated region. Growing in the rich vegetable mold of the cove, was the *Erythronium Americanum*, (Dog's tooth violet,) *Dielytra cucalaria*, and *Dentaria heterophylla*. We retraced our steps to where we left our horses, and next day returned to Sevierville, loaded with specimens, and well pleased with the result of our excursion. Yours truly, S. B. Buckley.

West Dresden, Yates Co., N. Y.

TRANSMUTATION.

Mr. Editor—I have been somewhat amused, if not edified, by the arguments advanced in your paper from time to time by the advocates of the doctrine of the transmutation of wheat into chess. As a case in point, and something new to me, I will state a fact from my own observation. In the spring of 1839, I laid off a new garden, and as I had no manure of my own as rotten as I wished, I purchased six wagon loads from a neighbor, out of a manure bank, upon which, the season before, I observed a quantity of Jimson, or Jamestown weed growing. I detest this weed above almost any other, and had never seen it growing on my farm; but thinking that it would only trouble me for one year, I concluded to venture it. Well, the manure was scattered over the garden, pretty well worked in, and a good deal of Jimson was pulled up that year. Since that, the garden has been in constant cultivation; no Jimson weed to my certain knowledge has ever been suffered to go to seed, and but one or two to get in blossom. I have never found but about two stalks on any other part of the farm, and yet, every season since the manure was first put on the garden, it has come up more or less, and this season, which makes the seventh, it came up in greater quantity than it ever has since the first year. Now, if I had scattered this manure on my field, and then put in a crop among which Jimson would not grow, and so kept it until last fall, then sowed it in wheat, and the wheat had been destroyed by frost or otherwise, and I had found Jimson coming up thick in its place, where it had been never known to grow, would not I have been as much justified in concluding my wheat had turned to Jimson, as the advocates of transmutation are in concluding theirs has turned to chess?

My wheat used to "turn to chess" a good deal, though I sowed some little in my seed; yet, I always thought it came up five for one in proportion to the wheat. About six years ago I picked a half bushel of wheat, head by head, in order to get it pure from mixture of every kind. I sowed it on a clean piece of ground, and the next season had not a grain of chess or cockle in it. I have sowed clean seed now for four years. I have not seen cockle on the farm since, and although my wheat has been winter-killed more or less every year, it has not "turned to chess" at the rate of more than from one to four stalks to the acre, and I think I might possibly have sown that much with my wheat without observing it. I have now a pile of wheat for seed on my barn floor, in which I think there cannot be one grain of chess found to the bushel, cleaned through a mill without a screen.

Piqua, Miami Co., O. S. Widney.

P. S. As you might wish to know, I will state that spring crops here look very fine, with the exception of hay, which is but middling. Wheat above an average yield, and remarkably heavy to the bushel, generally weighing 65 lbs. and upwards.

THE CULTIVATOR—A FARMER'S LIBRARY.

Mr. Tucker—I had been a rather irregular reader of the Cultivator for several years, failing to subscribe some years, and not receiving all the numbers other years, until last October, when I resolved to have the whole. I procured all the back volumes, neatly stitched, from your office, had them well bound, and have been occupying my leisure time this winter in reading the work in course. I began with Judge Buel's little experiment sheet, printed in March, 1834, and have examined somewhat carefully every paper down to your excellent number for January, 1845, which I finished last evening. The result is a most thorough conviction that the Cultivator eminently deserves to be labelled the Farmers' Library, and purchased by every tiller of the soil, for the very first of his agricultural reading. I say this after having read many agricultural books, and several of the current agricultural papers, most of which are certainly valuable, and merit a high place in the farmer's reading. It is in the hope of inducing others to procure the entire work, and read it attentively, that I trouble you with this note.

The Cultivator, though not the pioneer, is certainly the *standard* agricultural paper of the land. And this will be cheerfully admitted by most readers, and by every conductor, (except perhaps one, almost the last one that should not admit it,) of agricultural papers. None can tell its value without a careful and somewhat continuous reading. It is as a book, or series of books, its real worth will be known. I had heard it said, (e. g.,) that the first vols. were worth little to any persons except the tillers of very sandy soils, such as constituted Judge Buel's farm—that later vols. were taken up with the chess controversy—with the controversy between the advocates of native and imported breeds of cattle, &c., &c. Nothing is more untrue. The vols. conducted by Judge Buel, are full of pure wheat; no chaff—no foul seed. His care for young farmers is excellent, and this department of his paper is alone worth more than the price of the whole, especially to every young man, who (like myself) has commenced farming since Judge B.'s death. The vols. since then are much like the last, which I take it the reader has seen, except that I thought each succeeding one better than its predecessor, and the present bids fair, (even saying nothing about the excellent cuts,) to be the best of all. I have been astonished to find in the whole work so little valueless matter—so little repetition—so little controversy. The correspondents have given a vast amount of scientific and practical information, while the labors (both scientific and practical, if they can be separated,) of the editors, especially Messrs. Buel, Gaylord, and Tucker, can hardly be appreciated above their worth. I am sure, I would not part with the *information* and the *satisfaction* I have obtained from the Cultivator for ten times its cost. And I sincerely hope every farmer who has not yet taken the paper will do so soon, and every one who has not the back vols. will send $10 to Mr. Tucker at once and procure the whole. And if he does not find, *on a careful perusal*, that *each* volume is worth more, (counting worth, both pecuniarily and intellectually, or in the better tillage of his land, and the better culture of his mind,) I will agree to refund the sum, and take the library at once.

Ohio, Feb., 1, 1845. H.

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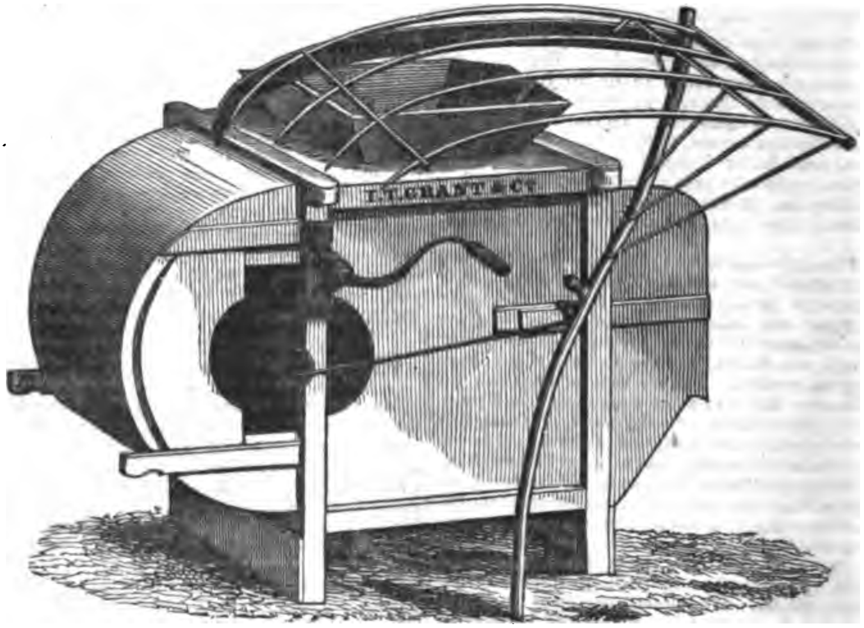
* According to M. Nicholett, the Smoky mountain, near the Warm Springs, is 5000 feet above the level of the sea, and judging from appearances, the range that we visited, between Sevier county, Tenn., and Haywood county, N. C., attains an elevation not far from 6000 feet.

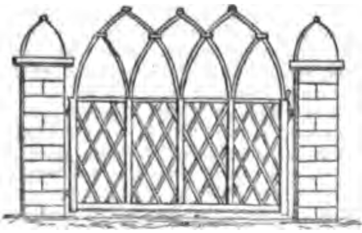


PREMIUM FANNING-MILL—(Fig. 82.)

Mr. Tucker—I wish to occupy a brief space in the Cultivator to invite the attention of agriculturists to Mr I. T. Grant's "Patent Fan-Mill," which in my opinion, excels any other mill now in use, in mechanism, durability, and utility. The "Patent Fan-Mill," is similar to the Fan-Mills heretofore manufactured by Mr. Grant, which mills have taken the 1st premium at two State and five County Fairs, except his late improvement, which consists in adding to the screen and other parts in general use in Fan-Mills, an additional screen, and what is denominated a chess board, which are arranged in such manner as to cause a much stronger blast of wind to act upon the grain at the lower part of the shaking sieves or screens than at the upper, and thereby to aid the action of said sieves in effecting the screening, by which means the chaffing and screening are performed simultaneously. All other Fan-Mills require that wheat should be run through twice, to clean it thoroughly, while the Patent Fan Mill will chaff and screen wheat more effectually in one operation than other mills will in two operations, thereby saving half the time and labor required by old mills. The "Patent Fan Mill" will also clean all kinds of grain, such as rye, buckwheat, oats, corn, peas, beans, clover, timothy, and flax-seed, in one single operation. Oats and peas are separated by being run through the mill once.

Notwithstanding the labor and expense in bringing the Fan Mill to its present state of perfection, Mr. Grant is enabled to furnish the "Patent Fan Mill" at the same price that he has received for mills heretofore manufactured by him. Directions how to rig the mill for cleaning different kinds of grain, accompanying each mill.

Lansingburgh, August, 1845. W. Brookens.



ORNAMENTAL GATE—Fig. 83.

Luther Tucker, Esq.—I herewith send you a rude draft of a gate, which I should like to see in your Cultivator. It would add much to embellish the premises near a dwelling, but would be rather expensive to place here and there on a farm. The posts on which the gate hangs should be constructed of stones, as they are much more durable, and the gate is less liable to sag than when hung on wooden posts. The gate may be made of oak or ash, or almost any wood that will bend without breaking. The two end posts should be about 5 feet high and larger in diameter than the rest. The others should be about three inches in diameter and 8 feet high. The long poles are split about 5 feet from the base, and are tied with strong wire, to prevent them from splitting farther; then spread them 18 inches or more apart, as fancy directs. The lattice work may be made of smooth slips of boards 1¼ inches wide to be nailed to the poles on the inside. A Subscriber.

Albany, July, 1845.

IMPROVEMENT OF HORSES.

There never was, in this county, so many fine foals in any one season, as there are now; and the cause, I think, may be attributed to the fact of a tax having been imposed on stallions—hence all the *scrubs* had to leave the turf, and farmers have had the advantage of breeding from the best sires. If this advantage is only pursued, and dams of good temper and qualities are alone allowed to breed, the improvement may become still more important.

Fistula and Poll Evil.—The simplest, as well as readiest cure for these two diseases, that ever came to my knowledge, is common table salt. My neighbor, Mr. Ramsburg, took a horse a few years ago, that had a fistula, and after every other effort had been made to cure him, without the least effect, he threw into the ulcer a handful of salt, and the good effect was soon perceptible. The salt was repeated every day or two, and in a short time a cure was perfected.

Last summer, I had a mare that had the poll evil, and I cured her also with salt applied in the same way. I put however, a small bit of red precipitate in the wound, twice. Both animals are at this time well and serviceable. George Blessing.

Frederick county, Md., July, 1845.

FOOT-ROT (SO CALLED) IN SHEEP.

LUTHER TUCKER, ESQ.—A late number of the Boston Cultivator contains an article on this subject from Mr. Jewett of Weybridge, Vermont, which induces me to send you this communication. The importance to the sheep-raising community of this whole continent to understand the nature and causes of the many diseases to which sheep are liable, is incalculable, and when well understood, they will be surprised to find the ease with which they can be cured, and in most instances prevented. When Mr. Jewett is informed that I was born and raised a shepherd, and that the little information I possess is the result of long and attentive practice, he will, I am sure, readily give me credit for the true intention with which I write, namely, to set him and others right, as to the true cause of, and remedy for, this (so called) disease, and not to find fault with him, or enter into any controversy about it; for I willingly admit that he gives evidence of some practice and observation, and that I believe it is only necessary to *direct* that observation to make him a valuable shepherd.

Properly speaking, there is no such *disease of itself*, as foot-rot. It is invariably the result of the neglect of another disease, simple and easy to cure, or the result of accident by a bruise of the foot in some way; and always evinced by a slight but visible lameness in whichever foot is injured. It is *not contagious, neither can it be communicated by inoculation.* I saw the latter tested myself by the late Mr. Field, father of the present able veterinary surgeon, of London, on a visit to an extensive flock-master in Leicestershire; and I think by the time you read this through, you will be convinced yourself as thoroughly as though you saw the experiment tried, of the impossibility of its being so communicated, inasmuch as foot-rot is not a disease of itself.

Sheep have a secretory outlet between the claws, peculiar to them, which is liable to become obstructed; and when obstructed for a few days the tender skin between the claws becomes red and inflamed, the sheep becomes lame on that foot, and more lame immediately after its first rising in the morning than at any other time of day, the inflammation making greater head-way while at rest during the night than at any other period. The watchful and observant shepherd will see the lame sheep at once on putting his flock up in the morning, and will apply the remedy, which is simple. First clean the claw by running your finger or thumb up and down through it, wet with your spittle, if you have no water convenient, then take out your bottle of spirits of turpentine and wash it well with your finger with that; let the sheep lie a few minutes until the claw is thoroughly dry, (I shall afterwards describe the simple mode of securing a sheep so as that it cannot get off its side until loosened by the shepherd,) and then rub between the claw a mixture of two parts tar and one part sheep's suet boiled together, well blended and let cool, which the shepherd should always have prepared and in a tin box to take out with him. This done let the sheep go to pasture again, and repeat the same dressing every second day until the sheep becomes well of the lameness, or until the skin breaks, which it sometimes will do in spite of the dressing, and assumes the nature and appearance of the disease called a scald, when you must then apply the liquid dressing described below. The scald is a disease of itself, though sometimes produced by the stoppage of the secretory outlet of the claws in the manner described above, is generally produced by very heavy dews, or a long continued series of humid weather, which predisposes the foot to this injury. It is as the other disease, first discovered by the shepherd from lameness, but at a different hour of the day. When the flock are first put up in the morning, the dew is heavy, is cooling to the foot, and washes between the claws clean, and though the scald has made its appearance, yet at that hour, the moisture prevents the friction of the parts from hurting and causing lameness, and it is not discovored until towards noon, when the dew is all gone, and between the claws becomes dry, and the friction commences to hurt and irritate the parts, and then the lameness becomes apparent. When this is the case the shepherd knows it is the scald,—he collects his flock, catches the lame sheep, ropes them as it is termed, and lays them on their side. He then takes his wash, previously prepared, composed of two parts tar, and one of oil of turpentine well mixed together, and then slowly added and stirred in, one part of muriatic acid (spirit of salt) with after that four parts of blue vitriol, very finely powdered, to which add spirits of turpentine sufficient to make the whole, when well shaken up in a bottle, of a liquid consistency, so that the wash may be applied by dipping a feather into it, with which annoint the scalded parts with the feather. The bottle must be well shaken every time the feather is dipped in, and when the claws are dressed the sheep must then lay tied until the wash is perfectly dried in, and a sort of incrustation is formed on the scalded parts,—every second day is enough to dress. It sometimes occurs that notwithstanding every care this scald turns to a *sore*, and then it is, that it is called the foot-rot. The sore is produced generally by something getting in between the claws, such as a bit of gravel or hard clay, or struck by some substance that would produce extra irritation, proud flesh and sloughing. The treatment then is, if the sore extends either way to the horny substance, to pare it away to the healthy edge, then shake a little fine powdered loaf sugar on the part, which will entirely take away the proud flesh, and then after half an hour apply the wash, and when dry, loose the sheep to pasture. Care should be taken never to wrap the foot with a cloth, unless when the horny substance is taken away, and the part is left entirely bared to the ground, and then the one claw only should be bandaged; or if both are bared, *each claw should be separately bandaged,* to prevent greater friction of the parts, and to keep them the more cool. *Under this circumstance alone,* is a bandage on the foot of a sheep *ever admissible,* because it causes greater heat, and of course greater friction by keeping the claws bound together and not allowing them to spread. In this stage of the disease, it is necessary to dress every day, and it must be noticed, that the cool of the morning is the best hour for dressing, because the sheep in hot weather is much oppressed by being tied down on its side for the length of time, sometimes an hour or more, that the proper application of the dressing requires. It not unfrequently happens that sheep show lameness when you can neither see a scald, nor discover inflammation between the claws from the stopage of the secretory outlet; and then the shepherd must look for the cause, by pressing and examining the hoof round, in the same way as the cause of lameness is sought for in the horse's hoof, and when discovered, the horny substance must be pared down to the part affected, and then the applications made as before described. In this case the lameness is produced from precisely the same causes, as the lameness in a horse's foot, by a bruise or hurt, or by the prick of a nail, or the gradual working-in of some sharp gravelly substance, which when discovered, and on opening matter is found, it is immediately pronounced as foot-rot in the sheep, but who ever heard of foot-rot under similar circumstances in the horse, or who ever supposed that the matter, if applied to another horse by inoculation, would produce lameness and a similar sore, in the same region, the foot? On this I deem any other remark unnecessary. No other help than the shepherd and his dog is required; nor no other instrument than a strong, sharp and well pointed two bladed knife, the large blade to pare down the hoof, the smaller one to cut out down to the part affected.

The way of tieing down the sheep is as follows: get a soft rope made of tow with three plys, each ply as thick as your middle finger, five feet long; then splice both ends together and you have a double rope 2 feet 6 inches long, when you catch your sheep turn him gently on his side, then raise him to a sitting posture, having his head bent over under your stomach, take your rope and put it over the *left* hind leg just above the hock, catching the sinew, then give your rope two or three twists, so as to confine the leg, and pass it along the belly and on the side of the chest close under the elbow of the *right* fore leg or shoulder, and pass the other end over his head on to his neck, lay him down on his side, and there he must remain secure until you choose to loose him. When you go to dress him or pare his hoofs, the easiest position for the sheep, and the handiest for the shepherd, is to place him in a sitting posture, the rope still left on until he is ready to be let out to pasture. The paring of the hoof can alone be well performed with a strong, sharp bladed knife, and is very simple; leave the bottom of the hoof as even as possible, so that the sheep may have an even and flat surface to stand upon, taking care of not cutting down to the quick; the toes should be left smooth and rounded, and no portion of the heel touched, unless some jaggy part is hanging.

The shepherd with his dog and crook, and 24 tow ropes on his shoulder, his knife and vials in his pocket, can go out and pen his sheep in any clean and convenient corner, catch the lame ones and rope them, let the rest of his flock out to pasture, and then in a very few hours dress his invalid sheep, and be prepared for his other work. Suppose the shepherd to have the charge of a flock of 1000 sheep, he must be very ignorant, or very careless, ever to require to use more than 12 or 18 out of his 24 ropes on any one day; there is no business at which a man is engaged, that "a stitch in time is more certain to save nine," than in herding a flock of sheep.

With much respect, I remain, dear sir,
Your humble serv't, GRAZIER.
Louisville, Ky., July, 1845.

A LETTER TO FARMERS.

MR. EDITOR—There is no portion of the "Empire State," or any other section that has come under my observation, where the agricultural population enjoy sufficient mutual thrift to prevent the frequent and painful contrast of a comfortable, or an elegant mansion, with poverty-stricken tenements, lacking not only the comforts, but the decencies of life. And these, in some instances, have been for twenty or thirty years, the abode of honest, hard-working men, whose health and strength have been sufficient to have earned all the necessaries of life, educated their children, and reserved a generous portion for old age. And perhaps they have earned it, and because of their inability to keep it their neighbors instead of themselves have been enriched by their toil.

Whatever has been the cause of their destitution, whether it was a lack of calculation, temperance, or industry,—whether they have little or nothing, they must have a place which they *call* home, which you can help to make more comfortable. Do not see them wear away year after year in the same cheerless unvarying round. And do not hesitate to advise them when you know they are squandering the little they have earned, in foolish and unnecessary trading. And try to find them some employment, when they cannot get work elsewhere, and you will in a measure prevent them from contracting habits of idleness and dissipation, and save their families much suffering.

Little offices of kindness, such as giving them a fruit tree or a few choice seeds, offering your team to break them up a garden, (in turn for their labor,) lending them your agricultural paper, &c., &c., will make them feel that you do not consider them or their affairs beneath your notice, and may be the means of exciting their gratitude and ambition to profit by your advice and example.

I never take a ride of half a dozen miles in any direction, without feeling my comfort greatly abridged by the filthy and forlorn appearance, or the uncomfortable condition of most of the tenements inhabited by the poorer class of country laborers. Not unfrequently fastened upon the road-side, on the summit of a treeless hill, to be scorched by the blaze of a summer sun, and fanned by the wintry blast; or placed on stilts in a smoky swamp, a prey to musquitos and the ague, without well or cistern, wood-shed or garden, except perhaps a patch of potatoes which the children are kept from school to watch.

Every man who lives in the country and is able to work, whether he has a trade, or depends upon tilling his neighbors' ground for his support, can or ought to earn a comfortable home. And if he can have but an acre of ground with a snug warm cottage, (though it be of logs) he has sufficient space for all the conveniences he needs, and may be as comfortable and happy as if he were the owner of thousands. And if he can be induce to add a few cheap embellishments, which will cost him nothing but his labor, such as whitewashing his buildings and fences, keeping a neat yard and garden, raising a few choice trees, vines, and flowers, his humble and limited possessions will form no unpleasant contrast with your spacious or splendid domains.

If our independent farmers would take a little more interest in the affairs of their poor neighbors, they might in a short time greatly ameliorate their condition, and improve the face of the country.

A FARMER'S WIFE.
Onondaga, N. Y., Aug. 1845.

CURE FOR THE BARBER'S ITCH.

MR. TUCKER—Perhaps the following receipe may be as useful to some of your readers as it has been to me, and I therefore communicate it for publication:

Take a tea-spoon even full of salt-petre with an equal quantity of salts, dissolve them in a tumbler of water and drink the same in the morning before breakfast, and continue to do so three mornings in succession before breakfast, then omit three mornings, and so repeat and omit three mornings, till nine doses are taken in the space of fifteen days.

The above named humor or disease I obtained at some barber's shop where I was shaved on my way from this place to New-York city, in April, 1843. I tried a great many prescriptions to no effect, and when I set out on my return, via the lakes in September following, my face, chin, and neck were grievously afflicted with running sores and hard tumors, attended with considerable fever. I was obliged to resort to poultices to allay the inflammation during the whole passage from Buffalo. A passenger on board the steamboat in which I came up the lakes, recommended the above, he having had a troublesome humor of the blood cured by it some years before. I had faith in the salt-petre as a purifier of the blood, and when I arrived at my own house I followed the prescription. The progress of the disease was checked at once—the itching subsided, the hard tumors gradually disappeared, and sores dried up in a few days after the last dose of salt-petre was taken. Some one remarked to me that the disease was hard to cure, and that it would be likely to break out again. In about six months it again made its appearance. I applied the same prescription. The disease soon disappeared, and has not shown itself since, although this was more than a year ago.

The salt-petre and salts are far from being a palatable dose, but they may be made more so, by wetting the mouth with and swallowing a small quantity of sharp vinegar, both before and after taking them.

It becomes all who get shaved in barbers' shops, or with other men's shaving utensils, to look to it that they do not get inoculated, nor inoculate themselves, with this or any other troublesome humor of the blood, and which in this instance stated was worse than an ordinary case of the small pox. G. G. S.
Brunswick, Peoria Co., Illinois, July 24, 1845.

FILBERTS.—They do not require a very rich soil, but grow well in that which is rocky or gravelly. The ground is kept clean around the trees, which are placed about twelve feet apart. They are very carefully pruned, and one stem only is left to branch out a few inches above the ground; the branches are trained and pruned in the shape of a punch bowl, and are not allowed to run above four or five feet high; thus they will bear abundantly, and be very profitable. When the filberts are gathered, they are laid to dry in the sun, or under a shed exposed to the air. If they are well dried, they will keep good for several years. *Penny Cyclopedia.*

The above refers to England; but would not this tree succeed in the United States and prove profitable to the cultivators of it. It seems to me that some trials on the culture of it in this country, ought to be made, as also on the English walnut, so termed, which has proved profitable in some instances at least. W. JENNISON.

THE STRAWBERRY.

To THE EDITOR OF THE CULTIVATOR—I met with your Cultivator yesterday, and noticed with pleasure the just observations you have made on several occasions, on the character of the strawberry plant. Your plate of the blossoms,* should be republished yearly, at the period of blossoming. Cultivators will daily see the swelling of the perfect fruit of the one, and the total, or partial sterility of the other. The plate has one error. The blossoms are represented as of the same size. The staminate blossom, is always the larger blossom, and often double the size of the other.

I saw in a late horticultural paper, a flattering description of Codman's Seedling, speaking of it as a great bearer, fine flavor, and superior in size to all others, and lauding its great *variety of shape*. The measurement given averages about four inches in circumference, which is below the standard of many other varieties. The plant I have not seen, but the various *shapes* of the fruit, which the writer so much admires, convinces me it never will be valuable for a general crop. The fruit is of *various forms*, in consequence of its being a *staminate* plant, and *partially* defective in the *female* organs. It is barely possible that it is a pistillate plant, and the defect in form occasioned by the want of staminate plants near. It may prove a very valuable variety to cultivate with pistillate plants, as it will cause every one of those blossoms to produce a perfect fruit, and produce a partial crop of its own.

The Ross Phœnix is described in your work, as having leaves 5¾ inches in diameter. Is there not a slip of the pen in this? I last spring, for the first and only time, saw this variety in blossom, in a small box. The leaf was not of unusual size. It was a blossom perfect in stamens, and the pistils more perfect than I have ever seen them, in any but a pistillate plant, except in one instance, and it will doubtless be valuable for impregnation; but if it is capable of perfecting all its fruit, it will be a prodigy, should the fruit be of large size. I do not believe in this, for the blossoms are not all perfect in both organs, or the fruit would not have a variety of shapes, which I am informed is the fact. It is time the question was settled.

In Cincinnati, where the male and female character of the plant is fully believed in by all market gardeners, a single individual has brought from his grounds 120 bushels to market in a single day; and towards the close of the market the finest fruit is sold as low as three cents per quart. The strawberry most cultivated for market, is the Old Hudson. I deem it one of the best flavored, and the most profitable for a general crop. It is of large size, and bears carriage. By itself, an acre would not produce even a defective berry, and the character of the plant not being generally understood, many have ceased to cultivate it. It is not known in Boston. Mr. Downing has not described it in his work, but in the place of it the English Hudson, which is an inferior fruit. I know that 50 years since it was cultivated in this State more than all others, and is still the favorite market fruit in Philadelphia.

In 1842, Mr. Hovey, as I discover by your paper, admitted my account of his seedling was true. That it was defective in its male organs, and required to be planted with staminate ones—in 1844, that he came out with a different doctrine,—that his original plant was perfect in both organs, but a few of the runners had become defective in the male or female organs, by high cultivation. A strange doctrine this. There is at times, by high cultivation, a disposition in flowers to become double. When cultivation changes the sexes of the strawberry (which it never has to my belief,) it will be by forcing out the defective male organs in the pistillate plant, and to increase, not destroy them in the staminate one. In favorable seasons, or by forcing, Kean's Seedling, and other staminate plants that are partially perfect in both organs, will have the pistils better developed than usual, and have the crop of fruit increased.

But my views are in opposition to the theory of your very intelligent and observing horticulturist, Mr. Downing, and his opinion is entitled to the greater weight, as he is supported in his views, not only by Mr. Hovey, but by all the intelligent and thorough-bred Scotch and English gardeners I have ever met with, who all contend that Kean's Seedling, was a great and uniform bearer in England and Scotland, and that all their other varieties were there perfect, in both organs, and uniformly productive. High and numerous as these authorities are, I do not believe one word of it. In stiff soils, Kean's Seedling will bear better than in a light dry one. There is no soil or climate in which it will perfect all its blossoms. If Mr. Downing's theory be true, that all natural plants are perfect in both organs, but that a few become defective in the one organ or the other, by high cultivation, how comes it, that in your field of natural plants, you have barren and bearing patches?—patches barren from being all staminate or pistillate—patches prolific from the presence of both. If his doctrine be true, why is the pistillate blossom always much smaller than the staminate? Why is it, that in raising from seed (and surely seedlings are natural plants,) that in general, there are as many staminate as pistillate plants, and not one (as all our western gardeners will tell you, who raise seedlings by the thousand,) perfect in both organs, and capable, by itself, of bearing a full crop of fruit? And further, if Mr. Downing's theory be true, how is it that our market gardeners not only tell the male from the female when in bloom, but at all seasons, from the stem and leaf, and even learn their children of 10 years of age to do it? If Mr. Hovey will send one of his perfect seedlings to Mr. Wilder, President of the Massachusetts Horticultural Society, and he, after a trial, shall pronounce it capable of bearing a full crop, I will give $50 for the plant. It cannot be made to produce even a single perfect fruit. For 20 years I kept the Hudson in a bed by itself, to make new beds from. It increased yearly by runners. During the whole period not a plant changed its character, or produced even a defective berry, unless as a matter of curiosity I placed a staminate plant near. I never saw a white, or a monthly variety, that was not perfect in both organs. The question will soon be settled, by further experiments of Mr. Downing himself. He concedes the old doctrine, against which I have been warring, (that all varieties were perfect in both organs, and no necessity of selecting plants to insure a crop) is not true. He states my practice to be indispensable, unless persons are careful to select what he calls "natural plants." "But if these are selected," says he, "every blossom will perfect its fruit." I deem one male (staminate) plant, necessary to ten or twelve female (pistillate.) If his theory be true, an acre on his plan will be far less troublesome than mine, and produce one-tenth more fruit. Its truth will be at once tested, for he will in future, of course, supply customers with all "*natural* plants." Heretofore he could not have been aware of it, as he sent me four or five kinds, (the Bishop was one) and they were all staminate, and bore but little fruit. If he will send to Mr. Jackson of Cincinnati, one dozen of each of the following *natural* plants, Mr. Jackson will plant them separate, and when growing will select the best plant of each, and let them form runners. If he shall report all the blossoms perfect in both organs, and bearing the usual sized fruit, I will pay him $5 for each variety:—True Kean's Seedling; Hovey's Seedling; Old Hudson; Bishop; Methven Scarlet; Brewer's Emperor; Warren's Seedling; Myatt's Pine; Swainstone Seedling; Myatt's Eliza. Most of these I have taken from Mr. Downing's work, never having seen them. Mr. Downing has. Yours, respectfully, N. LONGWORTH.

P. S. In the grape and strawberry only, would I venture decidedly to differ with Mr. Downing. To these plants I have devoted more attention than he has.

Newark, N. J., July 31st, 1845.

PEACH TREES are more liable to escape frosts, when planted on the north or west sides of buildings, the shade from the south sun preventing the too early starting of the young fruit buds, and their consequent injury by subsequent frosts; and the latter shading them from the morning sun on frosty mornings.

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* Cultivator, vol. 9, p. 165.

THE CULTIVATOR.

ALBANY, SEPTEMBER, 1845.

TO CORRESPONDENTS.

Communications have been received, since our last, from F. I. F., J. P. Norton, D. G. Mitchell, Grazier, G. G. S., Solon Robinson, G. M. Eichelberger, Eaton, Buel Warner, J. Bowman, C., Jno. H. Dent, W. Brookens, N. Longworth, John Crary, A. Dey, J. W. Seeley, S. W., A. L. Bingham, Senex, S. Widney, W. R., B. H., Jno. Girdwood, J. D. F., An Old Farmer, T. C. Peters, A Subscriber, E. N. Horsford, Wm. N. Ford.

☞ Answers to several inquiries, as well as several communications intended for this No., are necessarily deferred till next month.

MONTHLY NOTICES.

Our Foreign Correspondence.—We have the pleasure of presenting our readers this month, with the first of a series of "Notes of Travel I[illegible]eland," from the pen of a gentleman abundantly qual[illegible], from his practical knowledge of the agriculture and r[illegible]economy of both countries, to give peculiar interest to his "notes," from which we think our readers may safely anticipate much gratification. The letter from Mr. Girdwood, of Scotland, in continuation of his series of essays for the Cultivator, was received too late for this month. We think ourselves most fortunate in being favored with the contributions of Mr. Girdwood, and "F. I. F.," as well as those of Messrs. Norton, Horsford and Mitchell, whose Letters have given an interest to our pages which they could not otherwise have obtained.

Colman's Tour, Part IV.—Our readers will be glad to learn that the IVth Part of this work is now in press at Boston. It will be issued about the 10th of next month.

Aguirre Wheat.—By reference to the doings of the New-York State Ag. Society, it will be seen that Mr. Townsend of this city, has presented to the society a parcel of wheat of the above name. The specimen was superior in whiteness and weight to any we have before seen. It has been distributed among the members of the society, with a request that it be carefully tried and reports furnished of its product, &c.

New variety of Sweet Corn.—In our January No. we published a letter from Judge Darling, of Ct., describing a kind of sweet corn which he had produced by an intermixture of the common sweet corn with a very early variety of the Canadian yellow. Judge D. sent us a few ears of the new variety, which we distributed among the farmers and gardeners of this vicinity. Yesterday, Aug. 21, a man brought us an ear which had been raised from this, which is ripe enough to gather for *seed*. We cannot tell the date of planting, but it was not early in the season. The same man planted several other kinds of sweet corn at the same time, but Judge D.'s new kind was *several weeks* earlier than any of them.

Maple Sugar.—We have received from Mr. L. O. Stevens a very handsome and excellent sample of maple sugar manufactured by Mr. Joseph M. Stevens, of Hardwick, Caledonia county, Vermont. Mr. Stevens, we are informed, made the past season 4500 lbs., of superior quality. We agree with Mr. S., that "we see no reason why this sugar may not in every way equal the foreign article in flavor, whiteness, and most certainly in *purity*." He states that the process of manufacturing sugar of this quality is simple and easily explained by the manufacturer.

Shepherd's Dogs.—S. M. Bell, West Alexander, Washington county, Penn., informs us that he can furnish a few of these dogs—"price $10 per pair for puppies—grown dogs, price in proportion." A few of these valuable animals, of pure blood, can also be had on application at the office of the Farmer's Cabinet, Philadelphia—price $5 each.

Potatoes for fattening Animals.—We have repeatedly expressed a favorable opinion of potatoes for fattening stock,—an opinion, which though opposed to the theories of some, we believe to be based on fact. The following extract from a letter of a gentleman of extensive practice as a farmer, corresponds generally with our own experience.—"Those persons who are of opinion that potatoes cannot fatten either hogs or cattle, are very much mistaken indeed. I know of no food I would prefer to fatten hogs upon than *cooked* potatoes, mixed either with a little meal or bruised oats, mashed and made into balls as large as a man's head, and laid on a shelf for twenty-four hours, to become a *little* sour. It will produce firm and transparent meat, and lard of a very superior quality, and at a cheaper rate than corn at 12½ cents per bushel, fed in the ears."

Agriculture among the Cherokees.—We are happy to observe the various indications of improvement in the domestic arts among these people. We learn that they have lately organized an Agricultural Society, and are to hold an exhibition of stock, &c. For several years past, we have had from forty to fifty subscribers to the Cultivator among them. They publish a very good paper, the *Cherokee Advocate;* but which, we are sorry to say, we do not receive regularly. Will the publisher have the goodness to see that it is punctually sent us?

Delaware Agricultural Society.—This spirited and popular society holds its exhibition at Wilmington on the same days of our State Show at Utica. We regret this collision, as it will prevent many from visiting both shows, who would doubtless have done so, had they been held on separate days. We presume, however, that our Delaware friends will have no lack of spectators to witness their display of the products of the soil and the work of the hands. Jonathan Roberts, Esq., of Pennsylvania, and Dr. Muse, of Maryland, are to deliver addresses.

Peat and Marl.—Mr. Henry Reynolds, of Greenfield Centre, Saratoga co., has left us some specimens of peat and marl, taken from his farm. The peat appears to be a good article, and may be made valuable in composting with animal manures, or mixing with soils deficient in carbonaceous or vegetable matter. The marl is similar to what is found in places in this State underlying beds of peat. It is what is called fresh-water shell-marl. When applied to soils, its good effects are not always immediate, but in the course of a few months it moulders down like ashes, and improves the texture of the soil, as well as promotes vegetation.

Hovey's Straw Cutters.—We would call attention to the advertisement of this machine to be found in this number. It will be noticed that Mr. H. has considerably reduced the price of his cutters. Perhaps there never was a season, which, from the shortness of the hay and other forage crops, seemed to call for the practice of the utmost economy in feeding, so much as the present. Experience has shown that there may be a great saving by cutting and mixing various kinds of fodder, and that with a little attention and labor, and with a small quantity of meal, shorts, bran, fox roots, straw, and such qualities of hay as are not usually considered valuable, may be made to afford stock a healthy support through the winter.

Durham Cattle.—The advertisement of Geo. Vail, Esq., in this No. is worthy the particular attention of those wishing to obtain stock of this description. Several of the animals, it will be seen, were got by Mr. V.'s imported bull *Wellington*, and others by *Meteor*, which is acknowledged by all who have seen him, to be a bull of uncommon excellence.

Correction.—A slight error occurred in our notice of Mr. Albott's horse Consternation, in the July No. He won the £100 at *three* years old, instead of at four, as we stated, and has made one or more races since the accident to his leg.

☞ The attention of Hop Growers, is invited to the advertisement of Mr. Ryckman in this paper.

EXHIBITION AND FAIR
OF THE
NEW YORK STATE AGRICULTURAL SOCIETY.

From all we see and hear, we confidently expect that the Exhibition of the State Agricultural Society, which is to take place at Utica on the 16th, 17th, and 18th of this month, will be at least equal in interest to any one which has previously been held in the country. We presume the collection of people will be very large, and have reason to think there will be no lack of agricultural and horticultural productions, or of the evidences of mechanical skill. The show of stock of all kinds will unquestionably be large, and may be expected to sustain the reputation of our farmers in this respect. Utica, it will be recollected, is the centre of the great dairy district of the state, and hence we may expect a richer display of butter and cheese than has been made before; and in connexion with this department, we shall also look for a better show of *milch cows*, the most important stock for that region, as well as for a large part of the country.

Excellent arrangements have been made at Utica in relation to the various departments of the exhibition, and we are fully satisfied that the citizens of that flourishing city are determined to do all in their power to promote the interests of the Society on this great occasion.

Mr. QUINCY, of Massachusetts, who has consented to deliver the address, is a gentleman well known as being warmly devoted to the advancement of agriculture and all the industrial arts, and is not unused to speaking on such subjects. Having had the pleasure of listening to him on a like occasion, we venture the assurance that no reasonable anticipations will be disappointed.

We call particular attention to the list of awarding committees, and the regulations in reference to the exhibition as given below.

REGULATIONS FOR THE FAIR.

All members of the Society, and all who may become members at the time of the Fair, by the payment of $1,00, will be furnished with BADGES which will admit the person and his wife and children under 21 years of age, to the exhibition at all times during the Fair. Tickets to admit a single person, 12½ cents.

Members will be allowed to enter in carriages with their families, but no hacks or other public conveyances will be permitted to enter except when the inmates are members of the Society, without paying a dollar for each entrance, and the inmates, if not members, to furnish themselves with tickets.

Gentlemen may become members and obtain badges at the stage office of J. BUTTERFIELD & Co., and at the bookstores of I. TIFFANY, G. TRACEY, and BENNETT, BACKUS & HAWLEY, Genesee-street, Utica, or at the Business Office, at the show-yard.

All exhibitors at the Fair, must become members of the Society, and have their articles entered at the Business Office before taking them into the enclosure.

The trial of Plows will take place on Tuesday, the 16th—consequently all competitors must have their plows on the ground on the morning of that day.

All those who intend to compete for the premiums on agricultural implements, butter and cheese, sugar, cocoons, silk, &c., should have their specimens on the ground on the 16th, that they may be deposited in their appropriate places, and the rooms suitably arranged on the day previous to the Fair.

No premiums will be paid on animals or articles taken away before the close of the Fair.

Every thing intended for the exhibition, must be on the ground at or before nine o'clock, on the morning of Wednesday, the 17th.

Animals and other articles offered for exhibition, must be labelled with the owner's name and residence at full length.

THE COMMITTEES TO AWARD PREMIUMS.

The several Committees to award Premiums, are requested to report themselves at the Society's room, at BAGG'S HOTEL, on Tuesday evening, the 16th, or at the Business office, on the show grounds previous to ten o'clock on Wednesday morning, the 17th, after which all vacancies will be filled, and the committees will enter upon their duties at twelve o'clock.

The Judges are requested to furnish their awards to the Recording Secretary by twelve o'clock on Thursday, that a list may be made out from which the Treasurer can pay the prizes immediately on the reports being read from the stand.

The Judges will not award the prizes offered, unless in their opinion the animals or articles exhibited are worthy of the premiums.

Prize animals and implements at the previous exhibitions, will be allowed to compete for the prizes; but they must receive a higher prize, or in a different class, to entitle them to a premium. Should the same premium heretofore given them be awarded, they will receive a certificate to that effect instead of the prize.

No viewing committee, with the exception of the Committee on Discretionary Premiums, shall award any discretionary premium, without the previous permission of the Executive Board, expressed through the President.

The annual address will be delivered, under the large tent, at 3 o'cl[illegible] on Thursday afternoon, by Hon. JOSIAH QUINCY, J[illegible] Boston.

Immedi[illegible]y after the address, the reports of the Committee[illegible]ward the Premiums will be read, and the premiums paid at the Treasurer's office. The Treasurer will also be in attendance at the Society's Room, at Bagg's Hotel, on Thursday evening, and on Friday, for the purpose of paying Premiums.

On Thursday afternoon, the PREMIUM ANIMALS will be exhibited on the grounds, separate from the others, with cards showing the premiums awarded to each animal, so that the public may have an opportunity of viewing the animals which have been adjudged worthy of the Premiums of the Society.

TRANSPORTATION OF STOCK.

Arrangements have been made with the different Rail Road Companies, whose officers, with their usual liberality, have agreed to transport, *free of charge*, all animals and articles designed for exhibition at the Fair.

Gentlemen who intend to send their stock by the Rail Road, must give notice at least one week previous to the Fair, to LUTHER TUCKER, Albany; M. D. BURNET, Syracuse; J. M. SHERWOOD, Auburn; L. B. LANGWORTHY, Rochester; or L. F. ALLEN, Buffalo; so that the necessary preparations may be made by the companies for their transportation.

Extra trains of cars, both east and west of Utica, will be run, in which visitors to the Fair will be carried for a sum not exceeding half the usual rates on the roads. Of their times of starting, notice will be given as soon as the arrangements are completed. The Packet Boat Companies have made arrangements to facilitate the conveyance of visitors, at reasonable rates.

It is expected that that the operations of the MAGNETIC TELEGRAPH will be exhibited on the grounds during the Fair. It is intended by the proprietors of this work, to have it ready for operation from Utica to Little Falls, a distance of twenty miles.

Articles designed for exhibition at the Fair, may be directed to the care of FARWELL & HARRINGTON, Utica, who will take charge of them as directed by the owners.

JUDGES TO AWARD THE PRIZES.

Cattle, Class, I.—James Gowen, Philadelphia; J. S. Skinner, New-York; Thos. Hollis, Gilbertsville.

Cattle, Classes II, III, IV.—Adam Furgusson, Watertown, C. W.; F. Ingersoll, Vernon; D. D. Campbell, Schenectady.

Cattle, Classes V, and VI.—J. R. Speed, Caroline; Wm. Fuller, Skaneateles; Aaron Petrie, Little Falls.

Working Oxen.—Sanford Howard, Albany; Andrew J. Bell, Lairdsville; Squire M. Brown, Elbridge.

Steers.—E. P. Beck, Sheldon; Cliff Eames, Rutland; Israel Boies, Homer.

Fat Cattle and Fat Sheep.—Ela Merriam, Leyden; Lester Barker, Clinton; P. N. Rust, Syracuse.

Stallions.—J. M. Sherwood, Auburn; Wm. Jones, Queens Co.; Edward Long, Cambridge.

Mares and Colts.—Anthony Van Bergen, Coxsackie; Willard Ives, Watertown; F. P. Bellinger, Herkimer.

Matched Horses.—Wm. Salisbury, Leeds; Duncan Robinson, Fishkill; H. S. Woodruff, Auburn.

Sheep, Class I.—W. A. S. North, Duanesburg; Robt. Musson, Gilbertsville; Jas. Parker, Jr., Trenton.

Sheep, Class II.—S. Waite, Jr., Montgomery; W. H. Sotham, Albany; Lyman Sherwood, Auburn.

Sheep, Class III.—Chester Buck, Lowville; Samuel Cheever, Stillwater; D. R. Gill, Henderson.

Sheep, Class IV.—J. P. Beekman, Kinderhook; J. M. Ellis, Onondaga Hill; M. Y. Tilden, New-Lebanon.

Swine.—L. B. Langworthy, Rochester; George Webb, Pamelia; Hiram Hopkins, Cortlandville.

Poultry.—C. N. Bement, Albany; T. H. Hyatt, Rochester; Storrs Barrows, South Trenton.

Vegetables.—D. B. Fuller, Hyde Park; B. W. Dwight, Clinton; H. L. R. Sandford, Volney.

Plows.—Geo. Geddes, Tyler; C. C. Dennis, Auburn; M. L. Brainerd, Rome.

Waggons, Harrows, Cultivators, Fanning Mills, Machines for cutting corn stalks, Horse Powers and Threshing Machines, Drill-Barrows, and Straw Cutters.—H. S. Randall, Cortlandville; G. W. Patterson, Westfield; Myron Adams, East Bloomfield.

All other Agricultural Implements.—Pomeroy Jones, Lairdsville; John Williams, Jr., Salem; T. R. Hussey, Auburn.

Butter.—E. W. Bateman, Venice; Z. Barton Stout, Richmond Hill; Elijah Rhoades, Manlius.

Cheese.—T. C. Peters, Darien; Thomas Burch, Little Falls; Harrison Blodgett, Denmark.

Sugar.—O. Hungerford, Watertown; E. Mack, Ithaca; Geo. B. Rowe, Canastota.

Silk.—Alex. Walsh, Lansingburgh; Samuel Thompson, Utica; John Walsh, Albany.

Domestic Manufactures.—Judge Conkling, Auburn; Roswell Randall, Cortlandville; Le Grand Cannon, Troy.

Fruits.—J. J. Thomas, Macedon; Chas. Downing, Newburgh; P. Barry, Rochester.

Flowers.—Prof. Jackson, Schenectady; Benj. Hodges, Buffalo; Charles Tracey, Utica.

Plowing Match.—Lewis F. Allen, Buffalo; N. S. Wright, Vernon Centre; E. Marks, Tyler; Wm. Ottley, Oaks Corners; John Johnston, Geneva.

Miscellaneous and Discretionary Premiums.—Thomas Farrington, Owego; B. N. Huntington, Rome; Joel Rathbone, Albany; J. J. Viele, Lansingburgh; Oliver Phelps, Canandaigua.

NEW-YORK STATE AG. SOCIETY.

The meeting of the Executive Committee of the State Ag. Society for August, was held at the Society's Room in Albany, on the 14th—Present,

B. P. Johnson, of Oneida, President.
E. P. Prentice, Vice-President, Albany.
Alexander Walsh, Rensselaer.
Geo. Vail, Rensselaer.
Thomas Hillhouse, Treasurer.
Luther Tucker, Rec. Sec'y.

Letters were read from Hon. Wm. H. Seward, Auburn; Hon. Luther Bradish, New-York; Hon. Josiah Quincy, Jr., Boston; Isaiah Townsend, Albany; James Gowen, Esq., Philadelphia; James S. Wadsworth, Geneseo; Francis Rotch, London; James Taylor, Birmingham; Hon. John Savage, Salem; Lewis F. Allen, Esq., Buffalo; Paris Barber, Homer.

The Board then proceeded to complete the list of Judges to award the Premiums at the next State Fair, a list of which is given above.

Transportation of Stock.

The Committee on this subject reported that arrangements had been made with the different Rail Road Companies, whose officers with their usual liberality, had agreed to transport *free of charge*, all animals and articles designed for exhibition at the Fair.

They farther reported, that extra trains would be run, in which visitors to the Fair, will be carried for a sum not exceeding half the usual rates on the roads. Of their times of starting, notice will be given, as soon as the arrangements are completed.

Splendid Sample of Wheat.

The Recording Secretary presented the following letter, with the accompanying sack of wheat:—

L. Tucker, Esq., Rec. Sec'y N. Y. S. Ag. Society:

Sir—I send you for the State Agricultural Society, a sack of the wheat considered the best grown in old Castile, and sent me lately by a friend in the North of Spain.

The Talavera wheat, already familiar to English and American farmers, is also a Spanish variety. It came originally from Estremadura, a province in the south of old Castile, and of a milder more uniform climate. The Castillian wheat, it may therefore be inferred, will prove a hardier species.

I have sent to Gen. Rawson Harmon a similar sack, and proposed to him, should its introduction be accomplished under his experienced and enlightened management, to name this variety the *Aguirre wheat*, after D. Macsimo de Aguirre, our excellent Consul at Bilboa, to whose good offices I am indebted for the specimens I have received.

Gen. Harmon remitted me last winter, for a friend in France, several varieties grown under his care at Wheatland. Ten kernels taken indiscriminately from these, weighed,

of White Provence, (French,)	8½	grains.
Wheatland Red, ...	5¼	"
Virginia May,............	5	"
Soul's Red,................	5 4-10	"
Soul's White,.	5 4-10	"
Talavera, ...	7	"
Improved White Flint,*....	5	"
The "Aguirre" weighed,.......	8½	"

A person as little acquainted practically with the tillage of wheat as the writer, would infer from the above table that a certain weight of French Provence, white, or "Aguirre wheat," would furnish a greater amount of flour, and less amount of bran, than an equal weight of either of the other varieties.

The bread made from the wheat of old Castile, I have never seen surpassed in whiteness. In Spain, as you are perhaps aware, this universal article of consumption is not leavened.

What I send is for distribution, if you think worth while. I will seal up four or five pounds which might be kept in the rooms of the Society, as a standard whereby to determine the changes the wheat may undergo by culture in America. Respectfully, yours,

ISAIAH TOWNSEND.

P. S. I have just had weighed a half-peck of the wheat. The weight was 8 lbs. 9 oz., avoirdupois. This would give 68½ lbs. to the bushel. As this exceeds by 2¼ lbs. the heaviest wheat (Hungarian) in Lawson's Museum, (Vide his Agriculturist's Manual, p. 14,) I think it wants verifying by a better balance than that I used, the scales of a corner grocery. I. T.

On motion of the President,

Resolved, That the thanks of the Society be tendered to Mr. Townsend for the splendid specimen of wheat accompanying the above letter; and that the same be distributed to members of the Society, with a request that they make trial of the same, and report the result to the Society.

The Rec. Secretary presented a copy of the 9th vol. of the *Farmer's Cabinet*, from the publisher, J. Tatem, Esq., for which the thanks of the society were voted.

The President was requested to procure a windlass and dynamometer, for the trial of plows.

The Rec. Secretary and Treasurer were directed to procure the necessary badges and tickets for the ensuing Fair.

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* These weighed respectively, after being soaked 36 hours in a strong solution sulphate ammonia, 11—6¾—6¼—6½—6¼—9—7¼ grains. I have not soaked any of the Castilian variety.

CONNECTICUT CHEESE DAIRIES.

In our late excursion through Connecticut, we were glad to find satisfactory evidence that the character of that state for the manufacture of good cheese, is still maintained. The two principal cheese neighborhoods which we visited were Goshen and Winchester. The first of these towns became famous for its cheese at an earlier period than any other section of the country, but though the place still holds a prominent rank in this respect, we are inclined to think, from what we saw and heard, that for *general* reputation, "the sceptre has departed from" Goshen, and is now held by Winchester.

From Mr. A. Miles, of Goshen, a large dealer in cheese, we obtained some facts in regard to the quantity annually made there. The average quantity exported from the town, is about 500,000 pounds. The quantity of butter sold, is small, being only about 40,000 pounds per year. Cheese has fallen much in price within a few years, owing to the increased quantity thrown into market. It sells this season, while new, at five cents per pound—at home, or within the town. The average quantity made per cow is not known, but may be estimated at 300 to 350 lbs. Some good dairies make much more. Mr. Lawton sold last year an average of 403 lbs. per cow, and with what he kept for his own use, probably made 425 lbs. per cow.

Mr. Lewis M. Norton, of Goshen, was the first manufacturer of what is called *Pine-apple* cheese, in America. He commenced making this article in 1808. He had at this time no knowledge of the mode in which it received its peculiar form and qualities. He saw some which came from England, and set himself to work to imitate it. His first trial succeeded so well that he was encouraged to persevere, and he has continued to progress, until at this time, he has so perfected the whole process, from the "running up" of the curd, to the sale of the cheese, as to entirely distance all competition.

Mr. Norton is this year using the curd from ninety cows, for making pine-apple cheese. The principal portion of this curd is bought of his neighbors, for which he pays them the same price per pound that common new milk cheese brings, which is five cents this season; so that those who sell him their curd, save all the labor of pressing and curing their cheese, besides gaining considerable from the greater weight of the curd.

The curd is kept for twenty-four hours before it is made into cheese. The advantage of this, is supposed by Mr. Norton to be, that a degree of fermentation takes place, which being checked at a critical time, by the cutting of the curd, preparatory to its being formed into cheese, is not renewed after it comes from the press; thus preventing the defect of the cheese being hoven or blown.

The curd is rapidly cut into pieces of not more than a fourth of an inch square, with a machine invented by Albert Loomis, Torringford, Ct., which Mr. N. prefers to any curd-cutter he has seen. After being cut, the curd is put in a cheese cloth, placed in warm water, and the temperature gradually raised by pouring in water that is still warmer, till it reaches 105 degrees, by the thermometer. This does not *scald* the curd, which according to the practice of the best cheese-makers in England and in this country, is, we think, discountenanced. The curd is next cooled, by adding cold water, to the temperature of 88 degrees, when the whole of the water is drawn from the vat, and the curd weighed, and salted with the finest kind of table salt—four ounces of salt to ten pounds of curd—and after being well stirred is put in the press, where it remains twenty-four hours, or a longer time, as is convenient, as it takes no hurt by remaining forty-eight hours. The curd is weighed immediately over the tub, being drawn up by a pulley, and when this is done, is again lowered into the tub, where it is salted.

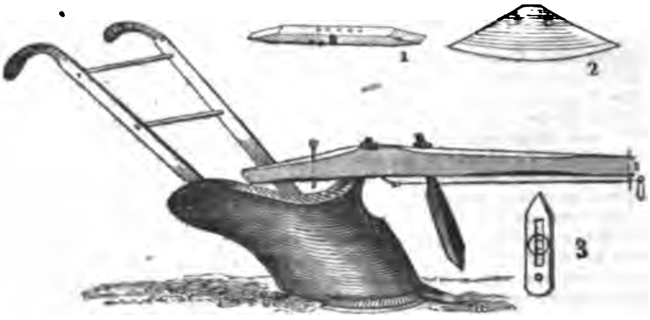
The cheeses are pressed in molds, made of sound blocks of oak timber, about twenty inches long and ten inches square. They are sawed lengthwise through the middle, and each half is carved or worked out so as to give the general shape of a pine-apple—one half in each part. From the cavity to the upper end of the block, a groove is cut in each part, which, when the parts are placed together, makes a round channel of about two and a half inches in diameter, for passing the curd into the mold. When the two parts of the block are put together in such a manner that the cavities match each other, and are strongly keyed into a frame, they form the mold for pressing the curd. The pressure is applied by means of a screw, operating on an upright, round piece of wood, which fits the channel in the block, and as it is forced down compresses the curd in the mold. The presses are very compact and strong, and appear to answer the purpose well. He has sixty-eight of them, and makes twenty-eight cheeses per day, weighing when dried five pounds each. When the cheeses are taken from the press, they are trimmed, and then placed in nets and hung in water of the temperature of 130 degrees. This is to soften the outside, that it may receive the desired impression from the net, which is done by taking them from the water while enveloped in the nets, placing them in a frame and straining the nets tightly over them by means of screws. This indents the threads of the net into the cheese in such a manner as to give them the external appearance of the fruit from which they are named. After this operation the cheeses are hung up in the nets from three to five weeks, for the outside to harden, and are then set on shelves having suitable hollows or concavities for the cheeses to rest on. In the centre of each concavity, a hole two inches in diameter is cut through the shelf, the more freely to admit air to the cheese, and to allow any liquid which may come from it, to run off. The nets used for the cheese are made of three-threaded flax-twine, and the manufacture of them costs, exclusive of the material, about 5 cents each. They will last three or four years.

Mr. Norton sells his cheese in New-York, Baltimore, and other southern cities. It usually nets him about ten cents per pound, after deducting commissions. How much greater are the actual profits derived from this kind of cheese than are obtained from other kinds, we cannot tell. Mr. Norton has evidently incurred great expense in his fixtures, and in the time and study he has spent in bringing the manufacture of the article to such complete perfection, and this ought, in justice, to secure him some corresponding advantages. He, however, makes no secret of any of the discoveries or improvements which his protracted and indefatigable labors have effected; but with a highly commendable liberality, freely permits the most minute examination of his systematic operations.

At Winchester, we were obligingly furnished with many facts in regard to dairying and other agricultural branches, by Messrs. S. & L. Hurlbut. These gentlemen purchase yearly 500,000 pounds of cheese, and are perhaps more widely known, from their long experience as dealers in this article, than any other men in the country. Mr. L. Hurlbut took us to several of the noted dairy farmers, among whom was Mr. Norris Coe, of Winchester, whose cheese is considered of the very nicest quality, and commands a quick sale in the market, at as high a price as is brought by any of the choice kinds of imported cheese. He usually obtains from sixteen to eighteen cents per pound, by the quantity, and it retails in New-York and the southern cities, at from twenty to twenty-five cents per pound.

We are unable to give the particulars of Mr. Coe's mode of making cheese. He thinks its superior excellence is attributable to peculiar management, which, being the result of a discovery of his own, he feels warranted in not divulging to the public, for the present. We however, saw the cheese in all its stages, from the curd just ready for the press, to that which was two years old. Some of the latter we tasted, and must acknowledge that it was superior to almost any other we have met with.

We noticed here that everything pertaining to the dairy department, betokened the practice of uncommon neatness. The cheese-room, instead of emitting a rank, unpleasant odor, as is in many cases observable the moment the door is opened, was so sweet and agreeable that we were prompted to ask whether spices had not been used there, but were assured that nothing of the



THE DOLPHIN SELF-SHARPENING, OR "MARYLAND PLOW."—(Fig. 84.)

Explanation of the cut. Fig. 1, the point, five-eighths of an inch thick, one and a half-inch wide, and eighteen inches long. Fig. 2, reversable share, made either of wrought or cast iron. Fig. 3, the clevice, setting perpendicularly on the end of the beam.

This plow has been lately invented, and is kept for sale by Messrs. R. Sinclair Jr. & Co., of Baltimore. It is highly recommended by those who have used it, and its construction and operation are thus described: "It is made both with left and right hand mould boards, and combines a most perfect self-sharpening principle. The points are made of steel bars, which may be reversed at least a dozen times, thus being equal in durability to a dozen ordinary points. The share may be made either of cast or wrought iron, which is also self-sharpening. The coulter of this plow is novel—instead of a single it has a double edge. The clevis or draught tackle is perfect, quite unique, and prevents the possibility of breaking the beam by sudden jerks; may be shifted to or from the land, and set deeper or shallower with the utmost precision and dispatch."

kind had been brought into the apartment. Great care is also taken to keep the cheese in a cool and even temperature. So much attention is paid to this particular, that a perfectly dark room is constructed in the centre of another room, into which the cheese is placed as soon as it becomes sufficiently dry, and is there kept till sold. The cheeses weigh when dried, about eight pounds each.

Whether Mr. Coe's "art and mystery" of cheese-making, is, after all, anything more than a punctilious observance of well-known rules, at the head of which is *cleanliness*, we know not, but will venture the opinion that a like practice of these rules by others, would be found of great advantage.

GARGET IN COWS.

This is a disease affecting the udders of cows. It appears to be caused by milk remaining too long in the bag, which becoming coagulated there, produces inflammation, and swellings, with hard tubercles. If not counteracted, ulceration ensues, and the disease results in a greater or less permanent injury to the bag. In most cases it affects at first but one teat, or one quarter of the bag only, the use of which is frequently lost; in other instances the injury extends to one-half, and sometimes to the whole udder, destroying the secretive glands. Great milkers are most subject to it, though it is thought to be more common in some districts than others. If this is so, it may be owing to the nature of the herbage—some plants necessary to the health of the cow may be wanting. It is a common belief in many parts of the country, that the *poke-weed*, sometimes called "cocum," and in some sections, "garget," is a complete antidote to this disease. It is certain that cows which have free access to this plant, will sometimes eat the tender shoots and leaves; and this may account for the fact that cows are, (so far as our observation extends,) comparatively exempt from garget in districts where poke-weed grows spontaneously.

As a medicine for cows affected with garget, we have never known anything so good as the root of poke-weed. It may be given by being cut in small pieces and fed to the cow mixed with meal or bran; or it may be given by splitting a potatoe, (a long one is preferable,) putting a thin piece of the root between the two halves, and letting the cow take the whole together from the hand. A couple of ounces of the fresh root may be given to a cow per day without injury, and in the early stages of the disease, two or three doses in connection with proper milking, and bathing the bag, (if much inflamed,) with cold water, will generally effect a visible change for the better.

In sections where from frost and snow it would be difficult to get the root in the winter season, a supply should be dug in the fall, cut in pieces and dried.

In some cases much good has been derived from a seton or rowel, made by inserting a piece of poke root in the dew-lap, just in front of the brisket. An incision an inch or two in length, is made with a knife through the pendent skin, the folds of which are then separated in a downward direction, with a stick of hard wood of the size of the little finger, having a round and rather blunt point, and a piece of the root as large as the opening will admit, is pushed in. The contraction of the skin will generally be sufficient to hold it, but a single stitch with a strong needle and thread, will be sure to keep it from coming out. In a short time the seaton will occasion a large swelling, from which, if it is properly kept open, there will be discharged a considerable quantity of matter; and this seldom fails to relieve the bag, provided inflammation has not already proceeded so far in that organ that suppuration has commenced.

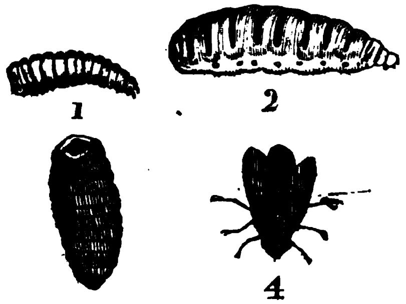
Our venerable correspondent, "O. P.," of Stockbridge, Mass., mentions a case of garget or "swelled bag" in a heifer, which was cured by giving poke-root *tea*. Describing the case he says—"that the bag was so tender that she would not let the calf suck—she would not eat the cocum-mess—and all attempts to relieve her were, or seemed impracticable, and she was given over as a loss. I ordered 1¼ ounce of cocum boiled awhile in 1¼ pailful of water. A cooled pailful was set in the manger, saying 'drink or die.' The second day she drank it, and the third day she drank another pailful from the same root; and this was all that was done for her. Before she finished the cocum, she seemed pleased to have the calf nose her bag, and she made a noble cow."

In cases where poke-root could not be had, we have used other remedies. If the inflammation was severe, we have had recourse to bleeding, and giving at the same time a good dose of glauber salts. After this, we have given about half a table spoon-full of saltpetre every alternate day, for six or eight days, in a mess of meal or bran—taking strict care always, that the milk was entirely drawn off.

Mr. Youatt recommends thoroughly rubbing the bag with the following ointment.

"Rub down an ounce of camphor, having poured a tea-spoonful of spirit of wine upon it; add an ounce of mercurial ointment, and half a pound of elder ointment, and well incorporate them together. Let this be applied after every milking, the udder being well fomented with warm water, and the remains of the ointment washed off before the next milking."

We have spoken above, of bathing the bag with cold water to reduce the swelling, but if mercurial preparations are applied, warm water must be used.



THE SHEEP BOT—(*Œstrus ovis.*)

The family of *Œstridæ* is numerous. No less than three species are known to attack the horse; while the ox, sheep, goat, deer, and even man, in some countries, are each annoyed by one or more kinds peculiar to themselves. The habits of the different species are quite various—some breeding in the skin of the animals which they attack, (as the *O. bovis*, or ox-fly;) others breeding in the intestines, (as the *O. equis*, or horse-bot;) and others, like the species under consideration, passing the first stage of existenec in the cavities of the head.

The effects of the attacks of these insects on animals, have never probably been clearly ascertained. In respect to those which attack the horse and the sheep, in particular, there has been much diversity of opinion; some contending that they are a great injury to the animals, sometimes causing death; while others suppose they occasion but little inconvenience.

Twelve or fifteen years ago, many sheep were lost in different parts of the country, as was then generally supposed, from worms in the head. Upon a particular examination, however, of some of the animals after death, the most indubitable evidence was found of the disease called *rot*, and but little doubt remained that their death was attributable to this cause. We dissected the head of a sheep which had died from our own flock, and found in the cavities no less than forty larvæ of various sizes. Our neighbors said the death of the sheep had been undoubtedly occasioned by the worms, and that others, then exhibiting similar symptoms, would also die. But an examination of the heart and liver of the subject alluded to, as well as many *post mortem* examinations of others, invariably resulted in discovering the most marked symptoms of the rot. We have also examined the heads of healthy sheep, which had been slaughtered, often finding the worms in considerable numbers.

Still we are by no means prepared to say that the sheep is not injured by the insect; still less to admit the suggestion of Mr. Youatt, that "these bots may be servicable, rather than injurious to the sheep." We presume not to fathom the designs of Providence in the creation of this or other forms of animal life—that everything, as Mr. Y. observes, tends to a benevolent end, we would by no means deny. We must confess, however, that in this case, we are unable to discover how the attacks of the insect conduce to the health or comfort of the sheep. It is certain that the fly is much abhorred. Any one will assent to this, who has witnessed the conduct of a flock of sheep exposed to its attacks, and observed their sagacious efforts to avoid the enemy. The poor animals may be seen huddled together upon some spot of bare, dusty ground, and will there endure for hours the scorching heat of the sun. The group stand with their heads towards the centre and with their noses close to the earth. If a fly of this kind appears near, they strike violently with their fore feet, and at the same time plunge their noses in the thickest dust, which usually prevents the fly from reaching them. Sometimes the fly, darting out suddenly, will attack the sheep while quietly feeding, and succeed in leaving its egg in the nostril. In such case, the animal instantly exhibits the greatest uneasiness—shakes its head, stamps, and runs off furiously to some dusty spot, or protected corner.

Soon after the egg is deposited, it is hatched, and the young larvæ makes its way up the nasal sinuses to the cavities over the eye and around the brain. The motion of the worm is obviously disagreeable to the sheep, as is shown by its restlessness, sneezing, &c.; but when it has reached its destined place, and remains nearly stationary, we have not been able to discover that it occasioned pain, or sensibly affected the health of the sheep.

The attack of the fly continues from May to August, and the larvæ from the eggs first deposited, reach their full size and are ready for transformation on the return of warm weather the next spring. The efforts of the full-grown worm to escape from the head, appear sometimes to create disquietude and pain. They work their way out of the head as they first ascended, and crawl into the ground or the rubbish of the sheep yard. Their skin gradually shrinks and hardens, and they are soon formed into the chrysalis. In from forty to sixty-three days, according to the experiments of Valisnieri, the perfect transformation takes place, and the fly comes out. The variation in the length of time the insect remains in the pupa state, is dependent on the temperature—maturity being hastened by warmth. Though most of the worms leave the head of the sheep to undergo transformation, it is certain that all do not. We have sometimes found shells of the chrysalis in the sheep's head, showing that some reach the fly state before leaving.

Not having had an opportunity of examining this fly with sufficient minuteness to give a particular description, we take that of Mr. Youatt, as follows:—"The fly is considerably smaller than the size of the larva would indicate. Its head and corslet taken together, are as long as the body; and that is composed of five rings, tiger-colored on the back, with some small points and larger patches of a deep brown color. The belly is of nearly the same color, but has only one large circular spot on the centre of each of the rings. The length of the wings is nearly equal to that of the body, which they almost entirely cover. They are prettily striped and marked. The eyes have the appearance of net-work, and are of a deep and changeable green color. They occupy less space upon the head than those of most flies. In the small space between them, are placed three other minute eyes in the form of a triangle. They may be discovered in a tolerable light, or by a lens of small power. The rest of the head is yellow, and seemingly hollow. It appears as if it were perforated by a great number of small holes, like a piece of sponge, and at the bottom of each of these cavities, a small black spot appears."

The figures in the above cut are also taken from Mr. Youatt's treatise. Fig. 1 shows the larva or the bot of the œstrus ovis, half grown; 2, the same at its full growth; 3, the œstrus ovis in the pupa state; 4, the œstrus in the perfect state, giving a full length view of it.

To prevent the attack of the œstrus, it has been recommened to smear the noses of sheep with tar. We are unable to speak from experience of the efficacy of this. It is claimed that the odor of the tar, deters the fly from alighting to deposit its egg. It is evident however, that to answer any purpose, it should be applied with such frequency as not to become much dried on the sheep. Scotch snuff is sometimes thrown up the nostrils of the sheep, as recommended by Mr. Jewett, page 58, of this volume of the Cultivator. The irritation produced by the snuff brings on sneezing, by which it is thought the worm is ejected, and the head besides cleared of its unhealthy humors.

Several years ago, we adopted the use of the trephine, to relieve the difficulty occasioned, (as we then thought,) by worms. By trepanning the skull a little above each eye, some of the worms were taken out, and by pouring oil into the cavities, it was supposed the remainder would be destroyed. The operation being completed, the skin was closed over the aperture made by the trephine, and the wound soon healed. It is not probable, however, that the use of this instrument can be made general; and indeed with the imperfect knowledge which at present prevails in regard to the effects occasioned by the insect, we are not prepared to recommend it. The best course, in our opinion, is to keep the sheep in good condition, that the circulation of the blood may be free, and the secretions natural. This will give the animals health and strength, by which they will be better enabled to throw off the worms whenever discomfort is experienced from them.

HINTS FOR THE SEASON.

Autumn is a favorable part of the year for making improvements on the farm. After the hay, the wheat, and other small grains have been secured, there is a lapse of time before the latter harvest demands attention, which furnishes a good opportunity for clearing fields of stumps and stones, making fences, improving meadows and pastures, reclaiming swamps and wet lands, digging peat and muck for manure, &c. The present season has been so dry that wet grounds may be worked on to good advantage, unless there should soon be heavy rains.

Moist grass-lands, whether in meadow or pasture, are liable to be more or less injured by the growth of bushes, rushes, and wild, worthless vegetation of various kinds. The most effectual remedy for this is thorough drainage, which should therefore be the first object. Bushes had better be pulled up root and branch. They generally grow in stools, raised a little from the general bed of the field, and may be readily torn up with a *root-claw*, (or in default of that, a plow,) to which oxen are attached. When the bushes are large they should be cut, in order to give a chance to get at the roots.

Tussocks of flat, wild grass, and small knobs, or bunches caused by moles, ants, &c., frequently occur on the surface of pastures and meadows. These should be cut off. If not too tough, they may be put at once into the hog-pen or barn-yard, to be wrought into manure; or they may be piled in heaps to lay till rotten before being used; or the hardest and toughest tussocks may be burnt, as soon as they are a little dried, and the ashes spread on grass grounds, or used for other crops. They make a large quantity of ashes, especially if taken from a mucky soil, and they produce very good effects, (as we have proved,) when spread on grass, turneps, or grain. The best mode of burning is to collect the tussocks into piles. Commence a fire in the centre, and when a few get well on fire, heap on a large quantity. The fire should work slowly, with as little flame as possible.

What is called a *bog-hoe*, is a proper tool for cutting tussocks. They should be ground to a sharp edge, to do the work easily and well. We have seen, at the implement warehouses in Boston, a tool to be drawn by oxen or horses, for shaving excrescences from pastures and meadows. We have no personal knowledge of its operation. Will some one who *knows* tell us how it works?

Peat or bog earth, designed for compost, or for spreading on cultivated fields, is much better for being dug sometime before being used. The action of the air, the frost, and the rains, dissipates its sourness, and a partial fermentation or decomposition takes place, by which it is pulverized, and brought into a good state to be applied to plants. The banks of ditches should be hauled to the barn-yard, or piled on dry land. If the ground is too soft and miry to admit of a team going on it, let the muck remain where it is first thrown out till winter, when the ground becomes frozen sufficiently to bear a yoke of oxen and sled; and then the muck can be easily cut into junks and carried off.

Peat or muck that has undergone a fermentation mixed with ashes and saturated with urine, is one of the best manures for gardens and nurseries that can be used, as it contains few or no seeds of weeds that will grow on dry ground.

That process of improving land called PARING and BURNING, though seldom practiced in this country, we feel sure, from what we have seen, might be adopted in many cases with excellent advantage. The operation consists in cutting a thin slice from the surface of sward or old grass lands. The sods are dried and burnt, and the ashes spread over the land. It is most beneficial to clayey soils and those impregnated with iron—the iron being converted by the fire into what is called a peroxide, in which state it is harmless to vegetation.

The advantages of paring and burning are several; it destroys the seeds of weeds, and much of the foul growth with which the land may be filled; it also destroys many insects and their eggs, and furnishes in the ashes and calcined earth, a powerful manure, impregnated with alkaline salts and carbonaceous matter, which is found highly beneficial in correcting the tenacity of clays, and converting them into friable loams.

We are so well satisfied of the advantages of this operation, that we intend to call attention to it again, giving a more particular account of the process and its effects.

INFLUENCE OF ELECTRICITY ON VEGETATION.

We have heretofore forborne any remarks on this subject, believing that sufficient facts have not as yet been collected to justify positive conclusions; and knowing the avidity with which novelties are sometimes seized on, we have been cautious in laying accounts before our readers which might tend to lead the unwary astray.

Among the papers which were read at the late meeting of the British Association for the Advancement of Science, was one by Mr. EDWARD SOLLY, "On the Influence of Galvanic Electricity on the Germination of Seeds." In the London Gardeners' Chronicle, we find a synopsis of this paper, from which the following is condensed:

Mr. Solly took a general view of all the experiments which have been reported in reference to this subject. He began by describing those of Sir H. Davy, and then described the recent experiments, giving an account of an extensive series at present being made in the gardens of the Horticultural Society.

"Seeds of barley, wheat, rye, turnep, and radish, were, in several different experiments, found to germinate with increased rapidity, when exposed to the influence of a feeble current of electricity of very low tension, and the plants not only came up sooner, but were more healthy than others. These experiments certainly appeared decisive in favor of the stimulating effect of electricity on germination, as distinguished from the mere chemical effect produced by electricity; but, on the other hand, a number of experiments on other seeds had given quite opposite results, proving either that the germination of some seeds was retarded, whilst that of others was facilitated by electricity; or, that the effects, observed in both cases, were merely incidental. Out of a series of 55 experiments on different seeds, 20 appeared in favor of electricity, 10 against it, and 25 showed no effect whatever; and on carefully counting the whole number of seeds up in the entire series, there were found 1250 of the electrified, and 1253 of the non-electrified seeds up. In conclusion, Mr. Solly stated that he felt very doubtful whether the effects observed were really due to the influence of electricity.

"Professor HENSLOW regarded this paper important, as showing how careful practical men ought to be, in arriving at conclusions upon insufficient evidence. Many persons believed that electricity exerted an influence on vegetation, from the instances of beneficial effects which had been brought forward, but they must now be regarded as purely accidental.

"Dr. DAUBENY stated, that although he had from the first doubted the influence of electricity on plants, he had, nevertheless, tried experiments, and come to the same conclusion as Mr. E. Solly.

"Dr. PERCY did not think Mr. Solly's experiments conclusive, as to the action of galvanism on the productiveness of plants. It was alleged that plants yielded more fruit from the action of electricity, but Mr. Solly's experiments only proved that their vegetative functions were not more vigorous.

"Mr. JOHN BALL believed that electricity exerted a constant influence on plants, and he regarded it as an agent in determining many of their peculiar forms. He believed it could be demonstrated that there was an antagonism in the electricity of the cellular and vascular tissues, and that the peculiar organs, as the hairs and spines, developed by those tissues were dependent on this fact."

Since the above was prepared for publication, we have received the following, in relation to the same subject, from a scientific correspondent:

"Many newspapers contain marvellous stories of the remarkable effects of common electricity on vegetation. One experiment has been minutely described and illustrated by a diagram, and consists merely of a buried wire enclosing a piece of ground, and connected with iron rods rising some feet above the surface like common lightning rods. The land thus enclosed is stated to have produced a very heavy crop, which it may have done from other causes; but to suppose that the electricity had any influence, is of course ridiculously absurd. For the wires not being insulated, the trifling amount of electric fluid which may descend, passes off instantly into the earth; and if they were insulated the case would be in no wise different. The fluid always following the best conductor, the plants could not be electrified in the slightest degree by any management. A man may hold a lightning rod in his hand in a hard thunderstorm, and receive no injury, the fluid passing through the rod directly to the earth. And if the plants were actually electrified, it is by no means probable that any perceptible effect would be produced. It is well to distinguish real scientific discoveries from humbugs—to discriminate between good bills and counterfeits."

ENGLISH AGRICULTURAL COLLEGE.

In our last we mentioned, in a brief paragraph, that this Institution was shortly to go into operation. Our late English papers give some particulars in relation to the plan on which it is to be conducted, and as agricultural education is beginning to be regarded with so much attention in this country, we presume the doings of other nations in regard to this important subject will be looked upon with interest.

The Institution is located at Cirencester, in Wiltshire. Attached to it is a farm of 410 acres, 380 of which are arable, and of a varied character of soil. The general outlines of the plan and mode of management, so far as we have seen, appear to be judicious, and of an economical character.

"The farm," (it is said,) "will be cultivated on the best established system, and will combine the breeding and feeding of stock, with a dairy. Every description of trial and experiment will be made in such a manner as not to risk general results, it being the determination of the council that the system pursued on the farm shall be the one most profitable, and such as the pupils may adopt with confidence in their future occupations. Still a portion of land will be set apart for experiments with manures and various seeds."

The management of the farm is to be entrusted to a man (Mr. Scales,) who it is said is thoroughly versed in the minutest details of good husbandry. The farm laborers are to be chosen with great care; and that the pupils may obtain a thorough knowledge of all farming operations, a portion of the work will be allotted for their performance. The buildings are to be erected with such a view to economy of cost, that they may be safely adopted on any farm of similar size and character.

"The College is situated on the farm. The building will include a large dining-hall, class-rooms, laboratory, museum, besides ranges of sleeping apartments on two floors, throughout which the best mode of heating and ventilation will be adopted, and separate rooms will be provided in case of illness. The head master and the professors will reside in the College. The schools will be under the management of the different professors, who will be constantly on the spot, and give their whole time to the pupils. The instruction will be conveyed not merely by lecture, but also by individual study and practical working. Mr. Way has been chosen as chemical and geologicial professor. Professors will be engaged to instruct in botany, natural history, mathematics and physics, drawing, mechanics, gemometry, dynamics, levelling, mapping, surveying, building, hydrostatics, hydraulics, &c., more particularly as they have reference to agriculture. The structure and treatment of the diseases of cattle, and a simple but accurate system of farm accounts, will form part of the instruction.

"Pupils who have at the least a knowledge of reading, writing, arithmetic and grammar, will be admitted from the age of fourteen to eighteen years; no pupil to remain after twenty. Their time will be divided between in-door instruction and out-door occupation. There will be frequent examinations, both public and private, and certificates of proficiency will be given them on leaving the Institution. They will board and lodge in the College. Each pupil will have a separate bed, and every attention will be paid to health and comfort. Each pupil will pay £30 [about $150] per annum, by half-yearly instalments, in advance. Probably two vacations will be given in the year; a short one between hay and corn harvest, and a longer one at Christmas."

STATE OF THE CROPS.

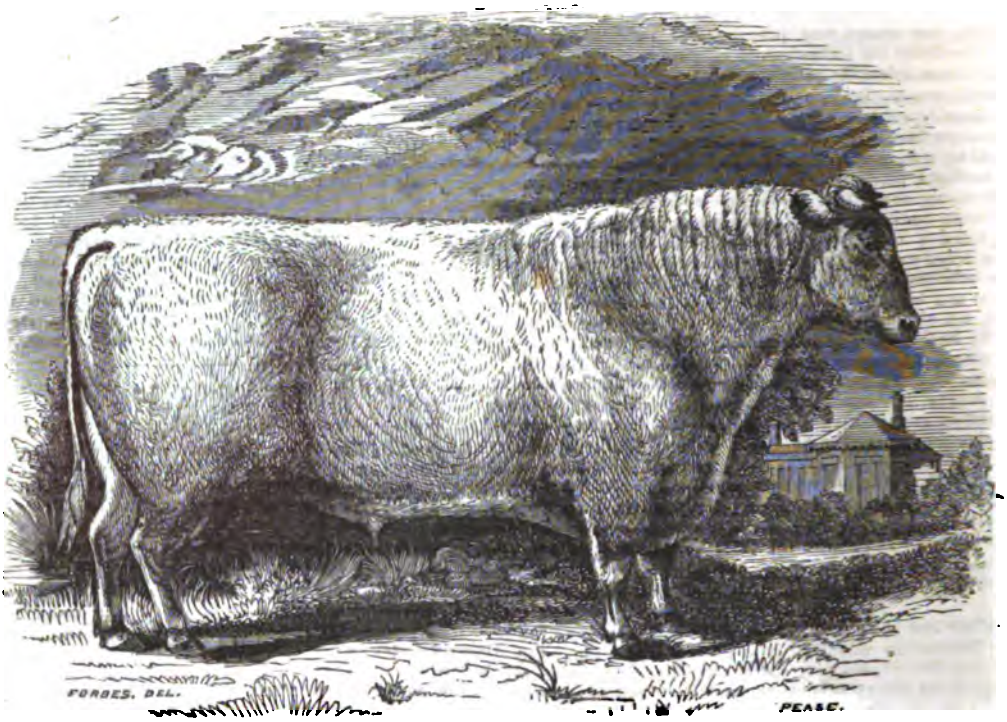
Hillsboro Co., N. H.—A letter dated Aug. 9, from J. L. Eaton, East Ware, informs us that there has been but little rain in that vicinity since the snow went off last spring—not so much as has sometimes fallen in a single day. The hay crop is not more than two-thirds an average yield. Wheat is well filled, but the heads are short. Wheat has been an uncertain crop there for several years, owing to the worm or maggot (*Cecidomyia tritici*) in the head—it sometimes destroyed nearly the whole crop. To avoid the insect, it was sowed late, but the late sown was liable to rust. Afterwards, it was thought better to risk the worm by sowing early, than the rust by sowing late. For the last two or three years, till the present, the insect has not been much seen. This year it has appeared in nearly all wheat fields, but has not been very destructive. Winter rye is light—oats good considering the drouth. Corn on dry land will not be much. Potatoe crop uncertain; much rain is wanted to give a fair crop of corn or potatoes. The rot has not yet troubled the potatoes in that neighborhood. The crop was good there last year.

Alabama.—From John H. Dent, Esq., of Eufalla, we have a letter dated August 7th. He gives a gloomy account of the cotton crop. The drouth is said to have been more severe than was ever known before. The ground has not been wet four inches in depth since March last. There are a few neighborhoods that have had timely rains, and have made fine crops. In general, Mr. D. considers the "cotton crop at an end, and it is daily exhibiting a more sickening appearance." He says—"our only hope for so sad a disaster, is an advance of cotton." Corn crop is very short, but it is added "by sowing grain this fall, we may have enough for domestic purposes."

Western New-York.—Samuel Williams, writes from Waterloo, Aug. 10th—"Wheat in our vicinity has been much injured by the rust. Many pieces were struck in our warmest driest weather. Hay is a middling crop; oats middling, but shrink; barley, flax, and Indian corn, very good; potatoes very light, but so far uninjured by *rot*. The last few days have been the hottest of the season. Last evening, we had two inches of rain."

Pennsylvania.—A letter from A. Langdon Elwyn, dated Reculver, Westchester county, Aug. 19th, states—"the frost of 31st May destroyed nearly all the wheat in this neighborhood. Little or none of the Mediterranean variety escaped, it being more forward than any other. What is known as *white* wheat was not injured. The early maturity of the Mediterranean wheat is an objection to it; but in a climate like ours, who is to calculate or guard against summer chills?"

South Carolina.—W. B., Laurens District, writes, Aug. 10th—"Our oat crop was a failure; wheat is light, but the berry is as fine as any I ever saw. Corn is scarce. It is now selling at 87½ cents to $1 per bushel. I do not think the price will be sustained this fall, for in some parts of the state, the crop is said to be better than ever before—especially creek and river bottoms."



IMPROVED SHORT-HORN BULL "KING CHARLES 2d."—Fig. 86.

The above is a most accurate portrait of the imported Short-Horn bull *King Charles 2d*, owned by **James Lenox**, Esq., Netherwood, Dutchess county. The pedigree of this animal is given in the fourth volume of the Herd-book, as follows:

"4154, **King Charles** 2d, bred by Mr. Whitaker; got by Sir Thomas Fairfax (5196)—d. (Lingflower,) by Ellerton's bull—g. d. (Gillyflower,) by Young Colling, (1843)—gr. g. d., by Allison's Danby—gr. gr. g. d. by Pink Bull, bred by Mr. Leonard Carter, of Applegarth."

Mr. Lenox has also several cows imported at various times. Of one of these, ***Red Lady***, our readers will remember, we gave a fine portrait, on steel, in the first no. of our present volume. *Daffodil*, another very superior cow, imported with Red Lady in 1840, he has been so unfortunate as to lose. She died of milk-fever, shortly after having her calf last spring. *Gayly*, imported in 1841, is a fine showy cow, evincing a great tendency to fatten. Mr. L. has also a fine Ayrshire cow, showing excellent points as a milker, and for constitution. Mr. L. informed us, that she was equal, for the dairy, to any cow in the herd.

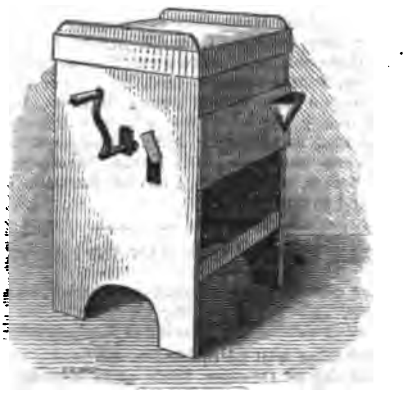
From these cows, he has several heifers, (some of which have now had calves,) that are very promising. With a yearling and a two-year-old, out of Daffodil, and a two-year-old and a calf out of the Ayrshire cow, by King Charles 2d, we were particularly pleased.

Mr. Lenox keeps the South Down sheep, of which he has a very pretty flock of about sixty. He is well pleased with them on account of their hardiness, and especially for the superior quality of their mutton. He remarked that he had frequently sent carcasses of the mutton to his friends, without their having any knowledge of the breed, and its excellence never failed to excite remark and inquiry in relation to it. The quality of the mutton of this fine breed is beginning to be properly appreciated in our cities.

Of swine, Mr. L. showed us some very pretty Berkshires, and a very fine Neapolitan sow, with several of her progeny of various ages, by a Berkshire boar. The cross bred stock look exceedingly well, being of fine form, and apparently hardy. We should think the best Neapolitans would make a desirable cross with the Berkshires—especially the larger class of the latter. Mr. L. has several full blood Neapolitans at his place in New-York, but the sow mentioned is the only one kept at the farm.

The team work of the farm is done partly by horses and partly by oxen. Of the latter, we saw two yoke that were large and strong. But we were particularly pleased with three or four of the carriage horses which were shown us. One of them in particular, a colt five years old, bred by Mr. Neefus, near Flatbush, Long Island, is one of the most splendid horses we have ever seen. It would certainly be of service to know exactly how such a noble animal has been bred and reared.

Mr. Lenox's farm consists of upwards of two hundred acres. He purchased it about seven years ago, at which time it was much out of order. All the buildings and nearly all the fences have therefore been *erected* by Mr. L. who has spared no pains to render them as perfect as possible in their design and completion. The place embraces a great variety of surface, which has rendered it susceptible of being laid out and improved in a highly ornamental and tasteful manner. The mansion, which is approached from the main road by a long avenue, winding through beautiful groves, is situated on a delightful spot, commanding the most charming landscape views on the banks of the Hudson. To the south, the village of Newburgh, though seven or eight miles distant, is brought plainly before the eye; and all the various objects which mark the scene, with almost every inch of the surface of the river may be readily seen till the noble stream is suddenly lost from sight in its deep gorge through the Highlands. To the north, also, the view is scarcely less beautiful, embracing as it does a rich and varied picture of cultivated fields, thriving villages and towns, woods and mountains. Indeed, considered both in reference to its natural advantages, and the embellishments which wealth and taste have bestowed, Netherwood is a place exactly fitted for the abode of contemplative and well cultivated minds.



CROWELL'S THERMOMETER CHURN—(Fig. 87.)

These churns are recommended by those who have used them several years, as being superior to any other kind they have ever tried. "The churn is constructed," (say the manufacturers,) "so as to bring the milk or cream to the exact degree of heat which is required to produce the greatest quantity and best quality of butter." A thermometer is placed in one end of the churn, by which the operator can ascertain when the milk or cream has the proper temperature, which practice shows to be 62 degrees. If, when put in the churn, the cream is too cold, warm water is turned in, by means of a tunnel at the side of the churn—if it is too warm, cold water is added till the requisite degree is reached. These churns, and also the patent-right for using them, are for sale by A. & Wm. A. Crowell, manufacturers of agricultural implements, Lyme-Rock, Conn.

AURORA HORTICULTURAL SOCIETY.

We had the gratification of attending the fourth monthly exhibition of this society, held at the village of Aurora on the fifteenth of last month. It is a decisive proof of the energy and interest which prevails, that each succeeding exhibition, though occurring as often as each month, has increased in brilliancy and attraction.

On the present occasion, the display of fruit was necessarily small, owing to the great and general destruction caused by the severe frosts of early summer. Several fine and choice collections were however presented, and among others about twenty different varieties in fine eating condition from one cultivator. We noticed three varieties of ripe peaches, though the crop suffered a nearly total destruction this year.

But the collection of flowers more particularly excited warm and general admiration. Not only were the specimens numerous and splendid, but the tasteful arrangement for display we have scarcely if ever seen equalled. They occupied a platform which extends across one end of the large public hall used for the occasion. On the right and left was a fine collection of green house plants, some of them in splendid bloom: and in the centre, on light shelves, rising successively to near the ceiling, and extending a length of 30 feet, were a most brilliant profusion of cut flowers, arranged with great skill, the brilliancy of which was much increased by transmitted light from behind, blending with the copious reflected light in front. Among the contributors were a large number from the immediate neighborhood, together with splendid collections from Auburn, Ithaca, Rochester, and other places.

Several hundred persons were assembled to witness the exhibition, and during the afternoon were addressed with much effect by H. R. Schoolcraft, C. Mattoon, and Wm. H. Bogart. The awarding committees reported, and the flowers and fruit were then sold by auction on the spot, which enabled the spectators to avail themselves of a much better view of each specimen individually, and to possess them if they chose. As an indication of the merit of the collection, and the skill of the contributors, as well as the taste of the purchasers, it may be mentioned that at a similar sale a month before the avails from the cut-flowers alone amounted to about fifteen dollars, and on the present occasion to more than twenty-one dollars, several single bouquets selling freely from three to four dollars. David Thomas is President, and Alexander Thompson, Secretary, and to their indefatigable exertions, especially of the latter, with those of the entire committee, the remarkable success of an inland neighborhood institution such as this, is to be mainly ascribed.

FARM OF JAMES GOWEN.

In the *Farmer's Cabinet* for June, is a copy of the report given by Mr. Gowen of his farm, to the Philadelphia Society for Promoting Agriculture. We should be pleased to copy the whole of the report, but want of room allows us to make only the following summary and extracts.

The farm is located near Philadelphia, and now contains about 100 acres, exclusive of woodland. Mr. G. took possession of it in 1834, at which time it is represented to have been in a very worn down and poor condition, from the neglect and bad management of previous owners. Mr. Gowen took away the old fences, made a new division of the farm, and fenced with stone-walls and hedges of the Osage orange, drained, and filled up ravines and gullies.

The land is now brought into a high state of cultivation, producing 100 bushels of corn, 400 bushels potatoes, 50 bushels wheat, &c., to the acre. He at first bought manure from the city, but after three or four years' experience, he gave up the plan, and has since made enough on his own premises, excepting light dressing. To do this he has been obliged to increase his stock of animals. "To maintain this stock," he says, "and bring my land to a high state of cultivation, by the most efficient and economical practice, has been a leading object; and to accomplish this, required no ordinary management on such a farm. The stock in cattle has ranged for years, from forty to fifty head, in addition to the necessary horses, with a large stock of swine for breeding and fattening; and these I have fed from the produce of the farm, except the purchasing occasionally of some straw, and supplies of mill feed for the horses and swine, and some meadow hay for the cattle, selling frequently its equivalent in timothy. During the same period I have sold hundreds of bushels of rye, some wheat, and on an average, four hundred bushels of potatoes annually, with some three to four hundred bushels of carrots, besides providing for the family. But the chief income was derived from the cattle.

"My expenditures during the whole period, could not be otherwise than large; as I could not put up so much stone fence, and picket fence, as encloses my farm without incurring a heavy outlay; but I view these improvements as cheap in the end. It may be safely inferred, that there is not at this day, any farm of the same extent in this part of the country, that can so easily be worked, or will require so little expense for a series of years in keeping the fences in order, especially when the hedges are taken into account. I am also of opinion, that taking in view the condition of the soil, as to depth and richness, as well as its being entirely free of stones and other impediments, that I can make it produce as much as any farm of its size in any part of the country, for a series of years, and at as small an expense.

"The secret of keeping so large a stock on so little land, consists in my practice of partial soiling, and green crops, whereby I make some four or five acres do the work of thirty acres, in the "slow and easy go way." From May to August, my cattle are confined to one or two fields, most commonly one, to which they are driven, more for exercise in the cooler parts of the day, than for pasture; they being fed in the stables early in the morning, at noon, and at night, with food cut for them from a lot adjoining the barn-yard. The food is generally of lucerne, orchard grass and clover, oats and corn. The patches from which the corn and oats are cut, are always sowed with turneps in August. No one can credit, unless he has had proper experience in the matter, the quantity of food that one acre of lucerne, one of rich orchard grass and clover, and one of oats and corn, afford from May till August, nor can he estimate the great saving in manure, much less the comparatively good health of the cattle, from not being exposed on the naked fields, under a fervid sun, toiling all day in search of food. This practice allows me to crop almost the whole of the land, and to make some 120 to 150 tons of hay annually. In the fall, from August till November, the cattle have the whole range of the mowed lands, as I do not cut second crop grass for hay. Then for winter feed, I have always an acre of sugar beet, half an acre of sugar parsneps; half an acre or more of carrots, for my horses; and generally from three to four acres of turneps. I report to the Committee on Crops this season, over 100 tons of these roots. In 1843, I gathered from one acre, 1078 bushels sugar beets, 60 lbs. to the bushel; carrots at the rate of 687 bushels; sugar parsneps, 868 bushels. This year 972 bushels sugar beets; 970 bushels carrots; 700 bushels sugar parsnep; and from three and a half acres, 2500 bushels of turneps, sowed with timothy seed.

The farm buildings consist of three substantial stone barns, one 70 feet by 33, another 50 by 26, and another hipt roof with cupola, 57 by 25, besides a large overshoot stable and hay house, stable high of stone, 60 feet by 30—the lower floors of all these are made of broken stone and lime, planked, being vermin proof. There are also, a corn crib capable of holding 1200 bushels of corn, one barrack, ample hog-pens, and sheds for carts and wagons. The barn buildings have been filled this fall to their utmost limit, except the corn crib.

"A substantial stone wall encloses the principal manure heap; the drainings from this heap are led into a place of deposit, in which are received also a drain that runs under ground from the kitchen, as well as drainings from the pig-pens, and the washings from all the yards. These drainings form an important item in the supply of manure to my land; it is a saving which I cannot estimate at less than $200 a year. This liquid by a simple process is applied to the patches of roots, &c., and to this may be ascribed my great success in raising such crops.

"Of *Improved Cattle*, my first effort was with the celebrated "Dairy Maid," still owned by me. Her first calf, Leander, by *Whitaker's* Prince of Northumberland, was reared and kept by me, for breeding. Dairy Maid's calves alone, exclusive of Leander, have already sold for more than $500. It would be curious to trace her profit at this day, by stating an account of her first cost, her keep, and that of her son Leander; crediting her by sales of her own calves and grand calves; deducting for the portion of the capital which was invested in the dams that produced the grand calves. To do this, would extend this paper to an unusual length—suffice it to say, that Dairy Maid has long since paid for herself, and that those who laughed at me for giving $540 for one cow, may turn this statement over in their minds, and think, whether since 1838 any investment of theirs, to the same amount, in any other branch of husbandry, has paid so well.

But there is a satisfaction beyond that of the pocket, and that is, that Dairy Maid's breed will be of infinite service to the country. Her calves and grand calves, are pretty well scattered already—and I make no doubt, but wherever found they will demonstrate the high character of the parent stock.

My sales for the last two years, exclusive of Dairy Maid's calves, amount to over $2000. The stock now on hand is about 40 head, principally Durhams. The butter sold for the last two years exceeds $750; this is a respectable item, when the calves that were reared, and the supply for my family are taken into view. From early fall to spring, the butter averaged 70 lbs. per week —the quality highly appreciated abroad, as well as at home.

"In the hog line, I have been quite successful, at least in bringing the animal by judicious crossing, to great perfection. I fatted off my old Lincoln, and Berkshire Boars, and my Hampshire and Chester county sows, last month; they weighed from 400 to 450 lbs., sold for $86.24. Have sold the last two years of pigs, designed for breeding, $150. Bacon, lard, &c., over $120, besides, having on hand 14 fine young barrows, last fall's pigs, now ready for slaughter, which will weigh from 250 to 300 lbs. each, value $150. The stock on hand consists of one fine boar of Lincoln, Hampshire, and Berkshire breed; one brood sow of Berkshire breed, 12 shoats and seven pigs."

FAIR OF THE AMERICAN INSTITUTE.

From the circular of the Managers we give the following extracts. They are making vigorous efforts to render the coming exhibition superior to any preceding one:

The exhibition will be opened to the public on Monday, the 6th day of October, 1845, at 12 o'clock, M., at Niblo's Garden, Broadway, in the city of New-York. Contributions from exhibitors will be received on Thursday, Friday and Saturday of the previous week. To insure the most favorable locations, and the advantages of competition, the products of the Manufacturer, *Mechanic* and Artisan must be delivered and entered *on* the books of the Fair, on one of those days. The chance of a good location will be in favor of those who come the first and second day. Fruits, Flowers, &c., form an exception. The proper time for entering them *will be* specified in the agricultural and horticultural circular, or notices hereafter to be issued.

On Thursday, the 9th day of October, a *National* Convention of Farmers and Gardeners, and Silk Culturists will be held. Circulars, with questions prepared, will be issued. Washington's Home Department of Agriculture, recommended by the Institute, and unanimously approved by a National Convention held last year, will again be urged.

For the second week, has been assigned the show of cattle, horses, and other live stock, and the plowing and spading matches. To accommodate those interested in the cattle show, a beautiful plot of ground has been secured between Twenty-third and Twenty-fourth streets, near the intersection of Broadway and the Fifth Avenue, with commodious rooms on the premises for accommodating the committees. The plowing and spading matches will be held in New-York, or its vicinity. For particulars, see agricultural circular.

The anniversary and other addresses will also be delivered in the course of the second week. The horticultural exhibition of vegetables, fruits, flowers, &c., will be in Niblo's long promenade, superintended by eminent horticulturists. Great varieties of rare seeds have been, the last year, scattered by the Institute over our country, with the express understanding, that a portion of their products be brought to the Fair, to swell the beauties of the display.

The best new and useful inventions will be objects of the highest honors. Also, establishments affording large varieties of specimens of well constructed agricultural and horticultural machines and implements; but in no case, for want of competition, or other cause, will any article be entitled to premium, if adjudged intrinsically not deserving particular commendation.

DEPTH OF PLANTING CORN.

No. 1,	1	inch deep,	come up in	8½	days.
2,	1½	"	"	9½	"
3,	2	"	"	10	"
4,	2½	"	"	11½	"
5,	3	"	"	12	"
6,	3½	"	"	13	"
7,	4	"	"	13½	"
8,	4½	"	"		
9,	5	"	"		
10,	5½	"	"	17½	"
11,	6	"	"		

Nos. 8, 9, and 11, were dug in 22 days; No. 8 was an inch below the surface, and 9 and 11, 3 inches below. No. 10 was very weak and died in 10 days.—*Burger*.

INQUIRIES.

Ribbon Houses.—T. C. (Sullivan, N. Y.) We are not in possession of any more particular information in regard to this kind of buildings, than we gave in our Feb. No., (page 42 of this vol.)

Charcoal.—B. S. (and others.) That from hard wood is considered best for agricultural purposes, and we believe that from maple is as good as any. Pine and hemlock make lighter coal—whether the same *weight* of it would be worth as much as that from hard wood, we cannot tell. Try both kinds, and you may then know.

Ice-house.—"What is the most approved plan of constructing an ice-house, where the springs at certain seasons of the year, are within four feet of the surface of the ground?" Query by "B. S." If any one will answer it, we shall feel obliged.

Burnt Clay.—B. S. We should think unburnt clay would be best for a sandy soil, because by burning it loses in a great measure its adhesiveness, and its attraction for water, which constitute its value for sand. We have no personal experience in burning clay, though we have partially witnessed the process. It can best be described in the language of Mr. Rham, in his "Dictionary of the Farm:"

"To burn clay, it is dug out in lumps and dried; heaps are made of these at regular distances in the field, with a small cavity in the centre, in which dry furze and brush-wood are introduced. This being lighted, the fire is allowed to burn slowly, and the smoke kept in by adding a sod or clod wherever it bursts out. When the heap is once burning, more clay may be added, even without being dry, and the combustion goes on without other fuel. It must be so managed as to bake the clay without heating it too much; and when the heaps are cooled and opened, the whole should appear pulverized, and of a red color, if oxide of iron exists in the soil. A coat of two or three inches thick, spread on a field and plowed in, will greatly improve its texture; but sufficient animal or vegetable manure must be added to make it fertile."

Soaking Seed-wheat.—A. W. (Huntington, L. I.) The length of time the grain may safely remain in the solution, depends much on the degree of temperature in which it is kept. Mr. Campbell soaked his seeds in muriate and sulphate of ammonia, from forty to sixty hours, in a temperature of 70 degrees. We presume there would be no risk in soaking wheat twenty-four hours at that temperature.

Sulphate of Ammonia.—C. F. (Morristown, N. Y.) Sulphate of ammonia is often used instead of muriate, in steeping seeds. Experiment only can decide which is the best. We do not particularly know about Dr. Feuchtwanger's compound of sulphate of ammonia, nitrate of soda, &c.

Sandy Land.—A. W. The soil would probably be improved by spreading on clay or any good soil of a more compact nature than that of the field. We are not aware of any objection to the use of lime where ashes have formerly been applied. The lime had better be kept near the surface.

"Hooks."—L. F. S. (Highgate.) The only remedy we have ever heard for this disease, is to cut out the gristly substance which grows in the eye. We believe this is done by the use of small hooks and sharp scissors.

Castor-oil Bean.—T. H. (Troy, Miss.,) wishes to be informed of the proper mode of harvesting this plant, and of manufacturing and clarifying the oil.

Hussey's Corn and Cob Crusher.—The proprietor of this article is requested to give information through the Cultivator what speed per minute the machine should have, and how to prevent the steel cutter from choking so as to stop the machine.

Swamp muck, Charcoal, &c.—B. N. (Ipswich, N. H.) Swamps should first be drained. The wild growth should then be subdued. and they may be sown with grass-seed, or cultivated, as may be deemed most profitable. One of the best modes of using muck is to mix it with animal manure, especially to absorb urine. Hog-pens, cattle and sheep-yards, should be covered with a layer of it to take all the urine and the soak of the manure. Where there are barn cellars, it should be kept under the cattle and horse stalls. It will answer a good purpose in many cases if applied by itself, but it is better to use it as mentioned, or mix ashes with it. Lime is also useful in ridding it of acids, noxious to vegetation, which it sometimes contains. (Get Dr. Dana's "Muck Manual.")

Substitute for White lead.—P. (Uniontown, Pa.) From experience, we are unable to say what recipe would prove best, but prefer the following to any we at present recollect:

Take one bushel of unslacked lime, and slack it with cold water; when slacked add to it 20 lbs. of Spanish whiting, 17 lbs. of salt, and 12 lbs. of sugar. Strain this mixture through a wire sieve, and it will be fit for use, after reducing with cold water. This is intended for the outside of buildings, or where it is exposed to the weather. Two coats should be laid on wood, and three on brick. A whitewash brush may be used for laying it on, and each coat must be dried before the next is applied. This may be made any color you please. For straw color, instead of the whiting use yellow ochre; for lemon color, ochre and chrome yellow; for lead or slate color, lampblack; for blue, indigo; or green, chrome green.

Machine for loading stones.—G. B. (Frederick Co., Md.,) wishes to learn whether there is in use a simple, cheaply constructed machine, suitable for loading stones of four or five hundred weight, that one or two hands could work.

Lawrence's Lever Buckle.—The depot for the sale of this article is Cornell & Brothers, 269 Pearl-street, New-York.

The Poppy—Opium.—A Subscriber, (Petersville, Md.) We are unable to say how many pots of opium can be produced per acre. The somniferous poppy may be readily grown in this latitude—indeed several varieties of it are common in flower-gardens—but the narcotic juice which it affords, is said to be much less potent than that produced in hotter countries. We do not know whether it could be profitably cultivated in the latitude of Maryland.

Injury to an Ox's eye.—A. L. (St. Joseph, Mich.) Treat the eye as you would your own, if it had received the same injury. If a film grows over it, some fine table-salt blown in through a quill, will probably take it off.

Sweet Scented Clover.—A. L. It is not worth much for fodder.

Seed Sower.—J. F. A. (Zanesville, O.) The price of Seward's machine, (mentioned in the April number) is $10. It would sow mustard well. There are several other machines, varying in price. The Boston agricultural warehouses would be likely to furnish an assortment of such articles. Lewis' machine is highly recommended, and is undoubtedly one of the best. It is for sale in Boston.

Silk Culture.—"A Subscriber." We know of no "*periodical*" at present published on this subject. If a *treatise* is what is wanted, a copy of Whitmarsh's Manual can be had at this office.

Seeds of the Larch.—J. B. (Van Buren, N. Y.) We suppose it is the seed of the Scotch Larch that is wanted. They could not be had in any considerable quantity without importing them. The best way would probably be to import the young trees from Scotland. We cannot say what they would cost. If any one in this country has them for sale, they would do well to inform us.

"Mowing Machine."—J. S. (Prospect Hall.) The machines used for cutting wheat are commonly called harvesting machines. We are not aware of any reason why they may not cut oats as well as wheat.

Woad.—J. D. F. (Schuyler, N. Y.) As it is too late for any information in regard to *culture* to be useful this season, we only give from the "Flemish Husbandry" some remarks on curing. The leaves begin to be fit for gathering when they turn down, and turn slightly yellow. A dry time is necessary for gathering, which is repeated three or four times as the leaves arrive at the proper state of maturity. If any dust adhere to the leaves they should be slightly washed, and set to dry in the sun. They are the better for a slight drying before they are carried to the mill. They should never be heaped in the fresh state so as to excite the least fermentation. They are ground into a paste in a mill constructed like an oil mill. The paste is well pressed with the hands and feet under a shed, and made into one or more heaps, of which the surface is made smooth. There it heats, and a hard crust is formed on the surface, which must not be broken on any account; all cracks in it are immediately stopped with some paste. In a fortnight the fermentation is completed, which is known by the cessation of the strong ammoniacal smell, diffused during the time of its continuance. The mass is then broken up, and the crust is well mixed with the interior parts. The whole is formed by the hands into balls of about one pound weight each, and then pressed into oblong moulds and formed into cakes like small bricks. These being carefully dried are fit for sale.

Charlock, or Wild Mustard.—A. E. (Cicero, N. Y.,) wishes to know the best mode of eradicating this plant. His course so far has been to pull-up every stalk as soon as it appears. Is there a better or more economical way ?

CONDENSED CORRESPONDENCE.

Improved Farming.—"Experiment," Easton, Talbot county, Maryland, informs us that in 1840, he bought a farm of 200 acres, of what was considered worn-out land. The year before he bought it, it was cultivated by a man who was thought a good farmer, and its produce was 410 bushels of corn, 31 bushels of wheat, and 115 bushels of oats, "all told, and no hay nor pasturage." Its present produce is stated at 1,200 bushels corn, 100 bushels wheat, and 800 bushels oats; which crops at a fair cash valuation, would give an income over the year 1839, of $515.10. In addition to the above crops, there have been raised for the two last years, from 300 to 500 bushels of potatoes each year, as well as from 200 to 500 bushels of turneps and beets, with such other vegetables as are commonly cultivated in a garden, and from five to ten tons of good hay." The stock kept is one saddle and carriage-horse, two work horses, one mule, fifteen head of cattle, (on an average,) and from four to six hogs, the latter confined in pens, and kept constantly in the manufacture of compost from leaves, straw, earth from the woods, muck, &c. As much manure is also made from the cattle and horses as is practicable, by providing materials for absorbing the urine, &c., all which is applied to the land. The writer states that he gave $1120 for his farm, which was considered very high. In regard to the expense of management, he says—"I keep two men; one of which runs the cart nearly all the year, hauling wood, hay, manure, and materials for making it, going to mill, &c.; the other performs the farm-work, with such help as he gets from the carter. For these two hands I pay $110 a year, including clothes, &c."

Culture of potatoes—Drouth in Virginia.—Mr. H. R. Robey, Hopewell, Va., states that he has been successful by cultivating potatoes by the following mode. He breaks up a piece of sward land in the fall or spring, and about the 20th of June re-plows it. Lays off the rows four feet apart, and plants the pieces of potatoes a foot in the row. He states that he has found no difference in planting large or small potatoes, either in quantity or quality, and he prefers cutting up small, as he thinks one good eye better than two or more. When the tops are about six or eight inches high, he runs the plow close to the potatoes and throws the earth away, and then turns the earth immediately back, and follows with the hoes. This is all the working they get. We think common experience does not agree with Mr. Robey's remarks about the product of small potatoes, and cutting potatoes for planting very small.

Mr. Robey states that the potatoe crop in his neighborhood this season must be small, even with a good season, for the farmers could not get seed to plant. Potatoe rot has not made its appearance in that section. The drouth, Mr. R. says, "has been truly distressing. The corn crop cannot be more than one-third the usual yield—the oat crop very small. Wheat has done well both in quantity and quality."

Black-leg in Calves.—E. Hammond, Conesville, says in regard to this disease—"Be as careful of your calves as though they were made of flesh and blood. Give them therefore a dry stable or house to winter in, and instead of giving them an ounce of salt-petre once in three weeks, just give them a good tea-spoonful once a week. But mind and keep their feet dry—this is the grand secret. They need good water too, as often as do your horses—see that they have it."

Culture of Potatoes.—S. Widney, Piqua, *O.*, informs us that he successfully cultivates potatoes on the following plan. Plant in hills, and when the potatoes are about an inch out of the ground, take a light plow and run it so close to them as to cover them lightly with earth. When they get through this an inch or so, cross-plow them, covering up as before. This mode is stated to be equal to the best hoeing, besides being a great saving of labor. Mr. W. states that he has practiced this mode for several years, and has never lost a *hill*, or had them at all injured by covering.

Agricultural Societies and papers.—Mr. Widney informs us that an Agricultural Society was organized in Miami county last year, that a fair was held at which a large concourse of farmers attended, bringing a respectable amount of good stock, &c., that the funds and general concerns of the society are in good condition, and that there is every prospect of success. *Speaking* of the advantages of agricultural papers, Mr. Widney says—"By reading the Cultivator for the last eight years, I have derived a cash profit of at least *fifty dollars per year*, in the way of improved cultivation and farming economy generally."

Saltpetre for Beef—Cotton Beds.—Alexander Leeds, Esq., St. Joseph, Michigan, writes us—"In curing my beef last fall, I used saleratus in place of saltpetre, and I never had better beef.

"You spoke of "cotton beds" in your Dec. No., '44. I have been using them in my family for several years, made of 'batting.' In summer they are cool and comfortable, and in winter equal to any feather bed. They are made like matresses, sewed through and through at every six or eight inches."

To cure the Scours in Horses.—Dissolve a piece of opium as large as a common sized chestnut in one pint of brandy, and pour it down from a bottle at one dose. I have given it, and ordered it in a number of cases and never knew it to fail to effect a final cure. Laudanum will answer the same purpose, if you can ascertain its strength so as to know how much to give. R. Burrit.

Good Sheep.—Mr. Reed Burritt, of Burdett, N. Y., informs us that he has a flock of 242 sheep, which yielded on the average, at the last shearing "a fraction over four lbs. two oz. per head—well washed on the sheep's back. One wether gave seven lbs. fourteen oz., one ewe seven lbs. seven oz." Two bucks, one a yearling and the other a two-year-old, purchased of Mr. R. A. Avery, of Galway, N. Y., gave eight lbs. five oz., (the oldest,) and six lbs. three oz., (the youngest.)

Mr. Burritt has 14 ewes and two young bucks which he purchased of S. W. Jewett, of Vt. One of the bucks is two years old, and the other is a yearling. The two-year-old was not sheared; the yearling's fleece weighed seven lbs. fourteen ounces, "well washed on his back." Mr. B. has also 13 ewes and a yearling buck which he purchased of John T. Rich, of Shoreham, Vt. [He refers to the Cultivator for 1844, page 378 for pedigrees of Mr. Rich's sheep.] The two lots were mostly one and two years old. "Messrs. Jewett & Rich," says Mr. Burritt, "thought they would average five lbs. of wool per head; but they came a little short of that as might have been expected, considering they came a long and tedious journey in the month of April, and were sheared fifteen days earlier than any of them were last year." Mr. Burrit gives his sheep through the winter, half a gill of corn or a gill of oats per head, daily, and feeds them with straw at noon, and hay morning and evening; having good sheds, which are carefully kept dry and clean by littering with straw as often as is necessary.

In a subsequent letter from Mr. Burritt, we have received samples of his wool, which can be seen at this office. He states that he paid for the 30 sheep he bought in Vermont, $660—that it cost $90 to get them home, making the whole cost $750.

Large Fleeces.—Mr. A. L. Bingham of Cornwall, Vt., writes us as follows:—"I notice in the last number of the Cultivator, a stump against the whole world. It is a very difficult matter to find a flock of sheep that will supersede every thing else, without finding something that will match them; consequently I am inclined to give you the result of the shearing of my sheep. In looking over my minutes, I find it to stand as follows: 48 paular merino ewes, with lambs by their sides, and two rams, averaged me 6 pounds 2¼ ounces of well washed wool per head. One buck, the Vermont Hero, 12 pounds 7 ounces—the other, the American Tiger, three years old, 12 pounds 10 ounces—one ewe sheared 9 pounds—four others between 8 and 9 pounds—the remainder between 4 and 7 pounds per head. Fifty-two yearling ewes, including two rams, averaged 6 pounds 3¼ ounces—one yearling buck 8 pounds 14 ounces—another 8 pounds 9 ounces. Sixty Gandaloupe breeding ewes averaged me a fraction less. I should like to know how many Mr. Randall took his averages from, whether they were all breeding ewes or yearlings, and how much the average was in pounds and ounces. Will he give us the result, so that we can see how we stand? So I would say old Cornwall against the world."

Heavy Fleece.—Mr. Buel Warner, of Cornwall, Vermont, writes, that having seen in our last, an account of the fleeces yielded by Mr. Randall's sheep, and noticing that Cortland "offers against the world," he was induced to send us the weight of a yearling buck of his, own brother to Mr. R.'s heavy fleeced one. Mr. Warner states that his sheep was yeaned the first week in April, 1844, and was sheared the 23d of June last. The fleece weighed 9 lbs 5 ounces, well washed and in good condition. This, he says, is over a pound more than Mr. R.'s gave at the first shearing. Accompanying this account, was a sample of the wool. It is clean, and of remarkable quality for such weight. The weight of the sheep is 116 pounds. He, as well as Mr. R.'s buck, were by Mr. Jewett's *Fortune*. Mr. Warner also states that Mr. Jewett sold last year, a March lamb to Mr. Foot, a neighbor of Mr. W.'s, which sheared on the 20th of June last, 11 pounds of wool.

Editor of the Cultivator—Will you permit one of your Boston subscribers to make a suggestion to the dairyman of New-York, Vermont, &c. For several years past, I have noticed that butter, which was perfectly sweet at the time it was purchased, has acquired towards the latter part of the season, (say March to May,) a *bitterish* taste in the outer portion of the mass, which rendered it totally unfit for the table. As this was entirely different from the *rancid* taste incident to badly made butter, I have attributed it to some quality inherent in the wood of which the firkins were made, probably owing to the circumstance of its being wrought in a *green* state. If this be the case, I should think it very desirable that those farmers who are in the habit of packing butter for distant markets, should procure for that purpose only such vessels as are made of properly seasoned wood. C.

Mr. Editor—I have pursued an effectual method of exterminating burdocks. I leave them to grow until warm weather is fully set in, and the plants filled with sap. I prefer leaving the middle stalk set, but am careful to take them previous to budding. With a strong spade I cut the roots two or three inches under the surface, drawing the spade directly back without removing the earth, plucking the top part up with my hand, and stamping the earth firmly over the remaining part to prevent a free circulation of air; and few of them will sprout. Such as do, will be only a weak and sickly progeny, and a repeated application of the spade will prove a cheap and successful exterminator. S. N. H.

FIRE-BLIGHT.

The opinion that fire-blight in the pear tree is frequently if not usually caused by the influence of frost on the imperfectly ripened wood, is now very generally adopted, and some interesting cases in corroboration have occurred the present summer.

"We have had no frost so severe as this," observes D. Thomas, in the Ohio Cultivator, "and as late in the season, since the year 1817. It has given us a new chapter in the history of fire-blight." * * "It has produced ten times more fire-blight than I ever saw before. It was not confined to the *pear* tree, though that suffered most; but the *apple* tree and the *quince* tree share largely in the calamity; and even the *cherry* tree, which was not on the list of such as were susceptible of this malady, did not escape."

The new shoots of fruit trees, being young, fresh, and succulent, were peculiarly susceptible of injury by frost, which operated on them with as great facility as the frost of winter operates upon the young shoots which grow late in summer or in autumn, producing blight in the ordinary way. Most of these young spring shoots escaped; a portion were killed at once by the frost; and another portion, a large one, though not killed immediately, were so affected as to cause a diseased action in the sap, or a poisonous fermentation, which after a time resulted in the death of the branch or tree.

That the fire-blight thus resulting, was not the effect of the cold of *last winter*, was conclusively shown by the fact that no appearance of the disease was seen before the frost; but immediately after the frost, it was observed to be taking place all through the country; and from that period to the present time, which is near the latter part of summer, new cases have been continually taking place. A *Stevens* pear tree showed no indications of the disaster until operated on by the intense heat of the present midsummer, and a young Bartlett was seen the present week to be suffering from the first stages of the malady, in one of its limbs. A Florence cherry tree died a few weeks only after the frost. In no case has the most rigid examination detected the slightest indication of the presence of an insect or of his ravages.

The great variation in appearance, and the irregular manner of attack, are worthy of notice. In some cases, the malady appeared to be simple death or cessation of growth, the leaves gradually withering, without that sudden change to a black color which shows the presence of poisonous sap in the branches, produced by freezing and partial decomposition. In other cases the latter symptoms were fully developed. Again, in some cases, single or small twigs only were destroyed on the tree; in others, large limbs or large portions of the bark were affected.

NOTICES OF NEW PUBLICATIONS.

New work on Sheep.—"The American Shepherd," by L. A. Morrell, Esq., of Lake Ridge, Tompkins county, N. Y., will soon be issued by Messrs. Harpers. From our knowledge of Mr. Morrell, and from having read a considerable portion of the work, we have no hesitation in saying it will possess a practical character which cannot fail to render it highly valuable to sheep-owners in all parts of the country. Previous to its going to press, the work was submitted to the examination of the Executive Board of the New-York State Agricultural Society, by whom it was recommended in the following language:—"The committee have great pleasure in recommending the work to the attention of wool growers and others interested in the breeding and management of sheep, as one containing a large amount of practical and scientific information on a most important branch of American agriculture." We are authorized to state that an opportunity will be presented at the coming State Fair at Utica, for procuring copies of Mr. Morrell's book. It will be recollected that Mr. M. offered a premium for the best plan of a sheep-barn. He requests us to state that the first premium was awarded to M. Y. Tilden, of New Lebanon, Columbia co.; the second to Richard Morgan, of Aurora, Cayuga co., and the third to Dr. Chapin, of Providence, R. I.

FOREIGN.

We have English papers to the 2d of August. The grain harvest will be late, owing to the want of sufficiently warm weather. Should the weather have proved favorable through the last month, a full average supply of wheat will be gathered in most parts of the kingdom. Barley is good, excepting its having been injured in some sections by lodging. Very large growths are expected of oats, beans, and peas. Hay is abundant.

The Exhibition of the Royal Agricultural Society at Shrewsbury took place from the 12th to the 18th of July. The show of stock was considered upon the whole highly satisfactory, and fully answering the purposes intended by the society.

At the auction sale which took place after the show, several Short Horn bulls sold at from 40 to 59 guineas each; and Hereford bulls at 40 to 50 guineas, and one for 99 guineas. South Down bucks sold for £11 to £15 each. Pigs, £7 each.

The exhibition of implements is said to have been far short of what has been seen at previous meetings of the society.

The society continues to increase in numbers and wealth. Its present list of members is nearly 9,000, and its funded property above £9,000.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, August 22, 1845.

COTTON.—But little has been done in the staple. At Savannah, sales were made of 100 bales, 6a7½ cts. At N. Orleans, 13 bales good new at 8 cts.

BUTTER.—Western, 12a15—Goshen, 16a20.

CHEESE—6a6½.

FLOUR—Genesee, from new wheat, $4.62½—Ohio, $4.43a$4.50.

GRAIN—Wheat, nothing doing—no new crop in market.

HEMP—Dew rotted, per ton, $68a$70—water rotted, $90a$110

HOPS—per lb. 13a14 cents.

HAMS—scarce and firm at 7¼a7½ cts.

BEEF—Mess, $9a$9.75.

LARD—8a8½.

PORK—new mess $13.87½—prime, $10.75a$10.87½.

TOBACCO—Kentucky, per lb. 3 cents—Connecticut seed leaf, 8a10.

WOOL—(Boston prices) Aug. 23:

Prime or Saxony fleeces, washed per lb.......	$0.37a0.40
American full blood fleeces,.................	35a0.37
" three-fourths blood fleeces,........	33a0.35
" half blood do	31a0.33
" one-fourth blood and common,....	28a0.30

NOTICE.

THE undersigned is happy to give notice that the added improvements this season by the subscriber to the "Warren's Improved Patent Horse Power and Thresher," have secured increasing success and satisfaction to all, as was confidently anticipated. The public can now be fully satisfied that these machines are superior in all respects to any others for their low price.

Two Horse Power and Thresher together, only $75.

These Machines are made and sold in this city only by the sole agent, JAS. PLANT,
Successor to L. Bostwick & Co., 5 Burling slip, N. Y. City.

SHORT HORN DURHAMS FOR SALE.

9 HEAD of this valuable breed of animals are now offered for sale by the subscriber, having more than he can well keep on his farm, viz: Rose, 9 years old, a good milker, having given 25 quarts per day, on pasture only. She is in calf by my prize bull Meteor, and will drop her calf about the middle of August. Empress, nearly as good a milker as Rose. She dropped her calf about a month ago, and will be bulled by Meteor. Eunice, 5 years old, white, bulled by my imported bull Duke of Wellington, 25th of June, a good milker; her dam has given 32 quarts of milk a day on pasture only. Julia, four-year-old heifer, recently bulled by Meteor. Lily, two-year-old-heifer, white, bulled by Meteor, 9th of June, and three yearling heifers, roan, red, and white, got by Wellington and Meteor. A yearling bull, got by Meteor, out of a cow bred by Charles H Hall, Esq., of Harlem. The Cows above named were bred by the Bullocks, of Albany county, and their descendants. This stock has the reputation of being good milkers. Gentlemen desirous of procuring the blood of the celebrated herd of Thomas Bates, Esq., of Yorkshire, can do so, with a cross of the Bullock stock, as the sires of the young animals are from that gentleman's herd, and the cows are in calf by the same bulls. This strain of blood can hardly fail to make good milkers. Letters, post paid, will receive an answer. The animals will be sold from $100 to $125 a head. A credit from 6 to 12 months will be given for approved paper. GEO. VAIL.

Troy, July 25, 1845—2t.

PORTABLE MILLS.

THE undersigned would again call attention to the Patent Portable Burr Stone Mills, for which he is sole agent in this city. Prices at retail, for 12, 15, 18, and 24 inch, $35, $55, $85, $100.

These are very useful for a dry season, and where horse or steam power may be used. One-third power is saved by their peculiar construction, while their extra speed causes very rapid grinding.

J. PLANT, 5 Burling slip, N. Y. City.

SALE OF DEVON CATTLE.

E. P. BECK will sell at public sale, on Wednesday, the 15th of October next, at his dwelling, in Sheldon, Wyoming Co., N. Y., a large portion of his valuable stock of pure Devon cattle, consisting of calves, yearlings, &c , steers, heifers, cows and bulls, of various ages. One year's credit will be given on approved credit to all who wish it.

Sheldon, August 20th, 1845.

SANDFORD'S PATENT STRAW AND HAY CUTTER.

THE subscriber is made sole agent in this city for the sale of this most valuable machine It is deemed superior to any others heretofore offered to the public. Its construction is such as to cut very rapidly and fine, and the knives are easily kept in order. Retail price, only $15. J. PLANT, 5 Burling-slip, N. Y city.

G. W. RYCKMAN,

INSPECTOR OF HOPS, No. 50 Water-street, between Old and Coenties-slip, New-York.—The subscriber has completed a regular correspondence in England, Germany, France, and throughout this country, in relation to the growth, and quantity of Hops raised, and the probable demand and prices for AMERICAN HOPS, both at home and in Europe. His sources of correct information are not surpassed by any other individual engaged in the business, and from his many years experience, he knows that he will be enabled to give the most entire satisfaction. He gives his personal attention to the sale of all Hops consigned to him.

☞ Advances made on all produce consigned to him for sale.

New-York, Aug. 20, 1845.—1t.

FRUIT TREES.

THE subscribers are now ready to receive orders for *superior Fruit Trees*, viz: APPLES, PLUMS, PEARS, CHERRIES, PEACHES, Quinces, &c., &c., from *their new and extensive nursery*, Their assortment, which they offer for sale the coming fall, is very large and fine. The trees are handsome, thrifty, and of the most suitable size and age for transplanting, and being propagated by the proprietors themselves with the most scrupulous care, either from bearing trees in their own grounds, or from others of undoubted genuineness, and being in every other respect until they are sent from the nursery, under their *immediate personal supervision*, they can be confidently recommended.

It is expected that all orders coming from persons unknown to the proprietors, will be accompanied by a remittance, or that some responsible reference will be given. Orders are entered on the order book, to be forwarded as soon as practicable in the fall. Orders respectfully solicitied, and will receive prompt attention.

WILSON, THORBURN & TELLER, or
WM. THORBURN, Seedsman, 38 Broadway.

Albany, Sept. 1—3t.

☞ A liberal discount made to those who purchase to sell again, or by wholesale.

NEW AND IMPROVED POUDRETTE,

MADE by the Lodi Manufacturing Co., may be had by application at the office of the Company, No. 51 Liberty-street, New-York, or by addressing a letter (post paid) with directions how to ship, &c., to "The Lodi Manufacturing Co., New-York." The price for it, delivered anywhere in New-York city, free of cartage, &c., is as follows: For one barrel, $2.00; for two bbls., $3.50; for three barrels, $5.00; four barrels, $6.68; five barrels, $8.00; six barrels, $9.75; and for any *quantity* over six barrels, $1.50 per barrel. Pamphlets and instructions for its use, may be obtained gratis at our office.

The Lodi Manufacturing Co., defy competition in the art of making a *cheap*, *powerful*, and *lasting* manure, and strenuously invite a fair trial between *an equal cost* of their poudrette, and an equal cost of the best guano in existence.

It is hoped that the successful trial of poudrette upon wheat, on Long Island, the last season, will encourage many others in other parts of the country, to make a trial of its effects this season. Quantity per acre for wheat is 10 barrels, or 40 bushels, sown broadcast with the seed, and harrowed in.

Sept. 1—2t.

SOMETHING NEW—IMPORTANT TO SMALL FARMERS.

THE undersigned has completed a Threshing Machine for hand power, one of which may be seen at his ware-rooms. It is ascertained that a man and boy can readily thresh 5 bushels per hour clean, and the straw be saved so as to be bundled and fitted for market.

More than one quality will probably be made, and the prices vary from $25 to $50 each. Fixed prices will be established hereafter. All orders (post paid) will be now attended to, and cash orders promptly supplied.

J. PLANT,
5 Burling slip, N. Y City.

AGRICULTURAL MACHINES, &c.

NOW in store for sale, Best Premium Fanning Mills, Straw Cutters, Portable Stone Mills, Plows, &c.,.&c Orders will be attended to promptly by J. PLANT, 5 Burling-slip, N. Y. city.

FAN MILL AND CRADLE MANUFACTORY.

THE subscribers continue to manufacture Fan Mills and Grain Cradles of the very best quality. The subscribers have recently improved their Fan Mills, so that wheat and all other kinds of grain and seeds are thoroughly cleaned by being run through the mill once. Said improvement has been secured by letters patent, bearing date the 10th day of July, 1845.

Notwithstanding the labor and expense which we have bestowed upon the improvement of our Fan-Mills, we are enabled to furnish the "Patent Fan-Mills" at the same prices which we have received for mills heretofore manufactured by us.

We manufacture four different sizes of Fan-Mills, seven sieves to each mill. Prices from $21 to $27. according to size.

Orders from abroad promptly filled, and a liberal discount to dealers.

I. T. GRANT,
D. H. VIALL.

Schaghticoke, Junction P. O., Rensselaer Co., N. Y.

We the subscribers certify that we have witnessed the operation of I. T. Grant & Co.'s "Patent Fan-Mill," upon wheat and all kinds of grain and seeds, and have no hesitation in pronouncing it superior to any mill now in use. The operation of cleaning wheat is performed with one-half the time and labor required by other mills, as it chaffs and screens at the same time. All kinds of grain and seeds are thoroughly cleaned by being run through the mill once. We cheerfully recommend, and advise all farmers who wish to purchase a fan-mill, to purchase the "Patent Fan-Mill" manufactured by I. T. Grant & Co.

John M. Mott,
L. D. Eddy,
Cha's J. Wilber,
James H Rice,
Moses Buckley,
P. G Williman,
Calvin Morse,
James H. Jones,
H. K. Duer,
John Case,
Henry P. Stuntz,
Philip H. Stuntz,
Edwin Smith,
James G. Gordon,
George W. Corry,
Francis Crocker,
Wm. B. Gordon.

I know little of the utility of the fan-mill above described except from information. I am, however, personally acquainted with almost every one of the above subscribers, and have no hesitation in saying that the most implicit confidence may be reposed in all they certify. JOB PIERSON.

I am intimately acquainted with the Hon. Job Pierson, who has signed the above certificate. He is a highly respectable man, (formerly member of Congress,) and I have great confidence in him.

W. L. MARCY.

For sale at WARREN'S, in Troy, WM. THORBURN'S, Albany, and D. L. CLAWSON'S, 192 Water-street, New-York.

WILLIAM HOVEY'S PATENT STRAW CUTTER.

THE subscriber having made some important improvements in his tools and machinery for building his celebrated Straw Cutter, is now able to offer them at the following reduced prices:—

No. 1, $10, former price $12.
No. 2, $12, " " $15.
No. 3, $15, " " $20.
No. 4, $20, " " $25.
No. 5, $25, " " $30.
No. 6, $30, " " $35.

A liberal discount will be made to dealers. The great advantage that these machines have over all other Cylinder Cutters, consists principally in the ease and facility with which the knives can be adjusted, for which he holds letters patent. Any one knife may be taken off and ground without taking off the whole number; and should any one knife become narrow by grinding, the edge can be set out by set screws, so as to come in equal contact with the hide roller, without the necessity of grinding all the other knives down to the same width. The wings to which the knives are fastened are of vast importance, as they serve to strengthen and support the knives, and prevent them bending while cutting cornstalks or other coarse fodder.

Machines will probably be offered by others in the market, made to resemble these Cutters, but entirely without the above named improvements. The knives are fastened on a cylinder without wings to support them, and are confined by rings on each end. No one knife can be taken off without the whole number—and in case of inequality in the width of knives, the machinery becomes useless unless they are all ground equal, as there are no means of setting out the edges to make them cylindrical, and it will be extremely difficult to grind them so perfect that they will all come witth equal contact on the roller on which they are designed to cut. Should such an imperfect article be wanted on account of cheapness, the subscriber will furnish a better one at a cheaper rate.

CAUTION.—Any person who shall make, use, or sell to others to be used, any of the above improved Cutters, will be held accountable for the infringement of the above named patent.

Worcester, Mass., August, 1845. WILLIAM HOVEY.

N. B. Ruggles, Nourse & Mason, having ceased to act as my agents, a full assortment will be kept for sale at the Farm Implement and Seed Warehouse of D. PROUTY & CO , Nos. 19, 20, and 22 North Market-street, and 19 Clinton-street, Boston. They are also for sale in Albany. Inquire at the Cultivator office.

Sept. 1—3t.

FARM FOR SALE.

THE subscriber offers for sale the farm upon which he now resides, situate in the village of Auburn, in the county o Cayuga, and containing 100½ acres.

This farm lies upon the south side of the western turnpike, (now Genesee-st., Auburn,) and is well known as having been the residence of Hon. Nathaniel Garrow, deceased, for many years.

The buildings, fences and other erections thereon, are ample and in good repair; the soil will vie with that of any other farm in Western New-York, for fertility, variety and earliness of vegetation. Great attention has been paid as well by the former as also by the present owner, to the selection and cultivation of choice fruit, and there is now upon the farm, in full bearing, a great abundance of the best varieties of apples, pears, cherries, peaches, grapes, &c. &c. The farm is well watered, durable springs. which give a never failing and ample supply.

The location is believed to be as desirable as that of any other arm in the state, as well for farming purposes as also for the residence of the gentleman or a man of business, being withing a few minutes walk from the Rail Road Depot, and within a few rods of the Female Seminary.

A credit will be given, if desired, for a large portion of the purchase money, for a term of years upon payment of interest annually. Inquiries may be made of the subscriber upon the premises, of LUTHER TUCKER, Esq., Editor Cultivator, Albany, or of DAVID WRIGHT, Esq, Auburn. JOHN REMER.

Auburn, N. Y., July 14, 1845.—3t.

A LAKE FARM FOR SALE.

THE subscriber offers for sale the Farm owned by Hon. JEDEDIAH MORGAN at the time of his death, situate on the east side of, and adjoining, the Cayuga Lake, about two miles south of the village of Aurora, m the town of Ledyard, (formerly Scipio,) containing about 360 acres, with a good porportion ot Timber Land, on which he oak and hickory predominate. The road leading from Auhurn, to Ithaca, via Aurora, passes through the Farm, dividing it into two nearly equal parts.

The land is of an excellent quality, as well for wheat and other grain as also for grass.

The situation and location is believed to be as eligible, and to combine as may advantages, as any other farm in the county. The first point of land which makes into the Cayuga Lake, above the village of Aurora, is a part of the farm.

A large proportion of the purchase money can remain, secured by bond and mortgage, upon annual interest. Any person wishing to view the farm, can do so by applying to C. C. WHITE, the tenant upon the premises. The whole will be sold together, or in parcels, to suit purchasers. Letters of inquiry addressed to the subscriber, *post paid*, will be promptly answered.

DAVID WRIGHT,
Trustee of the Estate of Jed'h Morgan, dec'd

Auburn, July 14, 1845.—August 1—3t.

FARM FOR SALE.

IT consists of two lots, situated on opposite sides of the Albany and Schenectady turnpike, four miles from Albany. The lot on the north of the road, comprises forty, and that on the south, sixty acres. Both are enclosed by a good fence of boards with chestnut posts, erected a little more than a year ago. The lot on the south side has a small house, a stable with shed, and a good yard for manure, or stock. It is also provided with a well of excellent water: There are permanent streams of water on both lots. The stream called the Patroon's brook runs across the whole width of the south lot With the exception of about a third of an acre on the north lot, both have been entirely cleared, drained where necessary, thoroughly plowed, seeded last year with clover and grasses, and will yield this season nearly or quite an average of two tons of hay to the acre. The two lots are suitable either for one farm or two farms, but will be sold together or separately, to suit purchasers. The natural position, as well as the soil of both lots is good, and cannot fail to give satisfaction. Every thing considered, a more desirable situation could scarcely be found in this vicinity.

For particulars, inquire at this office, or of JOHN McCARDELL, corner of Nassau and Pine-streets, New-York. July 1—3t.

LINNÆAN BOTANIC GARDEN AND NURSERY,

Late Prince's, Flushing, L. I., near New-York.

THE new proprietors of this ancient and celebrated NURSERY, late of WILLIAM PRINCE deceased, and exclusively designated by the above title for nearly fifty years, offer for sale, *at reduced prices*, a more extensive variety of FRUIT AND ORNAMENTAL TREES, SHRUBS, VINES, PLANTS, &c., than can be found in any Nursery in the United States, and the *genuineness* of which may be depended upon; and they will unremittingly endeavor to merit the CONFIDENCE and PATRONAGE of the Public, by INTEGRITY and LIBERALITY in dealing, and MODERATON in charges.

Descriptive Catalogues, with *directions* for *planting* and *culture*, furnished *gratis* on application to the *New Proprietors*, by mail, *post-paid*, and *Orders* promptly executed. WINTER & Co., Proprietors.

Flushing, L. I, August 1, 1845.—3t*

SEED STORE AND AGRICULTURAL WARE-HOUSE.

OUR Spring supply of seeds is now ready, and we shall be happy to receive orders for Field or Garden Seeds, of every description, Black Sea, Italian and Siberian Spring Wheat, Barley, Peas, Clover Seed, Timothy Seed, Seed Corn, Shaker and other Garden seeds, &c. Also, a full assortment of farming tools selected from the best manufacturers in the country. Hoes, Scythes, Forks, &c. cheap by the dozen. E. COMSTOCK.

Rome, Oneida county, March 1, 1845.

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☞ **ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.**

AYRSHIRES.

FOR sale an imported Ayrshire Bull, two imported Ayrshire Cows, and four young Bulls, from 2 years to six months old. The above are offered for sale to close an estate, and are of unquestioned excellence, as will be ascertained on application (post paid) to

MARK H. NEWMAN, 199 Broadway, New-York.

Sept. 1—1t.

STRAWBERRY PLANTS.

J. M. THORBURN & Co., 15 John-street, New-York, and Astoria, (L. I.,) beg to inform the horticultural public that they have now ready for delivery, 5000 *Myatt's Eliza* Strawberry plants, which they have proved by putting in beds for two seasons past, and can with confidence recommend this excellent strawberry to the most limited grower. In England, where it originated, it maintains to this day its celebrity, and in Covent Garden Market, London, yields to no other sort but the British Queen, which the Eliza is the parent of. It is of fine flavor, and cockscomb form, bright red color, and erect habit. Price for strong rooted plants in pots, 75 cents per dozen; out of pots, from the bed, $3.00 per hundred. Also, *Myatt's British Queen*, unrivalled for every excellent property, has fruited splendidly in a large bed the present season, and is indispensable to the smallest cultivator. No new sort in England yet equals it for general good properties, nor in this country approaches it. Strong rooted plants, in pots, $1.00 per dozen; and from the bed, strong plants, $5.00 per hundred. *Prince Albert*, very large and fine, great bearer, fine shape, and beautiful color. $1.00 per dozen; 5.00 per hundred. It is one of the best sorts for forcing in pots. Also *Hovey's Seedling*, a well known good sort—$1.50 per hundred, $5.00 per thousand. *Ross Phœnix*, one of the best American varieties, well known around Hudson and Albany, as a fine productive kind; $1.50 per hundred, $5.00 per thousand. *Scotch Pine Apple*, a very bright oblong fruit, of a sprightly pine apple flavor; $1.50 per hundred—$5.00 per thousand.

The above are quoted at prices which will encourage any one to plant a good sized bed at once. They will produce moderately next spring and abundantly hereafter. Strawberries to bear fruit in perfection, should be kept clear of runners, which can be used for forming new beds. A covering of three inches of stable manure, in winter, is very serviceable, which *fork* in early in the spring. Keep clear of weeds, and a good crop will follow—place the plants eighteen inches apart in the rows, and an alley of two feet between the rows.

Orders will meet prompt despatch and careful packing and forwarding.

Sept. 1—1t.

NEW-YORK AGRICULTURAL WAREHOUSE.

HAVING taken the commodious store, No. 187 Water-street, the subscriber is now opening the largest and most complete assortment of Agricultural implements, of all kinds, ever yet offered in this market. Most of these are of very highly improved pattern—warranted to be made of the best materials—put together in the strongest manner, of a very superior finish, and offered at the lowest cash prices.

Seeds for the Farmer.

Such as improved Winter and Spring Wheat, Rye, Barley, Oats, Corn, Ruta Baga, Turnep, Cabbage, Beet, Carrot, Parsnep, Clover, and Grass seeds, improved varieties of Potatoes, &c., &c.

Fertilizers.

Peruvian and African Guano, Poudrette, Bonedust, Lime, Plaster of Paris, &c.

Fruit, and Ornamental Trees and Shrubs.

Orders taken for these, and executed from a choice of the best nurseries, gardens, and conservatories in the United States.

Horses, Cattle, Sheep, Swine, and Poultry.

Orders executed for stock of all kinds to the best advantage.

Wire Cloths and Sieves.

Different kinds and sizes of these constantly on hand.

The subscriber requests samples sent to him of any new or improved implements, seeds, &c. &c., which if found valuable, extra pains will be taken to bring them before the public.

A. B. ALLEN, 187 Water-st., New-York.

Sept. 1—2t.

STODDARD'S STRAWBERRY.

PERSONS wishing to obtain the Seedling Strawberry noticed in the Cultivator for August last, p. 251. can obtain them by addressing Col. J. S. Stoddard, Palmyra, Wayne Co., N. Y. Price, $5 per 50 plants. They can be sent by Express, to any part of the country.

PREMIUM STRAWBERRIES, &c.

WM. R. PRINCE & Co., Flushing, will supply the following varieties of Strawberries, which are superior to any others: Early Garnstone, Prince Albert, Large Early Scarlet, Crimson Cone, Victoria, Bishop's Wick, Myatt's British Queen, Elton, Prolific Hautbois, Southborough, Coul late Scarlet, Swainstone's Scarlet, Prince's Conqueror, Old Pine, Ross Phœnix, Keene's Seedling, Hovey's Seedling, Black Roseberry, Deptford Pine, Boston Pine, Alice Maud. Also the following *second rate*: Myatt's Eliza and Pine, English White and Redwood, and Alpine varieties, and numerous others, including every valuable variety known. Orders not less than $5 or $10, enclosing cash, will meet prompt attention. Catalogues of all trees, plants, &c., will be sent every *post paid* applicant.

WM. R. PRINCE & CO

Prince's Linnæan Garden and Nurseries, Sept 1.

MACEDON NURSERY.

THE partnership formerly existing between Thomas & Smith, having been dissolved, orders for fruit trees will be received by J. J. THOMAS, Macedon, Wayne Co., N. Y.

A thorough revision of his list of fruits having taken place, and new ground extensively occupied, trees of many varieties can be furnished of only small size before another year.

COMMERCIAL GARDEN AND NURSERY
OF
PARSONS & CO., Flushing, near New-York.

THE proprietors desire to call attention to this extensive establishment which is now probably the largest in the Union, covering an area of over forty acres, and compactly planted with more than 600,000 Trees, Shrubs, Plants, &c.

The very rapidly increasing taste for Horticultural pursuits, producing a demand for new and rare Fruits, Ornamental Trees, and Plants, has rendered necessary a systematized arrangement for the importation of all that is new and desirable.

For this purpose, the proprietors have personally inspected all the principal public and private Horticultural establishments in Britain, France, and Germany, and have perfected arrangements, by which they will receive immediately on its appearance, every thing that is new and valuable.

The trees cultivated at this establishment are straight and thrifty, and from their exposed situation, they are sufficiently hardy for removal to much higher latitudes.

The attention of amateurs and others is particularly directed to the fruit grounds of this establishment, in which will be found bearing specimens of all the varieties of fruit which they cultivate.

Visitors are also invited to inspect their vineries and fruit-houses in which are more than 100 varieties of foreign Grapes, and about 200 varieties of Pears, Plums, Apricots, and Nectarines, all of which will be in bearing in 1846.

Orders may be addressed to the Proprietors at Flushing, New-York, and Catalogues can be obtained by application, post paid, to themselves, or to Parsons & Lawrence, 129 Pearl st., or Saxton & Miles, 205 Broadway, New-York.

VIRGINIA FARMS FOR SALE.

I HAVE for sale several good farms, being portions of the estate called Oak Hill, in Loudon county, Virginia, late the residence of President Monroe. It is about 30 miles from Washington, Alexandria and Georgetown, in a most healthy region, well watered and peculiarly calculated for raising stock of all kinds. To industrious and enterprising applicants, very liberal terms of payment will be given.

S. L. GOUVERNEUR.

Washington, July 1, 1846—july 1—6t.

THE CULTIVATOR.

NEW SERIES "TO IMPROVE THE SOIL AND THE MIND."

VOL. II. ALBANY, OCTOBER, 1845. No. 10.

THE CULTIVATOR

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ONE DOLLAR A YEAR.

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☞ "The Cultivator" is subject to newspaper postage only.

Foreign Correspondence.

MR. NORTON'S LETTERS—No. XVI.

Laboratory of Ag. Chem. Association,
Edinburgh, July 31, 1845.

L. TUCKER, Esq.—At the close of my last letter, I had reached Lynn, a town of some commercial importance, near the mouth of the Ouse. After leaving Lynn, our road as far as Boston, lay across a flat, low country, the greater part of which, is but just above the ordinary level of the sea, and some is actually lower, the water being kept out by embankments. Large tracts have in this way been rescued from the sea, and there are men living who have seen boats sailing where luxuriant grain now waves. The soil of this region is of a deep black color and rather stiff, but is very rich, as the crops attested in places where it was well dried. As this implies, a superabundance of water is the great difficulty. The farmers there seem to have but little idea of draining properly. They have their fields divided off by large open drains or ditches, which do the work but very imperfectly. Though the fall is very little on most of the lands, tile drains, rightly made, and at proper intervals, would carry off the water. Where the land is actually below the level of the sea, a hole might be dug in some central point to collect the water, which might then be pumped up by a windmill, and conducted into the sea. This method is extensively practiced in Holland. By a perfect drainage, these lands would become exceedingly valuable, and equal in fertility any in the kingdom. Our next stage, from Boston to Sleaford, was also over a soil capable of yielding immense returns; it lies higher than that near the coast, and is consequently more easily freed from water. Judging from appearances, however, thorough draining is yet confined to a small portion of the farms. Near Sleaford the vegetation was remarkably strong and of a good color. Soon after leaving that place, there was a change for the worse. The soil became light and thin, resting on the öolite formation. Formerly an extensive moor stretched nearly to Lincoln, 20 miles, and so desolate was it, that a lofty pillar was erected on some high ground in the centre, as a landmark for bewildered travellers. This pillar remains, but is no longer surrounded by a barren waste; within sight of it, are now some of the best cultivated farms in Lincolnshire.

We visited the farm of Mr. Frankish, about eight miles from Sleaford, one of the last reclaimed from its natural state. When he took it the whole was a light sandy heath. The soil is still light of course, but wonderfully improved. Clover now grows well there, though he says it is not quite certain to take. His wheat is from five to six quarters per acre. I noticed one wheat stack which was computed to contain 140 quarters, or 1120 bushels. He had two others nearly as large.

The stacks in Scotland are small and round; here they are oblong, and very high and wide. I saw one in the north of Lincolnshire, said to be forty feet in height. They are finished with great nicety, and the wheat will keep for many years, excepting mice and rats in great numbers find their way to it. In some parts of this farm there are but three or four inches of soil above the öolite limestone, which lies in small loose fragments to a depth of perhaps a foot farther. The subsoil plow would be of great use there to deepen the soil, by going down through the fragments of öolite. Their gradual decomposition also would then be of benefit to the soil with which they would be intermixed.

Mr. Frankish's large stock manufactures much barn-yard manure, but beside that he uses very large quantities of rape-dust and bones; he has a mill expressly for grinding these last. He has not yet dissolved them in sulphuric acid. He is trying this year a small quantity of Guano. We found that in this district, rape-dust and bones were almost universally employed. On our way to Lincoln, we looked at one or two other farms that lay about the middle of the old moor. Substantially the same system is pursued on them all. We reached Lincoln on Saturday evening, and on Monday morning resumed our northward progress. In the course of the day we visited six or seven of the best Lincolnshire farms.

We were much pleased at Stannwell's farm, Mr. Russell, about twenty-six miles from Lincoln. This and several adjoining farms, formed, a short time since, an extensive rabbit warren, and was a mere sandy waste when Mr. Russell took it. He has in a few years made wonderful improvements. Upon the very lightest fields, he has carted large quantities of clay and marl, producing thus, good crops where scarce a blade of grass was to be found before. His wheat and turneps were looking particularly well. In the course of our day's journey we passed successively across the upper and lower öolite formations, (the name öolite is given to a peculiar species of limestone,) and finally came upon the chalk of the Lincolnshire wolds. Here we visited during the afternoon, a number of very fine farms, especially deserving of notice, because made from the thin chalk soils of the wolds. We still found a want of subsoiling and draining, but certainly were disposed to yield a very high place to those farmers whom we visited. Guano has been little used there as yet, but bones and rape-dust very largely. The turneps are mostly fed off by sheep; the wheat crops are not often more than 4 or 4½ quarters, 32 to 36 bushels, but the grain is of excellent quality; barley does admirably. We could very profitably have passed many days among these farms, but were obliged to cross the Humber on the following morning.

Our next stop was near Wakefield, at the estate of which our companion, Mr. Breckenridge, was manager. Here we found many evidences of his encouragement to the improver. The soil is that of the coal measures, generally inclining to clay, and often very stiff. He has induced most of the tenants on the estate to drain their lands, and he told me that the harvest is fully ten days *earlier* in consequence. The subsoil plow is also here in full operation. The pasture fields on the best farms were remarkably fine. On our way to Wakefield, the next afternoon, we saw the farm of our other fellow-traveller, Mr. Johnson. In every respect, it was one of the very best that we had visited. The crops were excellent, and scarcely a weed to be discovered. At Wakefield our little party separated, after a most pleasant and profitable week. I might fill many sheets with details, but fear to weary your patience by anything more than this slight sketch. I am, very truly, yours,

JOHN PITKIN NORTON.

CULTURE OF THE POTATOE IN SCOTLAND.

Featherhall, Midlothian, August, 1845.

To the Editor of the Albany Cultivator:—

I shall now detail to you, the most approved practice, in regard to the cultivation of the different crops, and shall devote this letter to that of potatoes, which may be regarded as the commencement of the rotation in the district in which it is reared.

The land, which the previous season had been under oats, is plowed before the winter frosts set in, with a furrow varying in depth from eight to nine or ten inches. In giving the first furrow for any of the fallow crops, it is considered good practice, to cleave down the ridges, taking care, however, to preserve the original furrows if the land is not thoroughly drained. The advantages of this plan are, the levelling of the field, thus rendering the subsequent cross plowing more perfect and more easily accomplished. It also affords greater facilities for the escape of sudden and severe falls of rain on undrained or retentive soils, and more perfectly exposes all parts of the soil to the action of the frost during winter. The land having been plowed in the manner already described, and that when it is not too much saturated with moisture, the furrows at the headlands and the water courses are cleaned out, so as to prevent any water from lodging.

When the drying winds of March have fairly set in, and the land is relieved of that excess of moisture which usually prevails through the winter, the field is harrowed so as to pulverize the surface, and is then plowed in a direction across the ridges. This furrow is generally eleven or twelve inches in depth, or as deep as the plow will work. It is then harrowed with four or five turns, and rolled if found necessary; after which it again receives a double turn of the harrows, and the root weeds which have been brought to the surface, and freed of adhering soil by the different operations, are carefully collected into heaps by bands of women and boys, and removed from the field. Should these various operations not have rendered the soil clean, or of sufficiently fine tilth, it is either grubbed with Finlayson's harrow, or again plowed, harrowed, and rolled, and the weeds collected as before. If the land has been allowed to become foul, or is of a very stiff nature, it is sometimes plowed a third time, so as to render the soil very fine, and absolutely free from weeds. I have found it an excellent plan in cleaning foul land, to give it (prior to the spring plowing) a turn of the Finlayson harrow to the depth of four inches, then to harrow, roll, and collect the weeds brought up. The advantage of this is, that a considerable portion of the weeds are removed before they are mixed through the large quantity of soil stirred by the deep spring furrow; and that portion too, which being then laid undermost by the plow, is most difficult to be got rid of afterwards. In preparing clay land for green crops, I have tried the following plan with success: As soon as possible in autumn, I plow and otherwise work the land, then open the drills, and allow it to remain in this state till the time of planting. The plow is then passed along the drills, for the purpose of removing any soil which may have fallen from the sides of the ridgelets by the action of the frost; the manure and seed are then deposited, and the ridgelets split by the double mold plow. A fine "crumb" is thus placed over the manure and seed, excluding the air and drouth, and affording a suitable nidus for the young plants; and this in a soil, which any amount of labor, by the ordinary method in dry seasons, would hardly reduce finer than a mass of clods the size of road metal. The saving of spring labor effected by this plan, is also an important item in its favor.

But to return from these digressions. The field having been properly worked, in the way which I have endeavored to explain, two plows, each drawn by two horses, proceed to open the drills which are usually twenty-seven inches wide. The manure, which has been turned about eight days previously, and allowed to attain a slight degree of fermentation, is then carted out and deposited in heaps, commonly in every fifth drill. A person follows the cart dividing the heaps equally among them, while five spreaders with small forks or "grapes," distribute the manure regularly along the drill. These are followed by an equal number of planters with the seed which they drop seven inches apart. After the plows have opened fifteen drills, they return and cover two of those first opened, in which the manure and seed has been deposited; they then open two in going, and cover two in returning, and so on; thus there are never more than fifteen drills open at once. By the method detailed, the seed and manure are but a very short time exposed to the sun and air, while I am satisfied that there is no plan more economical of labor, for if there are a proper number of men at the dung hill, not an instant of the time of any individual in the field is lost. Thus, if the dung hills are conveniently placed, two plows, three carts, three men filling manure, one boy driving, and one man dragging out the heaps, in addition to the field workers already mentioned, will finish in the best style, three Scots acres per day, supposing such were to receive forty tons of manure, about the average quantity allowed. The planting of each field is concluded by working and planting the headlands, cleaning the hedge roots, or bottoms of walls, and planting by the spade, the corners, as well as all other places not accessible to the plows. The beginning of May is as late as it is considered prudent to plant.

The potatoes used for sets or seed as they are termed, are for the most part brought from some of the high, cold districts, where the land has been lately reclaimed from a state of nature. Those from moss are most esteemed. Peebleshire and the upper ward of Lanarkshire furnish a large portion of those used in Midlothian. As the price generally exceeds the ordinary market rates, while the Lothian farmers themselves do the half of the cartage, the raising of potatoes for seed, has of late years added very much to the resources of the farmers in these bleak moorland districts.

Few subjects have attracted more attention in the agricultural world, than the cause of the failure of the potatoe crop, but it still seems hid in impenetrable mystery. It is now a well ascertained fact, that potatoes grown in the potatoe districts of the Lothians, will not reproduce themselves in a healthy manner. I observe in a late number of the "American Agriculturist" what I have heard also stated in this country, that the application of manure in the drill, tends to increase the destructive effects of rot. This I must take leave to doubt, as on the only farms in this parish, which have *entirely* escaped this scourge, the manure is never applied in any other manner. It is of the utmost consequence, that the seed should not be kept in large heaps, neither before nor after cutting, as fermentation is easily induced, and I am aware, has often taken place when little suspected. The quantity of seed used for an acre is four-fifths of a ton.

Soon after planting, the drills are rolled with a light roller, and when the stems are within a short distance of the surface, they are saddle-harrowed. By this means the annual weeds which may have germinated are destroyed, and before another braird can make its appearance, the crop is ready for the hoe. Whenever the rows can be distinctly traced, a drill grubber is passed down between them, being adjusted by means of its screw, to go as close to the young plants as is consistent with their safety. They are then immediately hand hoed, and in the course of ten days they are again horse and hand hoed, and slightly molded with the double mold plow. The growth is now very rapid, and just before the stems from the contiguous drills begin to meet, the grubber is again passed between the rows, this time narrowly set, and drawn by two horses, so as to loosen the soil to as great a depth as possible. They are now finally earthed up, and if the crop is good the stems soon begin to interlace, and in a week or two present an unbroken surface of leaves and bloom.

Early in October, the crop is raised either with the fork or plow, and stored partly in houses, and partly in long conical heaps on the surface of the ground, which are slightly covered with straw and then with earth to the depth of six or eight inches. The earth for this purpose, is obtained by digging a trench along the sides of the heap, thus forming a drain which prevents any water from lodging in the interior. These heaps or "pits" as they are termed, are generally from five to five and a half feet in width, and four feet in height, and are occasionally of great length, containing sometimes 6000 bushels.

The yield of this crop varies from eight to fourteen tons, but there have been instances of eighteen and twenty tons per Scots acre, of marketable potatoes being raised.

In the district around Edinburgh, the potatoe crop is of the first importance. This will be readily understood, when I mention that *here* four contiguous farms have always 200 or 220 acres under it, and as the manure when brought to the field does not cost less than 7*s*. per ton, it will be seen, that if to this we add rent, seed, and labor, a sum little short of £1200 is involved in the growth of fifty acres, exclusive altogether of any profit. The price which has been obtained for these two years past, was 45*s*. per ton, but some years it has reached 60*s*. and 80*s*. The moderate price of late years, has been in a great measure owing to the low price of oatmeal, and a considerable importation from Ireland.

The use of portable manures is gaining ground greatly as an auxiliary to the ordinary manure. Guano on any soil at the rate of three or four cwts. per acre, and rape dust on strong soils, at the rate of six or eight cwts., sown on the drills above the dung, are found to yield a very remunerating profit. Mixtures, containing the elements of the stem and tubers, have also been applied with great success, and as chemistry advances, they will no doubt be much more commonly used. As our scientific knowledge becomes more perfect, and more diffused, those unsuccessful attempts at the application of principles to practice will be more rare, and when they do occur, instead of throwing discredit on science, and producing doubt and hesitation, they will be referred to the true cause—the errors or want of knowledge of the operator.

I am, &c. JNO. GIRDWOOD.

LETTERS FROM MR. HORSFORD—No. VII.

Giessen, June 20th, 1845.

MR. TUCKER—I am reminded by an American friend, that an account of a day's life in Geissen, would be interesting to your readers; and willing to minister to their gratification, at least in an effort so inconsiderable, I will give you my yesterday's history.

At half past five, I was awakened by the servant to whom I am indebted for all my home comforts. She brought me the biscuit and cup of milk which constitute my regular breakfast, and soon after my coat and boots. At ten minutes past six, I was with about fifteen other young chemists, in Dr. Fresenius' little Laboratory, listening to a Lecture upon the science of Sugar Manufacturing—the detection of impurities—the distinction between grape, cane, and milk sugar, &c., &c. You may be a little surprised to learn that this already famed man, is but twenty-six years old—one of the most indefatigable and industrious of men. This lecture was one of a course upon *Economical Chemistry*, which is given two days in the week. On two other days, at the same hour, I hear him upon *qualitative and quantitative organic analysis;* and on Monday of each week the same hour and the one following, are appropriated to blow-pipe investigation with Prof. Will, who in Giessen is second only to Liebig, and is indeed accredited one of the first organic chemists of the day.

From seven to eight, I was seated with five or six others, in Liebig's auditorium, listening to Prof. Ropp, on crystallography, and determining crystalline forms. The lectures of this gentleman are given three mornings of each week, and to them is added an exercise in crystallographic drawing, in the afternoon of Saturday, from two to five o'clock.

At a quarter past eight I was at work in the laboratory. [NOTE.—It is almost impossible to escape an almost unparalleled use of the first personal pronoun, in this personal history, and I beg that as this is by far the simplest mode of making a relation, I may be indulged in it, and moreover, that the apology which is by me deemed due, shall be sought in an honest wish to satisfy the not censurable curiosity of my friends in relation to the Giessen chemical school, and student life in Germany.] Just now, my first duty in the laboratory, is the microscopic examination of some fluids in ferment. The essential cause in fermentation is not yet settled and is full of interest. This occupies me but a few moments. I then go to labors with ash and mineral analysis, which it would be impossible to detail, and to organic combustions, which alternate with the former, as processes are waited for, to preparations of re-agents, &c. At five minutes past eleven, I was listening with about ninety others to Liebig's lecture. It is every day of the week. His lecture, always brilliant, and yet possessing this attribute quite independent of experiments, continued till about half-past twelve,—sometimes it continues till nearly one.

I received, two or three days since, the Cultivator, containing my first impressions of our great teacher; and warm as was my admiration when those impressions were committed to paper, it has only increased with each day's acquaintance. It is as impossible to give an adequate idea of these lectures, as it would be to revive Raphael's studio and its master through the letter of a correspondent of this century. Pens, paper, and language have an humbler office. In the lectures upon hydrogen, we have, I presume, from forty to fifty experiments daily, and in others, scarcely a single experiment, and yet all quite alike interesting. Indeed, in the review, I find it much more difficult to recall experiments, than the statements he made—so rich in thought are these every-day communications. This is their distinguishing attribute. It is the practice in all the lectures to take notes in ink of every proposition, experiment, explanation, and application—otherwise it would be beyond human power to recall any proportion of the mass of fact and theory which is given. I use this word theory not in the sense of censure, which is the more frequently mistaken conception of its meaning. A theory is an explanation of phenomena.

The lecture was upon arsenic, with all the modes for its detection in organic matter, and then an especial course for its unvarying detection, without compounding with antimony. As it is exceedingly simple and may be of service, I will give it you.

Put the food, stomach, intestines, or other matter supposed to contain arsenic, either as the lower or higher acid, in a vessel containing water—boil with the addition of hydrochloric acid, and successive additions of powdered chlorate of potash. After boiling till the organic matters rise to the surface, or coagulate—filter, and all the arsenic will be in the liquid as *arsenic acid.* Now boil with sulphurous acid to reduce the arsenic to arsenous acid, and continue boiling till all sulphurous acid is expelled. Then add sulphuretted hydrogen, either from water saturated with it, or by the gas—and all the arsenic will be thrown down as a sulphurous compound. Filter, and there will remain upon the paper, beside the sulphuret of arsenic, perhaps some organic matters. Re-dissolve with ammonia, and the organic matters remain in the filter, while the sulphuret goes through. Hydrochloric acid throws down the sulphuret again, which may be filtered and dried between absorbing paper, and finally in a water bath or sand bath, or on a stove, with some paper around it. When dry, take a mixture of one part of cyanide of potassium to three of carbonate of soda, and rub them well together. To one part of the sulphuret of arsenic, add twelve of the mixture, and rub them in a mortar. Bring this mixture in a tube of half an inch in diameter or a little less, and lead into it dry carbonic acid gas, to expel all atmospheric air. After gently heating this tube throughout its whole length with a spirit-lamp, to draw out all moisture, bring a strong flame under the mixture and heat to redness. The arsenic will abandon its sulphuret, and at a little distance be precipitated upon the glass tube forming a metalic mirror. If antimony were present, it would remain behind. This simple experiment is perfectly decisive—a metalic mirror in this instance can have come from nothing but arsenic.

At the close of the lecture, I went to my lodgings to dinner. Most of the chemists dine at *The Rappen*, a hotel where the suite of dishes amounts to ten or more. I joined them last winter, but finding the fare too luxurious, I sought the more prevailing mode of German students, that of dining on prescribed dishes, whose number and variety can be controlled. My dinner of yesterday was a kind of bread and milk soup, an early favorite dish—a bit of wild swine flesh, potatoes, and a dessert. The soup, meat, vegetables, and dessert, are varied every day. While my dinner is being arranged and at its close, and indeed as it progresses, I review my notes of the morning lectures.

Half an hour after dinner is given to the Cultivator, Argus, and Journal—sheets for which I feel an indescribable affection here, and for which I feel grateful to my friends—and I enter the laboratory to work on till half-past six, or later, as the case may be. Then I go to walk, or, with more than two hundred others, distribted all along the river for a mile, to bathe in the Lahn. The temperature, which has for the last few days ranged from 80 to 92 degrees, drives sleep out of possibility without it. At eight I am in my room—occupy the time till half-past ten with calculating analyses, reading the chemical journals, and closing the affairs of the day. Before resuming the books, however, I repeat my luxury of the biscuit and cup of milk.

Thus passed yesterday. On two other days of the week I hear Prof. Will upon inorganic analysis, a course which I heard in the winter, and through which I have worked in the laboratory, but which I cannot permit to pass unheard, so impossible is it to make a step of progress in inorganic chemistry without familiarity with all known reactions, or at least with the scheme of inorganic analysis.

Respectfully yours, E. N. Horsford.

MR. MITCHELL'S LETTERS—No. X.

Paris, Aug., 1846.

Luther Tucker, Esq.—There being little to mention of Agricultural interest at Paris, I propose to give you in the present, some scattered notes of British travel. My observation extended over nearly all England—only two counties, Shropshire and Norfolk were unvisited. Through Berkshire, Oxfordshire, Warwickshire, Cumberland, Westmoreland, and a large part of Derbyshire, and Berwickshire, (in Scotland,) I strolled on foot. During this pedestrian range of over three hundred miles, I took frequent occasions to visit the farm houses, and laborer's cottages along the way; have observed as closely as circumstances admitted, the habits of the industrial portions of the population, have conversed with them at their simple homes, and in the fields, and not unfrequently have made trial of their implements of husbandry beside them. Two or three bouts round a field in South Devon, I remember going, with my hands to the stilts of a crazier plow than I ever saw in the most retired districts of New England. Only a month since, I wearied myself to exhaustion with one of the heavy Cumberland scythes, which, though exceedingly clumsy, and ill fitted in every other respect, are of the best tempered metal, and retain a fine edge. The mower was at first, unwilling to trust his scythe in my hands, but after promising him a sixpence *pour boire*, he willingly granted the favor, and admitted the work to be very fairly done. Should circumstances admit, the results of this observation may be reduced to something like method. In the hurry of travel, and the excitement of constantly recurring novelties, I can only snatch from my note-book a fragment or two, which may be of interest to your readers.

And first, of the famous model farm at Dublin. On the 28th of last April, I took a car in Sackville-street, and instructed the carman to drive me to the model farm, near Glasnevin, about three miles from the town. The environs of Dublin, in point of judicious and thorough cultivation, are surpassed by those of no other British city, and in respect of rich scenery, are excelled by none, except perhaps those of Edinburgh. In fact, the whole country, for three or four miles about the town is a garden;—not a garden only in the richness and variety of its products, but from the fact, that nearly every inch of its cultivated soil is turned up with the spade, and levelled with the rake. The plow is indeed used, and of every variety—the subsoil, the wheel, and the double mould, but the spade, within the distance of Dublin above mentioned, invariably attends, or follows their operation. The consequence is, a heavy tilth, that gives the grasses a dark luxuriance of growth, and to every crop a most extraordinary robustness.

The model farm offers no exception to these general appearances; indeed, its fields are distinguished from its neighbors, by the neatness with which the crops were laid down, by the trim attire of its fences and hedges, and if possible, by the superior exuberance of its vegetation. Stopping in a little lane which turns off the high road, and leaving the car at a pretty white gate, opening upon the approach to the farmery, I strolled down the gravel walk toward the house, which was but some seventy or eighty rods distant. On either side of the way, were slight hedges of flowers and shrubs, over which were seen in rich profusion the many colored crops of the farm. The house is of stone, sufficiently large to accommodate sixteen or seventeen apprentices, beside the proper offices of husbandry, and is without any great pretensions to architectural style. But there are vines being trained over it, and a thousand little decorations of shrub and flower, which are better than such pretensions, and which show that scientific skill, and first rate practical abilities may be, and are associated with regard for, and love of beauty, without harming the one or the other.

The farm is a level surface, in the form of a paralellogram, and of about sixty acres in extent. It has been in the occupancy of the present proprietor but a few years, who leases it,—subject to the general supervision of the agricultural board, at a rent of $1,500 a year. Sixteen or seventeen young men, such as are recommended to the board, are apprenticed to the farmer, and perform all the labor, without other remuneration than their board, and the opportunity to learn proper farm management. Besides these, a very large and fluctuating number of persons preparing for school keeping in the agricultural districts, attend at the farmery two mornings in the week, for lectures upon agricultural subjects, and every Saturday, for personal observation of farm duties.

The manager is no humbug; neither overrating the aids of science, nor underrating the advantages of field practice; he understands his duty, and has the energy to fulfil it. I found him in the cattle yard, giving some final directions to the stable hands, before going to the fields. The yard is a square, with the sheds and stables about it, upon every side except the south. It there opens into a larger yard, into which the cows are turned for an hour or two every morning for exercise. The number was, I think, twelve, beside several young cattle. They are fed wholly in the stalls, upon fresh cut Italian grass, bruised oats, and in winter, roots and hay. These cattle, with several horses, two or three at least, are sustained, and in first rate order, from only thirteen acres in grass, beside, as the manager assured me, putting up several tons for winter use. The cows are of no particular breed—being intermixture of the Ayrshire and

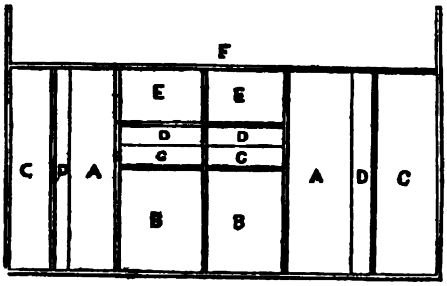
Durham, and Devon, with some traces of Jersey blood. One or two were crosses of the Short-horn and Ayrshire; but if I remember rightly, no pure blooded animal was in the herd. And it may be remarked in passing, that the cows about Dublin seemed to me superior, in all those points which make a good milker, to those I have met with in any other part of Britain. Eight quarts at a milking was the average yield at the model farm. Great attention is paid to the making of manure, and the system of soiling, the best possible for securing most fertilizing material, is thoroughly pursued. From six to eight hundred tons are made in a year. Draining and subsoiling are practiced upon the most improved plans; and the lessee was earnest in his commendation of them; he pointed me out a bit of land which presented a rough, yellowish, and altogether most unfruitful appearance, occasioned by subsoiling; "but," said he, "after two or three weeks of sun, and one or two thorough dressings, I will bring it to the condition of that along side it, which was last year in the same case," pointing to a strip of rich black loam, preparing for a crop of ruta bagas. Thorough tillage is his motto, and he regards the spade as the best of all implements of husbandry, which for England, Ireland, and Scotland, it undoubtedly is, both for reducing the land to the best possible state of cultivation, and socially, for giving employment to the thousands who are poorly employed, and in consequence, poorly fed.

Every variety of crop is raised upon the farm to a greater or less extent. Of all the grasses, the Italian rye grass is his favorite, both for nutriment and yield. Little clover is grown. The winter grains were promising well, but his chief dependance is upon the products of the dairy. The field work for the day, at the time of my visit, was the preparation of an acre or two of ground for ruta bagas. It had been plowed I know not how many times; all that remained to be done was the throwing of wide furrows with the double mould plow, at intervals of two feet—the strewing of manure, in no stinted quantity along the whole length of the drills, the lapping of a furrow from either side over the manure—the running of a light drill upon the top of the ridge—the dropping of the seed—careful covering with the hand-hoe, and the running of a light roller over all. The management of the farm dispenses with most of those labor saving machines, which prevail in many parts of England, and which do all operations at once. It is the policy of the manager to do every thing in the best possible way; and in ordinary cases, for the best possible way, a man's hands are the best possible means. Beside, whether overlooked or not, it is very desirable to offer to the land-holders of Ireland, such demonstration, that it is their best pocket-policy to bring into active employment all the idle hands of the kingdom.

I need hardly say that entire order prevailed in all the work—that every hand had its peculiar duty to perform, that every implement was in serviceable order, and had its place when unused, that the buildings were of the utmost neatness, all of them admirably designed for their particular purposes. In short, it is a model farm, not only for Ireland, but for whoever raises a crop. And its influence is felt more and more; not only in the immediate vicinity, where the mode of cultivation has improved latterly to a wonderful extent, but in distant districts where the school-masters, who derive their notions from weekly observation of such exemplary management, have carried their instructions. Nor is this institution the only one in Ireland. At Leopardstown, south of Dublin, and upon a gentle eminence overlooking the bay, has lately been established an Agricultural College. I passed it on my way through a most beautiful country to Wicklow, but unfortunately had not time for a visit. At Londonderry, in the north, or near it, is also a similar establishment, said to be the oldest of its kind in the United Kingdom. By the aid of these institutions—not only of their special instructions, but by the spirit they diffuse, the agriculture of Ireland is gaining ground—literally, gaining ground, year by year; and who does not believe that similar establishments, here and there, in our country, even though they should be set on foot by the enormity of a public appropriation, would be equally advantageous?

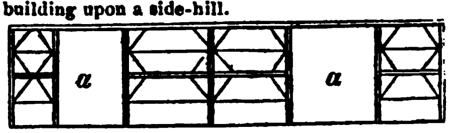
By my next writing, I shall probably have resumed my line of march, and may give you some notes of a pedestrian ramble towards the eastern borders of France, until then remaining, Yours truly, D. G. MITCHELL.

Domestic Correspondence.



PLAN OF A BARN.—Fig. 88.

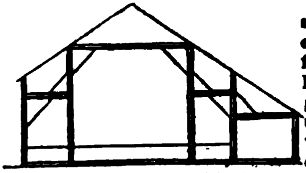
The accompanying plan was drawn at the request of a friend, and gives very good satisfaction. It is designed principally for neat stock, but with little variation would make a sheep-barn. It is intended for a side-hill, the front resting upon a wall. It would be desirable for the ground to slope to the south, as the yard would come upon that side. There are many advantages to be gained by building upon a side-hill.



Side view, resting upon the wall.—Fig. 89.

REFERENCES.—A A, lower floors, 9 feet wide. B B, bay, 20 by 30. C C, stable, 9 by 35. E E, stable, 10 by 30. D D, manger, 3 feet wide. G G, space, 3 feet wide. F. shed, 10 by 70. *a a*, barn doors.

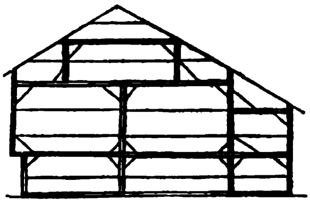
The main barn is 70 feet by 35, being more convenient to have greater length than width, with a shed 10 feet in width the whole length. The basement is framed by itself. It has 100 feet of stabling, without taking the upper story.



Centre Cross-section.—Fig. 90.

The upper story is similar to the lower, except that the barn floors are above the lower floors and manger; the whole of the upper story being covered with floor except the bays.

Some objection has been made to the beams being made so low. Having conversed with an experienced carpenter, I found there was no objection to framing them into the false plates, the inside bents being so that they will not interfere with unloading, as may be seen in fig. 90.

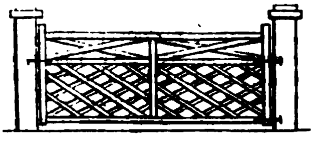


End View, with the shed —Fig. 91.

One of the greatest advantages of this plan, is in unloading the hay, requiring only one hand to take it away in any part of the barn, the hay being seven feet lower than the floor where the cart stands.

This plan will admit of many alterations without altering the principle. A SUBSCRIBER.

Winter grain, if not already in the ground, should be sown as soon as possible.



ORNAMENTAL GATE.—Fig. 92.

The frame is composed of hard wood sticks, 2¼ inches square; the lattice of boards 2 inches wide and ¾ of an inch thick, well riveted together at each crossing, which prevents the possibility of swagging.

Middlefield, Ms., 1845. LAWRENCE SMITH.

GOOD SHEEP—HEAVY FLEECES.

I have noticed, Mr. Editor, some statements of the high shearing properties of Col. Randall's flock, A. L. Bingham's, and some others, in the last two numbers of the Cultivator. These facts are of some interest and importance to all engaged in sheep husbandry. In your recent visit to Vermont, had you extended your tour as far as Williston, I could have shown you a very superior flock of sheep, which for the number, I think, is not far surpassed by any other in New England. Let me give you a few facts in regard to the shearing of my last clip. Each fleece was weighed as it came off, with steel-yards, that had been compared with Fairbank's Patent Scales, and found to be perfectly accurate—and the weight was recorded at the time.

I had 42 ewes that sheared six pounds and a quarter of very clean washed wool. One yearling buck that sheared 8 lbs. 10 ounces. And one, also a yearling, which sheared 10 lbs. and 8 oz., and the shearers will testify that the wool was very thoroughly washed. I had 3 sheep that sheared between 7 and 8 pounds—12 that sheared nearly up to seven—and so on, and 88 that went nearly to six lbs. each. Of my whole flock of 207—90 of which were yearlings—the exact average was five pounds and three quarters of an ounce. Some of the yearlings went as low as 3¼ lbs.; and two old ewes that had shed a great part of their wool went below three pounds. I have seen no account where the average on so large a flock was so great. My flock has been established within two years, and I have spared no pains or expense in making the best selections. My flock is made up of Gaudaloupes from the Shaker Farms, Enfield, N. H., and of Paulars, so called, from the flocks of the Messrs. Cutting, and Mr. T. C. Wright, Shoreham, and M. Bingham, and A. L. Bingham, Cornwall, Vt., and of that very superior flock, J. I. Bailey's, Newport, R. I. I paid from $10 to $30 each, for my ewes, and $40 for my best yearling buck, when a lamb about four months old. This last was purchased of Mr. A. L. Bingham, of Cornwall, who has refused $50 for the own brother to him, a lamb of this season. I consider this buck as the very best I ever saw. I have about 20 lambs from him, and they show him to be a stock getter of the highest order, having very thick and very fine wool, and so like the sire, that you, a stranger, would be able to select them from a flock of 90, after you had once seen him. He is a buck of very large size for his age—of proud and lofty carriage—of great strength and courage, and strong constitution.

I wish, Mr. Editor, that we could get the avérage weight of the entire flocks of A. L. Bingham, Col. Randall, &c., &c. If the average is taken on a small portion of a flock, it gives us no adequate or just idea of the whole. I find if I take my average on 53 instead of 42, that it is reduced to exactly 6 lbs. each.

I would give you the following general statement of my shearing, which will lead you to understand about how my flock stands. Of ewes with lambs by their sides, except where they were yearlings, three sheared over 7 lbs. each—12 from 6 to 7 lbs. each—48 from 5 to 6 lbs. each—and 88 from 4 to 5 lbs. each. The balance of the flock of 207, sheared below 4 lbs each.

I have about 250, old and young, full blood, pure merino sheep; 90 of the number are lambs. The balance are one, two, and three years old. I have a few high grade sheep, which I intend to dispose of, so as to have nothing on my place but pure blood merinos.

Williston, Vt., Sept. 12th, 1845. L. G. BINGHAM.

P. S. You see I have given you an account of the worst as well as the best end of my flock. I wish that others would do likewise. Then we could compare notes with proper data to go upon. "The truth, the whole truth, and nothing but the truth," is my motto. Will your correspondents enlighten us?

CLEARING LAND.

L. TUCKER, Esq.—You inquire, page 152, May No. Cultivator, for an article on the best mode of clearing land. I trust you are in possession of a better article than the following; if not, this is at your service.

Girdling or belting, where timber and wood are of little or no value, is the usual, and I am of opinion, the best mode, and to be the first step, in clearing land. If deadened a few years before cleared and brought into cultivation, the bark, limbs, and much of the sap part of the timber becomes decayed, and forms a valuable and lasting manure; whereas, had the whole been cut and burned while green, not only the decayed part above alluded to, but much of the vegetable mold, or soil of the land, would have been also consumed.

The trunks of the trees must necessarily be burned upon the land; and the larger the log heaps the better, as less surface is burned over.

I believe it is universally admitted, that burning over land is injurious to the soil; but the ashes made and allowed to remain, where log heaps and large brush heaps have been burned, fully restores the injury done. I can conceive no soil benefited, by burning anything that might otherwise decay on it. Except in extreme dry weather, by burning of new ground clearings, or even log heaps, the organic or vegetable matters are seldom destroyed to any considerable depth; but the proportion burned becomes heavy and inert; and if all, to the usual depth of the plow were burned, the result would be the same, as if spread to that thickness of brick dust made from the same material.

To obviate any danger from burning wood on the land, I would recommend establishing manufactories in the vicinity of them; which would soon add a greater value to the wood, than to the land when cleared.

Such is the fact at the north where manufactories are established, and villages have sprung up; such is the case in the sugar districts in Louisiana, and along the rivers and water courses of the whole country where steamboats and vessels ply, and commerce is carried on. In a word, the most profitable mode is the course usually taken, especially by new settlers. Deaden the timber, cut and burn the under brush, and put in a crop; afterward, and before the limbs and trunks begin to fall, to endanger life and limb, cut down and burn; and what is very important—go ahead. Yours, truly,

New River, La., 1845. S. TILLOTSON.

DESTROYING ALDERS AND OTHER BUSHES.

EDITOR OF THE CULTIVATOR—Sir—On the receipt of your August number, I noticed the article on "Killing Alders," and your invitation to others for facts on that subject.

Mr. Jefferson somewhere suggests the importance and utility of perpetuating the experience of old men, and agriculturists depend so much upon facts for what they do, that I am induced to state my own experience on this subject.

In the town of Salem, Washington county, N. Y., where I have resided for more than forty years, I have been in the habit yearly of cutting all kinds of brush that sprout in the open and cleared fields. This has been done in the months either of July or August, in the old of the moon, when the sign is in the heart; and when it has been done on the day the moon changed, but before the change, the sign being in the heart, it has never failed, to my recollection, to destroy the brush.

JOHN CRARY.

Salem, August 18, 1845.

NOTES OF TRAVEL IN THE SOUTHWEST—No. VII.

BY SOLON ROBINSON.

Once again, my friends, I come with my monthly greeting. Well, where parted we company last? Let us reflect. We had just visited Mr. Leigh, and given a slight sketch of his method of *farming*, which I have italicised to give the term a contradistinction from that of planting—the latter term meaning only the cultivation of cotton. But before leaving Mr. Leigh's neighborhood, I must notice that I was on President Polk's plantation, and earnestly hope that his cultivation of Uncle Sam's big plantation will be as well managed under the overseership of Mr. Polk, as his Mississippi cotton plantation is reported to be. The next point of interest that I visited was the plantation of Captain Wm. Eggleston, of Holmes county, who is one of the good farmers of Mississippi. He is a Virginian, from Amelia county, and having an introduction from his friend, Mr. Leigh, I met with a very hearty reception.

The 17th of February was an uncomfortably warm day. The peas in Captain E.'s garden several inches high, lettuce in full head, and other things in proportion. Captain Eggleston has about 1,400 acres of land under cultivation, and upon which live 20 whites, and 150 blacks, 70 of which are field hands; about one-third of his land is kept in corn and oats, the proportion of corn being as two to one. He keeps up a continued rotation of crops, and puts all the manure that he can upon the corn, which averages about 25 or 30 bushels to the acre; plants corn and sows oats in February. He is now working 43 mules and horses, and 28 oxen, and makes 560 bales a year, which he has to haul 10 or 12 miles. He also raises all the grain and meat required upon the plantation, feeding his negroes at the rate of 3½ lbs. clear bacon per head per week, with about a peck and a half of corn meal, besides vegetables and fruit, melons, &c. Like Mr. Leigh, he gets his flour from Virginia, and asserts that no other will keep well through the summer.

I saw in his garden some very fine fig trees, which as far north as this produce remarkably well. Peaches are unfailing, but with grapes he has not been successful. Apples are not a southern fruit, yet many are attempting their cultivation. And now a word of Captain Eggleston's system of cultivation. His place is all hilly, thin, oak land, very light soil, that melts away in water not *quite* so easy as salt or sugar; and yet he has scarcely a gully upon the whole farm; but he has more than 20 miles of side hill ditches, which are so constructed that they take up all the surface water before it passes far enough over the ground to form gullies.

While riding over the plantation, I found one of the overseers engaged, with a large force of hands, laying off and making ditches upon some new ground, it being a rule never to put in a second crop until the land is ditched.

I will attempt a description of the very simple instrument used as a level. It consists first of an upright standard about five feet high, the lower end sharpened to stick in the ground, and about a foot above is a shoulder, upon which rests a frame made of thin cross bars, tennoned at each end into uprights, about four feet long, one bar at top and one at bottom, and one in centre, with holes through which the upright passes, and upon which it plays freely. This standard being set in the ground and a plum line brought to rest upon a scale previously graded to the required fall of the ditch, the operator sights along the middle bar until it strikes the ground at the point where he would commence the ditch, and then moves it round the face of the hill he wishes to circle, having the various points marked as far as he could extend the view from that point. And here I cannot refrain from mentioning a very remarkable fact which I saw, and which Captain E. assured me that he had often witnessed, but could not account for. He had a negro boy—not a very remarkably bright one either—about a dozen years old, who being stationed at the starting point of the ditch, would start upon a smart trot round the face of the hill, and when he had gone as far as he thought necessary to strike a stake, he would stop, and never four feet out of the way. Query, had he a water level in his head? How can his leveling faculty be accounted for? I wish some political *levelers* had as happy a faculty of always being right.

When the line is thus staked off, the same boy walks back upon his track, picking up the stakes, while the overseer guiding a horse drawing a slightly marking plow held by another hand, follows on, and thus makes the line of the ditch for the big plow that follows, and in turn is followed by hands with hoes until the ditch is completed.

The alteration that I would recommend in this instrument, would be to substitute a spirit level for the plumb line, as on a windy day the line is too much affected.

This level upon hilly land is much preferable to the rafter level, and is as easily made.

As before remarked, the rows have to conform to the ditches, however crooked, and the manner of plowing is to lay off the rows in the first instance, the middles often being left unbroken until after the corn is planted, and perhaps up. Captain Eggleston's plan is to plow deep directly under the corn, and plow shallow while tending the growing crop. His motto is to plow deep for all crops. He assures us that since he has adopted the level system of ditching and plowing, that in addition to the advantage to the land, that his crops are better and the soil improving instead of deteriorating.

All of his mechanical work is done by his negroes upon his plantation. He has two negro carpenters that he occasionally hires out to others at the rate of $40 apiece per month. He estimates that he has ten miles of plantation roads, and 20 miles of rail fence, more than half of which is to fence against other folks' cattle instead of his own; and this fence has all to be renewed once in seven years, as in this humid climate that period is the length of durability of rails. What an enormous tax! And with the enormous waste of timber going on, how long will it be before all the rail timber is exhausted? What is to be done then? What is to be substituted? It is time this matter was thought of even amid the forests of Mississippi. There is another matter that ought to be thought of too by every cotton planter. What are they going to do when the supply of basket timber is exhausted, as it already is in some parts of the state? Will they send to the north for these indispensable articles? Well, so be it. We are ready to furnish you, and we will soon learn that you cannot pick cotton without baskets. I advise you to commence immediately the cultivation of OZIER WILLOW. It will grow upon all your creek banks, and it will make a more handsome and valuable fringe than many that I have seen in the middle of your fields. There is another article that grows almost spontaneously upon some of the rich bottoms and waste corners of your plantations, that would bring money if sent to market; and that is red pepper, the grinding of which you can do in your own mills, and pack in your empty flower barrels—try it. You can get the willow from New-York; I don't know in particular from where, but I will venture to name my friend, Charles Downing, nurseryman, Newburgh, whose honesty I have great faith in.

And begin in time to husband your resources for fencing. Don't pursue a course that I witnessed a few days ago. Deadening good rail trees within the proposed enclosure to stand and rot down, and going outside among the standing timber and cutting down the trees for rails, and for the reason that by so doing it saved the trouble of clearing up the tops within the field—those outside could lay undisturbed to rot.

Leaving Captain Eggleston on the 18th, the first plantation I passed was one that once had been a very fine one, of comparative level and rich soil, now in utter ruins: Cause—debt, law and taxes. Fences, buildings and land all in ruins; the former rotted and fallen down, and the latter gullied away. In the midst of all this desolation, an ancient mound reared its lofty head, looking still more the lonely monument of an extinguished race than it would when met upon the wild waste where *civilization* had not yet set its more enduring mark. Even here upon this monument the hand of the white man had been, and exposed to view the interior, "full of dead men's bones."

After passing Lexington, the county seat of Holmes, which is rather a pleasant-looking town, we begin to leave the hilly country, and find one, though of the same kind of soil, much more level, and showing more good farms, upon several of which I saw large forces busy planting corn. Cotton seed is much used for manuring corn, sometimes spread broadcast and sometimes put in the drill with the seed, which is generally planted in drills and covered with the plow.

From a Mr. Adams, whose hospitality I partook of this night, I learned that hot ashes are a very effectual remedy for what is generally called "the damps" in wells. They appear to absorb and neutralize the gas—so he says. It is easily tried. Mr. A. is a great economist of manure, and plows his land upon the level system, but without ditches, which Captain Eggleston says, upon side hills is worse than straight up and down. Mr. Adams' land is, however, comparatively level.

February 19th, I passed through the town of Benton, the county seat of Yazoo, and which is so superior to its namesake in Missouri, both in appearance and character of its inhabitants, that one or the other ought to change its name, and principally though for the reason that papers directed to one often get astray to the other. I regret that the anxiety that I began to feel to reach Log Hall, prevented me from making a stop at this town and forming more close acquaintance with some of the many friends and readers of the Cultivator that in a very short visit I found here. It was then my intention to return, which circumstances prevented. Although I would not make distinctions among friends, yet I may be permitted to signalise Mr. Jenkins, the P. M., and Wm. Battel, Esq., whom I found most active and anxious to encourage the reading of agricultural papers.

A few miles west of Benton I called upon John M. Cullen, who has invented, as he thinks, an improved cotton scraper—it being a small piece of steel attached to a plow in such a manner that he can "bar off" and "scrape" at the same time. I witnessed a trait in Mr. Cullen's character that I desire to mention, together with the wish that others would do likewise.

He owns a pond, which is the only watering place for teams upon the road for a long distance, and which he necessarily had to enclose; but instead of shutting the public out, he has gone to considerable expense to provide for their accommodation, and has put up a sign of "Bethesda," the meaning of which Bible readers will understand.

But let us go on with our wonders. To-day I first met with the "Spanish moss" regions, which, contrary to the opinion entertained by many, that it only grows upon trees in swamps, is found equally abundant upon the hills. I don't know that it shows any preference in the kind of tree it grows upon, for it is not a parasite; that is, so far as I could observe, it appears to have no connection with the tree, but hangs loosely upon the limbs, sometimes hanging down two or three feet. Its color is silvery grey, and when all the trees in the forest are thickly covered, it gives a curious appearance. Although at the north we esteem it valuable for mattresses, &c., it is here but little used.

This evening I crossed the "Big Black," a stream large enough for steamers in high water, but for want of improvement but little used. It runs through a wide, rich, overflowable bottom, entirely uncultivated. During two days ride I passed land that was not yet clear of timber, that had been worn out and thrown out of use. This bottom-land would be more enduring.

In this region of the state there is great difficulty in getting wells, while streams and springs are few and subject to dry up; and though every body ought to have cisterns and artificial ponds, yet every body has not, and none that I have met with seem to be "fixed," but are ready to sell out and hie away to Texas, or some other place "further west."

February 20th I travelled on a very broken and poorly cultivated part of Madison and Hinds counties; passed several "gone to Texas" plantations, the appearance of which give the country a desolate look.

Enquiring for Dr. Phillips, I found that "a prophet is not known in his own country," and that if a man wishes to distinguish himself "among some folks," he must turn politician, instead of becoming a writer for agricultural papers. However, most that I inquired of seemed to know that the Doctor lived somewhere, though the exact where they could not tell, and for which latter piece of ignorance I did not much blame them after I knew myself, for a more out of the way place can't well be thought of. Knowing that his post-office address was "Edwards' Depot," I easily found that, but I cannot say that the seven miles from there was so easy to find in th[illegible]t, or so pleasant to drive over; but perseverance accomplished the task, and I found the Doctor and his family so much more pleasant than the route to his place, that with the reader's permission who has traveled thus far with me, we will tarry awhile and partake of heartfelt hospitality while resting from the fatigue of our thousand miles journey. And now for another short month, dear reader, a kind adieu from your old friend and fellow traveller. **Solon Robinson.**

SEEDLING PEAR.

Luther Tucker, Esq.—Having read in the Cultivator for June last, the communication of Judge Darling, of New-Haven, in this state, relative to the seedling pears cultivated by Gov. Edwards, of the same place, I concluded I would send you a sample of a seedling pear which has been cultivated in this vicinity for a period of nearly or quite one hundred years. They are known by the name of "Pineo pear." It is said that the elder Dea. Pineo, who formerly lived in the North Society of Lebanon, (which is now Columbia,) found a young pear tree growing wild in a piece of wood land. He took up the same, set it out near his dwelling, and the result was the kind of pear which I send you. It has been cultivated by budding and grafting, so that many of the farms in this and adjoining towns have one or more of this kind of pear tree, which have long been in bearing. No sales of these pears have been made until within a few years, when a fruit dealer in the city of Norwich chanced to purchase a few of them in their hard state, which he considered of little value, and they were left in a barrel for nearly two weeks, when, having occasion for the barrel, he found on examination, that the pears had become mellow, were juicy and very delicious, and that the fruit he had considered as nearly worthless, was really a valuable kind.

He has introduced them into the Boston market, and they find a ready sale among the lovers of fine fruit in that "city of notions." In fact, they have so grown into repute within the few years past, that fruit dealers in Hartford and Norwich have been out to engage them of the farmers in advance, before the fruit was ripe enough to be gathered from the tree. Mr. Truman, a fruit dealer in Norwich, told me a few days since, that he thought the variety was peculiar to this region, and would not succeed well in any other locality. How this is I know not, but have been informed that people who have moved from this place to the western part of your state, have taken with them the scions of this pear, but when the trees came to bearing, they were nothing like the "Pineo pear." I also put in the box a few peaches, which are seedlings of my own raising. Should the box arrive before the fruit is injured, will you please to give your opinion as to its merits, and how it will compare with the pears raised in your vicinity.

John S. Yeomans.

Columbia, (Ct.,) Sept. 1st, 1845.

[The box of pears and peaches above spoken of by Mr. Yeomans, and for which he has our thanks, arrived safe on the 6th of Sept. The fruit was however too ripe, generally, to test its real qualities. The pear was tasted by several, and pronounced decidedly good. Its size is more than medium; form handsome; color fine light yellow with minute rusty dots; and its flesh rather melting and sweet. We presume it is not overrated by Mr. Y. The peach is a middling sized, pretty fruit. Color yellowish, with a beautiful bright blush. Quality middling.—Ed.]

A KITCHEN GARDEN—FRUITS AND FLOWERS.

Reader, if you want to see something in the vegetable kingdom a little earlier, and a little nicer, than you ever saw it before in this climate, just drop into the fruit yards and gardens of ELEAZER BURNHAM, Esq., and his son-in-law, Dr. ALEXANDER THOMPSON, at Aurora, Cayuga Lake.

Only one mile east of this place, 400 feet above the level of the Lake, nearly every thing of the fruit kind has been cut off this season, by a biting June frost; but here, directly on Aurora bay, under the warming influence of this never freezing lake, the tomato, the egg plant, the tender grape, and the peach, are in luxuriant progress; corn, planted in April, begins on this, 20th of July, to glaze; early potatoes, very much pinched by drouth, are now ripe; most other kitchen truck is in great perfection.

Here are ornamental trees, deciduous and evergreens, and flowering shrubs of every hue and variety; to say nothing of the earlier berries, cherries, gooseberries, &c., &c.; here is the Bon apple fully ripe, as is also the luscious little apple of Eve, on its tiny, bush-like tree; the delicious Seckel pear tree is so thickly beset with its unripe blood-red fruit that its leaves are thrown into the shade. Apricots, nectarines, plums, peaches, and clustering grapes, are giving an earnest of early fruition, such as but few, even in this fruitful land, have it in their power to enjoy.

But how shall I describe the flower garden, with its winding, circular, any thing but straight, gravelled walks; with borders of stone crop, Phlox, and *Buxus sempervirens;* its concave, crescent-shaped, many sided beds; to undertake to name the genus, let alone the legion variety of these beauties of the floral creation, which now bloom here, is more than my poor pen can compass; suffice it to say, that here are flowers indigenous and exotic, from every clime,

"Where woman smiles or sighs."

That which occurred to me first, was, how so much labor could be done at so little expense; the absence of every weed, the finely ameliorated soil, the extreme good taste in the arrangement of the flowers and the house plants, in their rustic boxes, the picturesque disposition of the beds, and the flowering shrubs; above all, the order, beauty, freshness, which pervaded all; was *prima facie* evidence to me, that no mercenary hand, no clod-hopper foot, had been tolerated here. It was evidence positive that the result here produced was the effect of that labor, and those combinations, which enthusiasm alone can originate and direct. Mr. Burnham himself is too far in the "sere and yellow leaf" to lend his physical aid to the work, but Dr. Thompson finds both mental and physical renovation in the labors of the fruit yard and garden; here is also a single young man, a servant of all work, an Englishman; but not the dull, leaden-eyed, stupid, obsequious, serving man of old England; I am told that he spends much of his leisure time in Dr. T.'s library; here under the doctor's instruction he has learned something of geology, agricultural chemistry, and botany; this "little learning," pronounced so "dangerous" in the old world, has come to be, under our republican institutions, the best "*support to the throne,*" the only guarantee to popular civilization, the parent of that exalted enthusiasm, without which there is no upward progress; nothing to separate the intellectual laborer from that biped drudge of grossness and ignorance, who has too long been honored with the title of *a laboring man.*

S. W.

THE MOON OUT-GENERALLED.—A lady of our acquaintance, lately fairly out-generalled the moon. In making *soap* (over which the moon and the witches seem to have great power, according to some,) she was particularly unsuccessful, though her ley was strong, and every thing else apparently right. She was promptly informed by an experienced neighbor that she had undertaken the business exactly in the wrong time of the moon. A young chemist, who happened to be present, discovering that the ley effervesced strongly in acids, and was therefore not caustic enough, applied quicklime in small quantities to the obstinate and half-made soap, when in a short time all lunar influence was withdrawn, the planet struck its colors, (if it ever had any,) and a fine lot of first rate soap was produced. T.

DRAINING MARSHES AND PONDS.

MR. TUCKER—Among the many little obstructions which nature has placed in the way of the practical farmer, none appear more repulsive than those little swamps and marshes which are here and there promiscuously seen in the midst of fertile lands, often surrounded by high ground, which seem to baffle the industry and defy the skill of the agriculturist, to drain or fill up. The result of an experiment last summer in draining one of this kind, I purpose to give for the benefit of those who are similarly annoyed by a swamp surrounded by land so high that it is impossible to drain it in the usual manner of ditching.

There was situated in the centre of a field a pond of water, covering about half or three-fourths of an acre of ground, in which water has remained for a great number of years past, from three to four feet deep, surrounded by ground rising in every direction from the centre of the pond, so that it seemed impossible to get a ditch deep enough to let the water out. The soil of the surrounding field is of a sandy quality, and in the bottom of the pond is of muck or blue clay, and for several rods around the pond where the water occasionally stood during wet seasons of the year. About four or five rods from the pond, and a short distance from the clay soil, where the ground was perfectly dry and sandy, I commenced digging a well about eight feet in diameter. After digging about two feet from the surface of the ground, the soil grew harder, and showed some indication of gravel, and continued to grow more hard and gravelly to the depth of six feet, where it grew more loose and gravelly; and continued to grow more loose and porous to the depth of twelve feet, when it began to cave, and was but little else than a stratum of loose stones and gravel. I then filled the well with large stones, loosely thrown in, and in order to prevent their falling too hard and packing too tightly on the bottom of the well, several posts were placed slantingly towards the bottom for the stones to roll against; and from the well I dug a ditch to the pond, deep enough for the water to run readily from the bottom of the pond. This was done in the afternoon, and the next morning the pond was perfectly empty of water, which the evening before was from one to four feet deep, and covering near three-fourths of an acre; thus in less than fifteen hours this immense quantity of water was discharged from the bottom of the well into the bowels of the earth. A ditch was then dug leading from the well through the centre of the pond, and stoned in the ordinary way of filling blind ditches, and the muck drawn out upon the high ground and mixed with the sandy soil of which the field is composed.

The ground has since remained perfectly dry and tillable, and bids fair to become more productive than any other part of the field. I am satisfied, from the success of this experiment, that most of the swamps, ponds and marshes which abound in our country, and are similarly surrounded by sandy soil, may be, with trifling expense, drained and made permanently dry in this expeditious manner. J. W. SEELY.

Bainbridge, Chenango county, August, 1845.

BOMMER'S MANURE.

L. TUCKER, Esq.—As I am a friend to the agricultural interests of the country, and wish its improvement and prosperity, I send this communication to you. I have lately purchased George Bommer's patent method of making manure, and from trial consider it very valuable, not only in the fabrication of manures, but also in its analyses of soils, and other interesting matter to the farmer. I have long thought the subject of agriculture had been greatly neglected, and am very glad this effort has been made to accelerate its interests. I would not be deprived of the aid of the knowledge contained in the method for five times what it cost me could I not regain it. I hope my fellow farmers throughout the country, who need manure for their farms will avail themselves of this useful method, which so cheaply and expeditiously converts the materials into this valuable article. Let us be awake to this subject, and we shall but little longer hear of short crops and worn out lands.

RALPH STORRS.

Mansfield, Ct., August 27th, 1845.

CANADA THISTLES.

MR. EDITOR—I fully agree with a writer in the July number of the Cultivator, that "prevention is better than cure." I have no doubt that old, deep-rooted patches of thistles may be subdued by constant and thorough plowing; but my plan is to save the trouble of a "cure." I know by my own experience, that any farm not already overrun with thistles, may, by a little work and constant vigilance, be kept entirely clear.

In 1807, I came into possession of the farm I now occupy. There was not then any thistles on it, but a neighbor adjoining had at that time one lot very full of them. He took no pains to keep them down, except by ordinary plowing and cropping, and his farm at length became completely overrun with them. In every head-land and joint of fence they were from year to year suffered to run to seed. The consequence was, that my farm, which adjoins my neighbor's for half a mile, in a few years showed Canada thistles springing up in different places. I made up my mind to commence not a *Florida* war merely, but an interminable war on the base intruders.

Believing in the theory that the root is as much dependent for prosperity on the branch as the branch is on the root, I take a hoe, in the spring of the year when they first make their appearance, and just crop them off at the surface with one stroke, which a man can do and walk right along. I repeat the operation as often as the thistles appear, which may be three or four times in the season. I have frequently killed them in this way the first season, so that they have not appeared again in the same place; but if they should appear the next season they will look sickly, and by repeating the same process the second year they will be entirely subdued. But if, unfortunately, you have neighbors less faithful than yourself, you will be constantly annoyed with new cases which will require attention.

I have pursued this practice of cutting thistles with a hoe for nearly forty years; and although my neighbor's farm is now filled with them in every field, there has never been on mine in any one year more than a man could cut up with a hoe in ten minutes, provided they were standing in one spot. But they will spring up in some new places every year or two, requiring, like the maintenance of liberty, "eternal vigilance."

AN OLD FARMER.

Saratoga, August, 1845.

HOUSES OF UNBURNT BRICK.

MR. EDITOR—We have a method of building cheap good houses here of unburnt brick, of which I do not recollect that any notice has been taken in your paper, and which I think are admirably adapted to any part of the country. The plan is as follows:

First, find out some strong, adhesive clay—the stronger the better—throw up a quantity of it and mix in plenty of straw or sedge grass, cut about six inches long. Put in sufficient water to make a strong mortar, and tread with oxen or horses to a consistency to be made into brick. Mould them to any size you wish, from 18 inches by 9 to the size of common brick; they are generally moulded here as long as the wall is thick—say 18 by 9, and 6 inches thick. After being dried in the sun, like other brick, they are ready for building, and can be put up with either clay mortar, or lime mortar, as is convenient. Lime is of course the best. They should be built on good stone or oak sill foundation, 18 inches from the ground, and the eaves of the roof should project over 2 feet, to prevent the water lodging. The chimney can be built of the same material of a smaller size, except the fire place, and above the roof. The plaster is put on the wall without lathing, both inside and outside, it being usually rough cast. If five or six nails are driven into each brick to within half an inch of the head, they will prevent the rough cast from falling off, but it will stick close enough to the wall on the inside without. A frame is fitted on the wall where floors are wanted for the joists to fit into, if for good houses, but if for a cheap kind, simple two inch plank are laid on the wall, and the joists laid on them for the floor.

These houses are at once cheap and durable, being very warm in the winter and cool in summer, and always free from damp. Being generally frost-proof, flowering plants can be kept in them in the winter with the greatest ease. A friend of mine, a few miles from here, who formerly lived at Albany, Mr. John Holmes, has built a very good one of this kind, and he finds it all that he can desire a house to be. Mr. Ellsworth, of the Patent Office at Washington, has also built one.

J. B. BAGWELL.

Chinguacousey, Canada West, August, 1845.

POUDRETTE.

TO THE EDITOR OF THE CULTIVATOR—Having seen it stated by you in some of your papers, in answer to an enquiry in relation to Poudrette, that it is undoubtedly one of the best manures when properly made—but that the purchaser must trust to the honesty of the manufacturer for a good article—we beg leave to state two or three facts concerning ourselves, which will show that we have an *interest* in making a good article, and *prove* the fact that we *do not* adulterate our poudrette. In the first place, we have too much capital at stake to risk our reputation by making an article that would sell for but one season. Our buildings, vats, drying floors, with movable covers, which occupy more than an acre of ground, together with the vessels continually employed in the business, cost us more than $75,000. Secondly, we offer the following

AFFIDAVIT.—*State of New Jersey, Hudson County, ss.*—Charles F. Dodge, being duly sworn according to law, deposes and says, that he is now, and has been Agent and Superintendent for the Lodi Manufacturing Company, at their works on the Hackensack River, during the two last years, (1844 and 1845,) that he knows the materials of which every barrel of Poudrette has been made during that time, and that to his certain knowledge, no raw peat, turf, or meadow mud is now, or has been used, in the manufacture of their *New* and *Improved Poudrette*, and moreover, that *no street manure, pond dirt*, or *hard coal ashes*, or *any other hurtful* or *deteriorating* material has been or is now mixed in or with the article. That the cheapest material used in its manufacture, is an article answering exactly both in description and analysis to the celebrated "*Dutch Ashes*," which, as deponent is informed and believes, have been for many years a considerable article of commerce in Europe, being there considered a most *valuable* and *powerful fertilizer*. And deponent further saith, that the proportion of night soil to the other compounds, is not less than 60 per cent., and that no article is used which is not a good manure by itself; that all foreign substances, such as sand, &c., are separated as much as possible from the night soil, by a peculiar process;* *that no two kinds of Poudrette have ever been manufactured for sale*; that the proportions of the several ingredients are uniform and not varied from; that in its manufacture it is carefully protected from rains, snows, and dews, and that from the manner in which it is made, *it is next to impossible that one barrel should be better or worse than another*.

CHARLES F. DODGE, *Agt. and Supt. Lodi Man'g. Co.*

Sworn this 23d day of June, 1845, before me at Jersey City. J. D. MILLER, *Master in Chancery.*

Add the fact, that we are an old established and incorporated company; that we have survived every rival establishment; that we have greatly improved upon the European process of preparing Poudrette, and we leave your readers to judge whether we are not entitled to confidence, or at least to a *trial*.

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* It sometimes happens, that hard coal ashes are thrown into privies. In such cases it impossible to separate or screen *every* particle of hard coal from it—hence, small pieces, about the size of a pea, are occasionally found in the Poudrette.

Respectfully yours, A. Dey,
Pres't of the Lodi Man'g. Co., 50 Liberty-st., N. Y.
New-York, August 14, 1845.

BLACK SEA WHEAT.

Mr. Tucker—Having in several former numbers of the Cultivator, seen notices of the Black Sea Wheat, and learning that where it had been raised it was considered a valuable variety, I concluded to make a trial of it myself. Accordingly I last spring procured one bushel and a half for seed. This was sown the 24th of April on a little over an acre of ground. The crop I have just harvested, and for many years I have not had so good a one. The straw was bright, the heads long and remarkably well filled. Still I think it was somewhat injured by the drouth, as it was on dry land, and the season with us has been very dry. As many farmers in this vicinity have made no change of seed for many years, would it not be for their interest so to do? *I think I have found it so.* My wheat is not yet threshed, or I would give the number of bushels. In some pieces in this vicinity, a small worm has made serious depredations. Will you give the name? Have heard it from others, but not satisfied. It is about the eighth of an inch long, of an orange color, and it is found by the side of the kernel, or between the kernel and the hull.

In the last number of the Cultivator was a notice of a trial of the Centre Draft Plow. I have used this kind of plow several seasons, and believe that as yet, too much has not been said in its praise. In the beautiful work it performs, in the ease with which it is held, and in its lightness of draft, the farmer is sure of finding his reward.

Plainfield, Ms., Aug. 21, 1845. Wm. N. Ford.

P. S. Any person wishing to procure the Black Sea Wheat for seed, can be supplied by the subscriber.

INDUSTRY AND ECONOMY.

L. Tucker, Esq.—Several years ago, on a cold raw day in November, public business called me to the house and farm of Mr. Dudley Chase, then and still residing in the town of Winchester, in this state. I was so highly pleased with the amount of labor performed in doors and out, with the help employed, that I then made memorandums of the same in writing, and think it worthy of a place in your very worthy agricultural journal. I have no doubt of the truth of what I state, although it may seem extraordinary. The work was none of it slighted, but was all, in doors and out, done in an excellent manner, and in due season.

They then lived in an old inconvenient house in the middle of their farm, and had no public road to the house, but have now a good convenient house, and a good road passing by it. Mr. C. was, as might be expected, a subscriber to the New England Farmer, published at Boston, perhaps the only agricultural periodical then published hereabouts. He had that year kept and milked 16 cows, and made 6,500 lbs. cheese, 450 lbs. butter, and fatted 2,700 lbs. pork, to aid in doing which, he bought a load of bran and 70 bushels of corn.

Mrs. Chase and a hired girl did the work in the house. They had three children, the oldest then four years old, and the youngest born the preceding August.

Mr. C., with the help of a boy 16 years old, had done all the work on the farm, raised 3 acres of corn and potatoes, made 16 rods of stone wall, got out his manure, made and got in his hay, collected materials for a large and convenient farm-house, and his year's wood; made 575 lbs. of maple sugar, of which he saved for his own use 30 lbs., and cleared on the rest over expenses of transportation, $59.20, and 2 galls. of molasses sold for $2.50. Sold 5,400 lbs. of his cheese for 8 cents a pound, and his calf-skins for $9.28. Collected the apples for 25 barrels of cider, carried them more than a mile to the mill and brought back the cider.

His team consisted of a singe horse and no more, and he used no other during the year, except to break up one acre of sward land for planting. And with that same horse, he went to market in trips from 7 to 53 miles out, each, amounting in the whole to 428 miles, and he thinks about the same distance in shorter trips.

He bought his farm on credit, but by the industry and economy, not parsimony, above described, had been enabled to pay for his farm, and furnish himself and family with all the comforts of life. My daughter drank tea at his house a few days ago, and informed me that every thing is managed as well as when I was there.

Lest it should be thought I have some interest in puffing a particular friend or connection, I can say, and say truly, that I never saw or heard of the man or any of his family, till the occasion first mentioned, nor have I now any connection with them or any more friendship for them than for any others, that by industry and good management, make themselves comfortable and respectable. Such folks I wish to encourage, and as far as in my power, present to others for example, and therefore hope you will not refuse this a place in the Cultivator.

C. Butler.

Plymouth, Conn., June 16, 1845.

THE TANNING PROCESS.

Mr. Editor—Tanning is a chemical process, but I doubt whether it keeps pace with the present march of improvement in science and knowledge.

The following information would be of general utility to tanners in the south and west, to wit:—

1st. Is there any philosophical instrument to ascertain the strength of tan ooze, or the tanning liquor? If yea, what is it?

2nd. What is the strength of the first liquor the hides are put into? And what the strength of the last?

3d. Are there any improved tanning machines of late invention, and what is their utility? Who are the inventors, where do they live, &c., &c.?

4th. Is there no improved plan of scouring off the hair, cleansing the hide of the lime, &c.?

A Subscriber.

Livingston, Ala., July 29th, 1845.

In reference to the foregoing, we offer such information as we possess, hoping that others will more fully answer our correspondent's inquiries.

A new process of tanning was invented in England a few years ago, for which, we have been told, a patent was granted by the crown. About the year 1838, or '39, an Englishman then residing at Zanesville, Ohio, obtained letters patent from the United States government, for what we understood was the same process. The name of this man we cannot now recollect, but presume any information can be furnished in relation to him, or to the process of tanning, by Mr. Joseph Stacy, of Zanesville. In *Johnson's Farmer's Encyclopedia*, a description is given of a new process of tanning, which we suppose to be the same as is above alluded to. The subjoined extract embraces the substance of the account:

"A discovery has recently been made, which seems likely to revolutionize the tanning trade. By means of a tanning machine, or pair of horizontal rollers, fixed over a tan-pit, between which is fixed a band or belt of hides attached by ligatures to each other, to the number of 50 to 100, and by which the rollers are constantly fed or supplied, the hides are lifted out of the pit on one side of the machine; as they pass between the rollers, the exhausted ooze or tanning liquid is pressed out of them, and they are deposited in folds in the pit on the other side, where they absorb another supply of fresh tannin. The first hide having been inserted between the rollers, the others follow in succession, and upon arriving at the end of the band, the motion of the roller is reversed, and the belt is returned through the machine to receive another squeeze. This alternating motion is constantly repeated, the pit being replenished from time to time with fresh solutions of tan, till the operation is completed. The effects produced by this simple plan, are—1. The shortening of the time of tanning to one fourth of that generally required. 2. The production of a considerable increase of weight. 3. The leather tanned by this method resists water longer than that tanned by the old process. 4. The new method is cheaper than the old. 5. It is applicable to the existing tan-yards, at a comparatively trifling expense, with a capability of working in rounds or series, and of expending less tan or liquor. 6. That it is available for all sorts of leather."

A SHOWER BATH.

Friend Tucker—A great deal has been written and said, of the necessity of frequent ablution. It has often been shown by the most learned logic, that perfect health may not be expected by him who neglects to keep his skin *clean*, any more than him who neglects to keep his feet warm by exercise. And yet it is probable that not one person in a thousand in this country, expects to wash daily more than his face and hands. This is particularly true of the country, where water is in greatest plenty, and where from the nature of our occupation, it perhaps, is the most needed. How many a poor fellow after a hard days' work in the harvest field, has retired at night, wearing linen steeped in perspiration, and found that

—— "he's a ninny who supposes
That every bed's a bed of roses."

He rises in the morning uttering the almost universal complaint at this time of the year, "I am more tired than when I went to bed."

Now, if he could have stood for but one minute under a shower bath, and followed this by a brisk towel, and this with a clean night gown, how full his heart would have been of "blessings upon the man who invented sleep." He would have thought with the Irish poet,

"Still as I stretch each wearied limb,
I cast a grateful thought on him,
And wish him rest in heaven."

A certain correspondent of the Genesee Farmer once said "that hogs did not prefer to be *dirty*, but they wallowed in foul water because clean was not given to them."

Surely no one will say that men are less refined than hogs! The true reason for this apparent neglect, arises chiefly, in my opinion, from the want of a suitable washing *apparatus*. Bathing tubs are sometimes found in the dwellings of the rich, but these are costly, and require to have the water heated during the most of the year, for who but a regular disciple of Preissnitz would encounter, feet foremost, an ice bath in the winter! Seeing in an eastern paper, (the name I do not like to give lest I might be suspected of fanatical tendencies,) an advertisement of "Portable Shower Baths," we set our *wits* to work, to contrive a "Macedon Shower Bath." And though with much inward trembling lest the "rights" of the aforesaid advertisers be infringed, I will now proceed to describe the results of this mental exertion, in a simple and perfectly successful apparatus.

A sink is first made, two feet by two feet and a half, six inches deep, hollowing to an inch hole in the centre. This stands upon legs seven inches high. Four posts two inches square are raised upon the corners of the sink. Three of the sides are enclosed by muslin, nailed to the posts, and painted. The fourth side has a door covered by muslin as before. Across the top run two inch strips, two inches wide; in each of these two window pullies are fixed, one in the middle, and one near the end. So far the closet, now for the engine. This consists of a cylinder of tin, keg shaped, ten inches in diameter, and twenty-eight in length, with a small iron axis running through the *heads* one inch from the centre, and having gudgeons at either end. Now put blocks with cords attached, upon these gudgeons, and let the cords pass over the pullies, and the cylinder may be raised then either by a *crank* or weight.

The next thing will be to get the water in, and out. The reader will observe that by reason of the axis being at one side of the centre, the other side will always tend downward. Toward the top, as it hangs, cut out three sides of a parallelogram, that is, the two short sides, and the *lower* long one; bend *in* this piece of tin, perpendicular to the surface of the cylinder, and you have a hole for turning in water, four inches by twelve. The ends of the piece of tin must then be lengthened to the *heads* inside and soldered fast, making a tight partition four inches deep and twenty-eight long.

Now to get the water out. On the other side of the partition, and near it, describe a circle eight inches in diameter; punch this space full of holes, size one eighth of an inch. Solder a ring to the upper surface of the cylinder, and attach a cord three feet long thereto.

Are you ready for a bath? If so, let down the engine and pour in twelve to eighteen quarts of water, turn the crank until the cylinder has reached the top, and the clack holds it fast; step in and gently pull the string; the refreshing shower descends. Do you say "hold, enough?" let go the string, and the cylinder falls back by the unalterable laws of gravity; thus on till you are satisfied, and refreshed, not forgetting the rough towel, and polishing flannel at the last. W. R. S.

PRESERVATION OF CARROTS.

Mr. Tucker—In the Cultivator of last year, page 141, Mr. Henry Weston, of Indiana, says that carrots may safely be left in the ground during winter, like parsneps. This statement induced me to leave a few carrots in the ground last fall for the purpose of experiment. They were of the long orange variety. When dug, in the spring, the lower ends of them were sound, but the upper ends, for four or five inches, were soft and rotten. I conclude, therefore, that in *this climate*, it is not *always* safe to let carrots winter in the ground where they grow. Yet I have no doubt the experiment may sometimes be successful; and the same is true of turneps. I have seen excellent turneps pulled in April, from the ground where they grew the preceding year. The winter had been very severe. Snow fell in November, and remained on the ground until late in the succeeding April. The turneps, being covered during the *whole* winter with a thick coat of snow, were preserved from freezing. But when the top of the ground is subjected to alternate freezing and thawing, as is often the case during our winters, turneps left in the ground are soon spoiled, and carrots do not fare much better, judging from the result of last year's trial. A. R. M'Cord.

Lagrange Dutchess county, 1845.

THE BUTTON-WOOD TREE.

The sad fate of that noble shade tree, the Button-wood, (*Plantanus occidentalis*,) during the last four years, has attracted the attention and excited the sympathy of the admirers of nature.

When their early shoots were killed in the spring of 1840 or '41, it was generally conceded that early frosts were the cause, and I well remember that in this state we had, soon after their buds had expanded, a cold rain and *sleet*, covering the young leaves with icicles that "nipped the tender shoots" beyond recovery. Vegetation put forth again, but so late in the season that the wood had not time to mature and ripen before winter approached, and the young leaves were either killed or entered the ensuing spring sickly and weak. They again perished—the old tree suffering most; but sprouted out as before, late in the season, and again were too young, or had not sufficiently performed their office to withstand our severe winters. In many of the old trees life became entirely extinct, and all were more or less affected.

Some writers have assigned as the cause a disease or epidemic, and given, as an indication of it, instances in which the trunk of the tree has been affected—the bark in places turning brown and the sap ceasing to circulate. This, however, I conceive to be the *effect* rather than the *cause*. The appearance of the trunk and large branches has generally been healthy—remarkably so for trees that have so frequently been deprived of their foliage. The present spring being unusually dry and the mild weather approaching gradually, has favored these monarchs of the forest, and I am happy to observe a more healthy condition in those which have survived. It has been said that the button-wood is one of our hardiest forest trees, and therefore should not have suffered more than others by early frosts; but this may depend greatly on the particular state of each kind of tree when attacked. The willow and other early trees may by greater expansion of foliage have acquired more hardiness, whilst the oaks and such as are late in blooming may not have budded. But is the button-wood one of our *hardiest* forest trees? Its natural location is on the rich bottoms and shores of our large rivers in the middle and western states, while the oak, chestnut, &c., are found in high latitudes and on mountain sides where they brave the severer storms that there prevail.

The opinions I have thus ventured to express seem strongly confirmed by the account given of the *Plantanus occidentalis* in Selby's British Forest Trees, and which I have not seen elsewhere noticed. After describing the tree, he says—"It is evident from the fatal effects produced by the severe spring frost in the month of May 1809, and by the severe winter of 1813 and 1814 that it is in reality of a more delicate constitution, and less able to bear the vicissitudes of our climate than the oriental plane. In the year and month first named a severe frost destroyed the tender shoots and leaves just then bursting from their envelopes, of most of the largest trees; and though some which were not killed by the first attack made an attempt to push again late in the season, the feeble shoots they emitted were again destroyed by an early autumnal frost; this sealed their doom, as nature was too much exhausted to make a successful effort the following spring, and they speedily died."

There are farther remarks by that distinguished author illustrative of the effects of severe frosts on these trees, most of which were destroyed by the severe winter of 1813 and '14, and they are now rare in England. I trust, however, that nature, always provident, will adapt them to the changes and vicissitudes of our climates and spare us this noble tree. Yours, A. S. Roberts.

Philadelphia, Sept. 8, 1845.

THE CENTER DRAFT PLOW.

Mr. Editor—Professional business having taken me away, I was from home when your number for August reached my place of residence, or I should have noticed sooner the report of the committee on the trial of the Center-draft plow at Albany. As a young friend observed, when introduced for the first time to a newly married pair, he had been considering for some time which he would rather be, whether Mr. or Mrs. L., so I find it difficult to determine which most to admire, the subject of their report or the document itself, both being, in my estimation, master-pieces in their way. I have been in the constant practice of using the center-draft plow for eighteen months, but it will be as many years before I shall cease to talk of and admire it; and yet, I admit it is necessary to understand it before it can be thoroughly appreciated. As has been said, its operations are spade labor, and so are the results, amounting, I am fully borne out in declaring, to the difference of a profit and loss on a farm. To speak the truth, I could not keep my farm in proper cultivation without it, and this I say from practical experience; for since I have used it I am able to keep the weeds under, which I never could do with the cutting plow, the center-draft first breaking and pulverizing the furrow-slice, so as to shake out the weeds by their roots, thus causing the death of one half by exposure to the sun and air, and hurling to perdition the other half, into the bottom of the furrow, making manure of them.

After this, however, I must be permitted to make an observation, without the shadow of animadversion on the committee's report, but to point out an error in judgment regarding the *utility* of the dynamometer in the trial of plows at our meeting, save and except as to the simple fact of ascertaining the mere comparative quantum of draft. I may be singular in my opinion, perhaps, but I believe much injury and wrong judgment has arisen from its use; the committees on plowing being often led astray in their estimate of the *value* of a plow by its lightness of draught, without taking into account the cultivated and upturned state of the furrow-slice, so that the plow that cuts the land smoothly with its well-sharpened wing and point and coulter, and sets the furrow to an angle of 45° or even less, and passes on without breaking or disturbing a particle of it, is measured by the dynamometer against another, which *breaks without cutting*, and cultivates the earth, like the spade and rake, from the bottom to the top of the furrow, which can only be done by a resistance amounting to a great many pounds, perhaps in some instances to a hundred, over the mere cut-and-edge plow. To be sure, the plow that shall be found to pulverize the soil like the center-draught at an expense of resistance not greater than the Ransome, would be a remarkable implement; and thus I estimate the Prouty-plow, from data derived from the working of my teams, on which I can fully rely, it being seldom now that I see them turn a hair or quicken a breath in the labor of turning the stiffest soil, while formerly, they would be covered with foam. It has been computed that two horses in a center-draft plow are equal to three in almost every other; and this I go for, and a little more occasionally. D. C.

New Brunswick, N. J., 1845.

"SPARE THE BIRDS,"

Say a large host of scribes in the different agricultural papers. Though the birds destroy, mutilate, and defile the fruit, yet they also eat the *insects* which destroy the fruit. Hence we should spare the former on the principle of "setting a thief to catch a thief."

But this benevolence should be more expanded. The grubs and wire-worms, though they destroy the crops, also destroy the weeds which choke the crops; therefore "spare the grubs." Canada thistles, though they choke the crop, also choke mulleins, docks, and Johnswort, which injure the crop also; therefore, "spare the Canada thistles."

I am so heterodox as to differ from others. I am in favor of destroying *all* depredators that are proved to be such. If they happen to be *snakes*, destroy them; if they are *birds*, destroy them; if insects or noxious weeds, destroy them;—and then I have the privilege of disposing of the crop, as is most convenient. We must take care of our own crops and show no partiality to any intruders or thieves, however handsome their dress or fine their music. Let every one be judged by his actions. If a snake kills field mice, and does no injury himself in turn,—protect him;—if a "feathered songster," eats and defiles fruit, and does no good beside—destroy him. And however much good he may do in saving the farm or fruit crop from insects, if after it is thus saved, he appropriates it all to himself, he has forfeited protection.

There seems to be a sort of morbid humanity in favor of birds, because they are birds; true humanity should extend to all animals alike, which have feeling. Is it any greater merit to be a bird, than a toad, snake, or lizzard? Why must the snake be killed and the bird be spared, when both may be equally innocent or equally guilty? Whose fault is it that the toad is a toad; why then visit him with the blame of what he cannot help? He is not a free agent in this matter. A rogue should not escape if he has a handsome face, nor an innocent man be punished though hook-nosed and hump-backed. Let us discriminate. Some birds are our friends, and do us good; others are gross nuisances, let them be abated. X.

METHOD OF PRESERVING PORK.

Mr. Editor—I am aware that much has been written on this subject, and also that the great mass will continue in the beaten track of their good old fathers, because they are unwilling to run any hazard, and I am fully satisfied that there is a great difference in cellars, some favorable to the preservation of meat, others unfavorable; and so of other articles. The method which I have adopted for two years past, has previously been practiced by some of my friends with complete success, where the common mode had often failed. I pack my pork the same day of killing, (even though it be not fairly cooled through,) in the common mode, except I use Turk's Island or rock salt. The same day I scald and skim my brine till it is perfectly pure, then boil and pour to my pork boiling hot. It penetrates at once equally, takes from it all stringy and tough qualities, renders it brittle, adds much to its flavor, and is the safest method I ever practiced. *Shoreham, Vt.* S. N. H.

The method of curing pork above described is new to us, and we should therefore be unwilling to ensure its success. If others have practiced it we should like to be informed of the results.—Ed.

REMEDY FOR RINGBONE.

Take half a pint of the best whale oil, and half a pound of best box raisins. Cut the raisins open and put them in the oil. Simmer both together (do not boil) till the raisins are hard and crispy. Apply the preparation to the ringbone once a day, rubbing it in well. It will last about two weeks, and one preparation will generally effect a cure. I tried this on a horse three years ago, that was quite lame; the bunch is still on his foot, but he has not been lame in the least degree since.

Eaton.

East Weare, Hillsboro county, N. H.

CONDENSED CORRESPONDENCE.

Carriage for manure, &c.—"B. H." New Lisbon, describes a new vehicle for hauling manure, which he thinks of considerable importance, as follows:—"All that is required is three cross-pieces, 6½ or 7 feet long, pinned to the side scantling of a stone-boat, and planed bass or pine boards, 8 or 9 feet long should be nailed to them. They should be seasoned and matched, or made tight. The cross-pieces should be hollowing in the middle, from 6 to 10 inches; the one at the hind end of the stone-boat should be settled as low as possible; The forward piece should be raised from four to six inches. This gives a smooth surface of about sixty feet, and being hollowing in the middle, more can be placed upon it, and in unloading, the shovel more naturally tends towards the centre. For drawing and spreading any kind of manure, or old ashes, where the distance is not great, two men will do more with greater ease than three men can with any other kind of carriage."

Westchester County, N. Y.—Mr. Wells, of Croton, will receive our thanks for his good wishes and efforts to extend the circulation of the Cultivator in that county. Though he regrets the general want of enterprise and information among the farmers of that section, he says—"There are some who seem to manage upon principles, and appear ready to avail themselves of every suggestion, and to profit by the light which science is pouring on rural affairs. When you go over the county, you can readily tell which are the farms that have such owners. We might mention their names, and you would recognize them as standard subscribers to the Cultivator. But there is a population of 48,000 in the county, three-fourths of which, or more, are directly employed in agriculture, yet the mansions are few indeed where you can find an agricultural paper. This should not be." In reply to Mr. Wells's inquiry, we state that the number of our subscribers in Westchester county is 151.

Advantages of Agricultural Papers.—Mr. John S. Yeomans, of Columbia, Ct., says—"I have been a constant reader of the Cultivator from its commencement—took it for six years in company with a neighbor, working at that time as a mechanic and owning but a few acres of land. For the four years past have taken it myself—have purchased some more land, and am dabbling some at farming. I have always been prepossessed in favor of agricultural interests, and have often expressed the opinion that the intrinsic value of the real estate in our small town has been enhanced considerably in consequence of improvements in making manure and cultivating lands, which never would have been adopted but for the suggestions in the Cultivator."

Prevention of Smut.—I have been soaking my *seed wheat* in bluestone (sulphate of copper,)—1 lb. to 5 bushels, water enough to cover, leaving it in soak for about 24 hours and then rolling it in ashes, and have found this method a full preventive against *smut*. With the same effect I have tried for 5 bushels seed wheat, 1 lb. saltpetre, (nitrate potass,) 2 lbs. sulphate soda in crystals, (glauber salts,) 2 lbs. of copperas, (sulphate of iron,) and I never had smut in wheat when I used either of these preparations. *Laurens Dist., S. C.* W. B.

Large Fleece.—We have received an article signed "*Tityrus*," giving, in an extract from the Hartford Times of 28th June last, an account of the fleece of a Merino buck fifteen months old, belonging to Daniel Pinney, Esq., of East Windsor, Ct., from which was sheared on the 9th of June, *thirteen pounds and eight ounces* of wool "in good merchantable condition." "Tityrus" informs us that this remarkable animal was the produce of what is called close breeding—that is, breeding from near relations. The ewe which brought him is said to have been a full blood Merino, though it is unknown whether she was a "Pauler, Escurial, Nigretti, or Rambouillet." "Tityrus" informs us that—"This ewe was put to a ram that had carried his fleece two years without shedding his wool, and *his* fleece was about eight pounds. The produce of this union was a ram lamb, which at fourteen months old sheared *nine* pounds of wool. She was next put to this son of her's when he was only about seven months old, and her produce by him was *two* ram lambs, one of which is the famous buck that produced this enormous fleece of thirteen pounds and eight ounces of wool at his *first shearing!*" The weight of fleece, we think, exceeds by several pounds that of any other Merino buck of the same age that we have heard of.

Items.—We give the following items from a letter from G. M. Eichelberger, Frederick, Md.

"I am pleased to see that you suggest to Mr. Townsend the expediency of not extending the controversy relating to the transmutation of grain. Those who still adhere to the opinion that transmutation takes place, if they have read half what has been said in the Cultivator, and tried to think rationally on the subject, must be "bound to their idols," and "would not believe, though one rose from the dead" to assure them of its impossibility.

Mr. Eichelberger informs us that he planted last spring some Mercer potatoes which were procured from Baltimore, and were much affected with the dry rot or gangrene. He cut off most of the affected parts, but planted some a good deal rotted. "They were," he says, "a long time vegetating, and some few did not grow at all, but the rest grew finely, and if the drouth had not interfered I should have had a fine crop. I have dug them, and the quality is very fine. So far as I have discovered there is not a single particle of rot."

"In the spring of 1843 I made inquiry through your paper relative to damp walls of dwellings. In September or October following, I lined the walls with zinc, and covered it first with a pretty stiff wrapping paper, such as hardware merchants use for wrapping, and had the walls papered; up to this time no dampness has shown itself."

The fourth flowering of the Paulownia Imperialis.—The Revue Horticole thus describes this tree. "The parent of the splendid family of the Paulownia, which has been disseminated to every part of Europe, and also to America, has just flowered for the fourth time in the Garden of Plants, at Paris. Two hundred and twenty terminal clusters, each 15 to 16 inches in length, and comprising 20 to 30 flowers to each cluster, impart to the tree the appearance of a single magnificent bouquet of a light blue hue, and most charming effect. The tree is now 25 feet in height, and attains in Japan the height of 40 to 50 feet." The most attractive object in the nurseries of Wm. R. Prince & Co., at Flushing, is a plot containing 500 trees of this species, which have attained 8 feet in height since the middle of May, with entire circular leaves, 20 inches in diameter. It was introduced by them in 1843, and has proved perfectly hardy; indeed more so than the Ailanthus and Catalpa.

Self-acting Pump.—A correspondent at Washington city, D. C., writes—"A very deep interest is felt here in relation to the Self-acting Pump, a communication upon the subject of which appeared in your last number. If it will perform what its inventor promises there will scarcely be any calculating its convenience in this southern country, where wells and cisterns are principally depended upon for water. I trust the public will hear more about it, as soon as propriety will permit.

I read the description of it, to an old acquaintance, a few days ago, who is a planter, and resides near the centre of the state of Mississippi. The self-acting pump he said, would be invaluable to him. He depends solely upon cisterns for water throughout the whole year. His cistern, from which he draws water for his family use, is about forty feet deep, and twenty feet in diameter. He fills it in the winter season, because the water then is not only colder, but is thought to be purer. No water is admitted during the warm weather. Like all others, accustomed to the use of cistern water, he thinks it the sweetest and best water that can be had, any where, any how—but could it not be much improved, in the way of filtering it, by means of a self acting pump?"

Center Draft and Subsoil Plows.—W. B., of Laurens District, S. C., writes concerning these implements as follows:—"I think myself bound to add to the many testimonials in favor of Prouty & Mears' plows. The subsoil plow I have used, and believe to be an implement of immense importance, at least in this section of country, where the ground is rarely plowed deeper than three inches, save by accident, and two inches is considered "pretty deep plowing." The self-sharpening plow is a noble farming tool, doing the work to perfection.

"A few persons of intellect and enterprise, who witnessed the performance of these plows, or were informed by me of the ease and nicety with which they work, have caused me to order several of them for experiment on their farms. I *believe* that the plows I obtained from Prouty, of Philadelphia, were the first of the kind ever brought here. I saw indeed one subsoil plow, at the farm of one of your correspondents, at Newberry, S. C., Mr. W. S., a gentleman of enterprise, and a scientific as well as practical farmer, but it was a clumsy affair, requiring a full team of horses, different in every respect to the plow of P. & M. I believe it was made after the pattern of the Deanston plow, and very *probably* Mr. W. S. was the first who brought a subsoil plow to South Carolina."

Farming in Canada.—Mr. J. B. Bagwell, near Toronto, says in reference to the rotation of crops practised in that neighborhood—

"Our general mode of farming here, is first a naked fallow, wheat, then oats, then peas with wheat or a fallow again, and so on in rotation with an occasional sowing down to clover. This is not a grazing part of the country, the land being more adapted to grain than grass. Our cattle are a mixture of Durham with the native stock; sheep principally of the Leicester breed, and hogs partly Berkshire with a pretty good sprinkling of the alligator and landpike breeds. The average clip of wool is from 4 to 5 lbs. of washed wool, and the average weight of hogs from 150 lbs. to 300. Mutton has in few instances been killed weighing 40 lbs. per quarter. But we cannot boast of the heavy weights of beef or pork that you do on your side of the lake."

Soaking Seeds in Ammonia.—A correspondent at Princeton, N. J., writes—"It may be of interest to some of your readers to give the result of an experiment in the way of soaking seeds. Last April, I soaked some oats in a solution of carbonate ammonia and gypsum, according to the mode prescribed by Mr. Campbell, of Scotland, as stated in the Cultivator The result was, at harvest, no perceptible difference from those by the side of them."

Blind Bridles.—"Why are blinders injurious to the horse?" Because they gather dirt and heat round the eyes. Dirt irritates the eye, and heat produces inflammation. Eyes were placed in the corner of the head that the horse might have the advantage of looking in different directions. Men, in the abundance of their imaginary wisdom, concluded the horse had too much sight, and they wished to curtail it; hence the origin of blind bridles. These so entrammel the eyes, that the horse is constantly compelled to strain them to see his way. This over exertion soon brings on disease.

INQUIRIES.

Orchard Grass.—H. C. (Jefferson co., N. Y.) This grass is the *Dactylis glomerata*. It is excellent for pasturage on tolerably dry soils. It makes very good hay, but matures too early for mixing with other grasses usually cultivated here. Another objection to its being sown in meadows, is the tendency it has to form *tussocks* which render the ground uneven, and prevent the scythe from running smoothly and closely. It is therefore most valuable for pasturage, and in this respect is superior to most grasses. It produces an abundance of long rich leaves, and starts very quick after being cropped or cut. Owing to the lightness and chaffy nature of the seed, a large quantity, not less than two bushels per acre, is required to seed the ground sufficiently to make a good sward of this variety. But little seed is produced in this country—the most of what is sown here being imported, which causes the price to be rather high. It may be had of Mr. Thorburn, of this city, at $2.50 per bushel; stated to be first rate article.

Cob-Mill.—A Subscriber, (Greenville C. H., S. C.) See the notice of Pitts' machine in this paper. Hussey's "Corn and Cob-Crusher," (see Cultivator vol. x, p. 19,) is well spoken of. We think it is for sale by Messrs. Sinclair & Co., Baltimore, Md. Messrs. Sinclair & Co., have also a mill for grinding corn (without cob) into meal, (see page 17 of current vol. Cultivator,) to be used on plantations, &c., that would probably answer the wants of "A Subscriber."

Foot-rot.—R. H. G. (Blenheim, N. Y.) In the Sept. No., you will find some good directions for this disease, in an article signed "Grazier." It is true the writer denies the propriety of calling the disease the "foot rot," but his treatment is no doubt beneficial in effecting a cure. Wash the foot well in soap-suds, and then apply a solution of blue vitriol (sulphate of copper) or some other caustic substance which will kill the *seeds* of the disease. Keep them on clean dry land.

Root-claw.—A. M. (Salisbury, Ct.) Perhaps you had better send to Boston for a root-claw or "root-puller," such as was alluded to on page 286, last No. It will serve as a pattern from which you can make others. This will be better than any description we can give of the tool, as we have no cut of it. We presume they can be had of Breck & Co., Ruggles, Nourse & Mason, or Prouty & Co., Boston.

Threshing Machines.—M. L. B. (Salisbury, N. C.) There are so many kinds of threshing machines in use that it is not easy to tell which is best. Pitts', Burralls, Hall's, Warren's, Taplin's, &c., each have their advantages. Hall's horse-power with Pitts' separator, described in our last vol., page 344, is highly approved. It is made and sold by Joseph Hall, Rochester, N. Y. A. Wheeler and Brothers, Chatham 4 Corners, Columbia co., N. Y., also make various kinds of threshing machines, and we bellieve most of the approved kinds may be had of J. Plant, successor to L. Bostwick & Co., 5 Burling Slip, New York. We are unable to give prices—they vary according to size from $120 to $300.

Harvesting Machine.—Hussey's and McCormic's machines are good ones, if we can credit the accounts of them. Messrs. R. Sinclair & Co., Baltimore, Md., would be able to give all information concerning them.

Straw Cutter for horse-power.—Hovey's largest size, price $30, is no doubt a first rate machine of this kind.

China Pigs.—T. D., (Louisville, Ky.) We know of no pure bred China pigs. The catalogue wanted shall be sent you. Accept our thanks for the interest you have taken in the Cultivator, an additional eight copies of which have been sent you.

Lucerne.—A loamy, not clayey soil, is most favorable to lucerne; but if it can be made to stand well and get through the first year, it will do pretty well on one that is more compact. Great care should be taken to keep it from being overrun with weeds the first summer, and to prevent this it is perhaps better to sow it with a machine, in drills, say eight or ten inches apart, and keep the spaces clean with the hoe.

THE CULTIVATOR.

ALBANY, OCTOBER, 1845.

TO CORRESPONDENTS.

Communications have been received during the past month from W. R. S., D. Gould, Solon Robinson, W. R. Smith, L. A. Moody, J. G. Bagwell, A Subscriber, Ralph Storrs, W. R. Prince, D. G. Mitchell, A. R. M'Cord, A. S. Roberts, J. P. Norton, D. C., A. L. Bingham, Asher Tyler, Tityrus, H. T. C., S. Weller, Henry Brewer, A Farmer, Grazier, Za. Drummond, Investigation, Farmer C., A Farmer of Chenango, Berkshire, An Amateur.

G. B. Frederick, Md.—Shall be glad to receive the communication on the subject to which you allude.

☞ Two "Challenges" have been received which we cannot publish except as advertisements.

☞ A notice of the agricultural exhibition at Troy, is unavoidably postponed till our next.

MONTHLY NOTICES.

Part IV. of Mr. Colman's European Tour, will be issued early in this month.

☞ Gentlemen having stock of any kind for sale, will please take notice that our advertising columns are open to them; and that we wish to avoid, as far as possible, the publication of communications intended mainly as advertisements.

Seedling Peach.—Mr. **James H. Watts**, of Rochester, has sent us a specimen of peaches produced by a tree which came up in his garden. It resembles the *Melocoton*. It is of good size, very juicy, and of fine rich flavor—well worthy of cultivation.

☞ Our friend E. E. T., of Painted-Post, has our grateful thanks for his high opinion of the Cultivator, and our efforts to advance the improvement of agriculture. We trust our paper will continue to merit his approbation.

Worcester Cattle Show.—This show is to be held on the 9th inst., when Mr. W. Cushman will, as he informs us, offer for sale, a variety of improved stock, consisting of cattle, sheep and pigs.

Sales of Stock.—Besides the sales of stock which were negotiated at the State Fair, several purchases have recently been made in this neighborhood. R. H. **Green**, Esq., of Winslow, Maine, has purchased the famous bull *Fairfax*. This animal together with two cows purchased of Mr. **Prentice**, have just left here via rail road for Mr. Green's fine farm on the Kennebec, where, should they arrive without accident, they will prove an acquisition of great value to the vicinity. Fairfax is well known and generally esteemed one of the best Durham bulls in the country. In 1842, being then two years old, he received the first premium for bulls of that age at the show of the New York State Society. His condition and appearance is now fine, and we think he will be likely to make such a *sensation* among the "down easters" as no animal has before done.

Mr. **Vail**, of Troy, has also lately disposed of a fine bull calf to Col. **Hampton** of South Carolina. The calf is the progeny of Mr. V.'s last imported cow, purchased of **Thos. Bates**, Esq., of Yorkshire, England, and the prize bull Meteor. The price paid for this fine calf is $300.

Advertisements.—We invite attention to our advertising department. It will be seen that Mr. **Comstock**, late editor of the Central New York Farmer, is now opening an extensive Agricultural Warehouse in this city. Such an establishment has been long wanted here, and we are pleased to learn that it has been undertaken by one so well qualified by his practical knowledge of the business, to give satisfaction to the public.——Gentlemen who contemplate removing to Virginia, will not fail to notice the sale of Farms in London county, to take place on the 25th inst.——Horticulturists at the South, will do well to notice Mr. **Weller**'s advertisement, whose list of fine native Grapes we presume is equal at least to that of any other establishment in the country. We find it impossible to give his communication this month.——The attention of our readers is particularly called to the notice of the "Rensselaer Institute," one of the most valuable schools for young men in the State.——Wool growers are referred to the advertisement of "Fine Wooled Bucks," as an opportunity is afforded to procure several, at reasonable prices.

Virginia Agricultural Societies—We are happy to observe various indications of the improvement of agriculture in the "Old Dominion." Agricultural Societies are becoming organized in different parts of the state, which under proper management cannot fail to prove beneficial. We learn that a society has lately been formed under very favorable auspices, in Berkley county. One of the resolutions adopted at a late meeting was to authorize the Executive Committee to subscribe for the *Farmer's Library*, the *Albany Cultivator*, the *American Farmer*, and the *Richmond Southern Planter*.

Fine Wool.—We have received samples of wool from the noted flock of Messrs. **Perkins & Brown**, of Akron, Ohio. This flock has been got up by Mr. Brown, who several years ago, as we are informed, procured "the best sheep from the best flocks in the United States." The samples of wool sent are certainly very fine, and we are informed that it commands the highest price from the manufacturer. It is stated that the "average price for his whole lot has been 68 cts. per lb., and that he gets about 3 lbs. of wool per head." It is also stated that "he has succeeded to a great extent in breeding *gum* out of his flock, and is now aiming to obliterate horns, neither of which evils, are believed to be necessary concomitants of fine wool."

American Institute.—The annual exhibition of this institution, will be opened on the 6th of October, at its old rooms at Niblo's. The opening Address will be delivered on the evening of the 7th. On the 8th, the Annual Convention of Farmers, Gardeners and Silk Culturists, will be held at the Repository of the Institute, in the Park, at 10¼ o'clock. An Address on Agriculture, by Hon. George Lunt, of Newburyport, Mass., in the evening. On the 14th, the Annual Plowing and Spading Matches. Cattle Show on the 15th and 16th, terminating with an Address, on the last day. Anniversary Address, by Hon. T. D. Elliott, on the evening of the 17th.

Relief for Choked Cattle.—We spoke not long since of the use of a *tarred rope*, for removing obstructions in the gullet of cattle. The first man we ever knew make use of the article was **Paine Wingate**, of Hallowell, Maine. He has used it for thirty years, both for himself and neighbors, and has in no instance failed in relieving the animal without occasioning the least injury. A description of this rope, as given by a writer in the Maine Cultivator, may be useful to those who have not yet provided themselves with it. It is 6 feet long and 1¼ inch through, (or three and three-fourths inches round) Three inches of one end is picked apart so as to make it soft to the throat, and wound with twine or spun yarn. Any rigger of vessels can make one. The writer states that from the end of the nose of a middling sized cow to the inlet of the stomach, is about five feet—there being seldom a variation of but a few inches from that. When the rope is used in winter, the writer recommends that it be dipped in warm water to make it pliable—in summer it may be dipped in water either cold or warm.

Peach Worm.—A cultivator of the peach in New Jersey, stated at the New-York Farmers' Club, that a sharp penknife, or a sharp wire, was the best preventive for the worm. The insect insinuates itself under the *bark* of the tree, where ordinary poisonous applications will not reach it. He had set out fifty thousand trees, and had cut out with his penknife thousands of the insects.

THE STATE FAIR AT UTICA.

The extraordinary interest which for a few years past has attended our State Agricultural Fairs, was fully kept up by the exhibition at Utica. Taken as a whole, there appears to have been no diminution in the superb display of agricultural products, in the vast collection of farm implements, and in the multitude of fine domestic animals, of all kinds and classes, which add so much to the attraction and great utility of these truly noble exhibitions.

The number of persons in attendance could not have been less than forty thousand; and among the distinguished individuals present, were many from a large portion of the other states of the Union, from Maine to Mississippi, evincing, by the pains they had taken to witness the exhibition, the high estimation with which such scenes are regarded.

The ground selected was about one mile south of the city, about ten acres of which were inclosed by a high temporary board fence, and within this boundary all the vast multitude of objects constituting the exhibition were collected.

The grounds, which were of an oval shape, were entered by three carriage and three foot entrances, and so great was the concourse, that these were hardly sufficient a part of the time, for the ingress of the spectators. Next to the boundary fence, within, a broad carriage road extended the whole distance round; and within this, with the exception of the front side, was a continuous and parallel row of posts for cattle. Parallel with this row of posts, and still further within, were the lines of pens for sheep, swine, calves, &c. The central portion of the grounds, consisting of about seven acres, were occupied with four temporary buildings, each 100 feet by 30; by the various agricultural implements, tents, &c. Directly in front of the principal entrance, and about ten rods within, was the first of these buildings, inscribed "FLORAL HALL," occupied with flowers, fruits and vegetables. The decorations and arrangement of this building, were much superior to any thing of the kind yet exhibited at our state fairs; and for this superiority, the society are indebted to the labor, taste, and skill of Dr. ALEXANDER THOMPSON, of Aurora, Cayuga county. A neat and beautiful evergreen sylvan temple was erected in front of the hall, while the entrance of the hall itself was richly decorated with appropriate ornaments and inscriptions. A double series of terraced shelves, about ten feet high, extended through the center of the hall, and were densely filled with the articles exhibited, broad aisles for the passage of the spectators being left on either side. Three beautiful evergreen temples were situated within the hall, one in the middle and one at each end of the series of shelves which extended through the middle. The first, directly within the entrance, inscribed "CERES," was devoted to the exhibition of vegetables in connexion with the adjoining pyramid of shelves; the central temple, with a chaplet inscribed "FLORA," in the richest gothic style, and wholly covered with dense evergreens, bordered the rich and brilliant display of flowers. From this to the further extreme end, extended terraced tables loaded with fruits, and terminated by the temple dedicated to "POMONA." Among the contributors to the decorations of this hall, were Frederick Boice, of Utica, who presented an extensive collection of green-house plants; S. D. Childs, of the same place, with some splendid specimens of house plants; and Prof. Jackson, of Schenectady, with a fine and rare collection. Ellwanger & Barry, of Rochester, also contributed largely; and many of the citizens of Utica and the vicinity showed a praiseworthy liberality, taste, and public spirit in furnishing many small collections. Among the contributors to the fruits, were 39 select varieties of American and European pears, and an extensive variety of apples from David Thomas, of Cayuga county; a large assortment of apples and pears from Ellwanger & Barry, of Rochester; an extensive and miscellaneous collection of fruits from N. Godsell, of Greece, Monroe county; large collections of apples were also presented by J. C. Hastings, Utica; Judge Phelps, Canandaigua; Pliny Case, of ——; H. N. Cary, Marcy; and T. H. Hyatt, of Rochester. A very fine and valuable collection of pears was presented by Wm. Kenrick of Newton, near Boston. Very fine specimens of Coe's Golden drop plums were exhibited by Henry Green, by Ward Hunt, and by N. Devereaux, of Utica. Fine specimens of grapes were contributed by H. N. Langworthy, of Rochester, by S. D. Childs, and by Wm. Mervine, of Utica. The whole exhibition of fruits was smaller than the two previous years, but under the disadvantages of the general injury by frosts, was highly creditable the present year. It was quite remarkable, however, that with the exception of W. Kenrick, of Boston, there was scarcely a contributor east of Utica. What has become of our North River and Long Island friends?

Among the contributions to the vegetable collection, were fine specimens from Dr. Brigham, of the State Lunatic Asylum; G. S. Dana and D. Gray, of Utica; C. Schuyler, New Hartford; H. N. Langworthy, Rochester; and H. G. Dickerson, Lyons, who presented fine specimens of the sweet potatoe, raised in his own garden.

The second building, directly to the right of "*Floral Hall*," and inscribed "LADIES' HALL," was devoted chiefly to domestic manufactures. A large range of tables extended through the centre, for exhibited articles, leaving broad passages each side for spectators. One half of this line of tables was covered with glass cases, for securing from dust the more delicate articles. This part of the exhibition, though highly interesting, was not equal to that of last year. It would, however, be difficult to enumerate the multitude of beautiful articles for use and ornament, including raw and manufactured silk, shell work, embroidery, and the more useful and substantial fabrics in the shape of carpets, coverlets, shawls, rugs, and the various articles of clothing, many of them evincing great skill in manufacture. There was a case of interesting specimens of ingenuity of various sorts, from the State Lunatic Asylum.

The third building, directly back of the "*Ladies' Hall*," and designated as "MECHANIC'S HALL," was entirely lined on one side by very extensive collections of cooking stoves, from various contributors. On the opposite side were fine specimens of stone and earthen ware, glass ware, and a large number of domestic machines, as churns, washing machines, cheese-presses, &c. A braid-weaving, a stocking-weaving, and a calculating machine, were in constant operation.

The further building on the left, known as "FARMERS' HALL," contained a very fine and extensive collection of cheese, covering closely the long tables of one entire side of this hall, from a host of contributors, the whole amounting to many tons in weight, and affording a display we have rarely seen equalled. This building also contained fine specimens of butter, flour, and salt; several interesting and useful domestic machines; highly finished farm implements; bee-hives with bees at work, &c., &c. But one of the most creditable parts of the exhibition was the maple sugar, several specimens of which fairly rivalled in whiteness of color and purity the best refined loaf sugar. Among the best we noticed were those from Joel Woodworth, of Watertown, and Moses Eames, of Rutland, Jefferson county, and Wm. E. White, of Walton, Delaware county.

The exhibition of *Farm Implements and Machines* was excellent, and included a fine collection of plows—common and subsoil—fanning mills, horse rakes, harrows, gang-plows, seed sowing machines and coverers, reaping machines, horse powers, straw-cutters, cob-crushers and grinders, hurdle fences, improved gates, &c., for a particular enumeration of which see the awards of the committees on implements and on miscellaneous articles, in another part of this paper.

The Trial of Plows took place on the 16th inst., on grounds two miles south of the city. Experiments were at first attempted to test the strength of draught required for the several plows, by means of a windlass in connexion with the dynamometer. But although from the slower motion thus given to the plow the work could be more closely and leisurely inspected as it advanced, yet as there must always be the same variation from inequalities in depth, width, and toughness of the soil, which are as hard to overcome by this as by any other mode of plowing, no material advantage could in any way be obtained. Indeed, it was found that the rapid passage, by means of a team, through these inequalities, enabled the observer to judge of the mean or average pressure exerted on the rapidly vibrating index of the dynamometer, by presenting this average more immediately at the same moment to the eye, than when these variations were of longer continuance. The several plows entered were carefully tried by the dynamometer in the usual way, for the result of which the reader is referred to the report of the committee soon to be published.

As these experiments were performed only in sward ground, the result can only have reference to the comparative merits of plows for such ground. A thorough trial for all kinds of soil, whether heavy or light, with a sward, stubble, or mellowed surface, must be reserved for other occasions than State fairs, where the hurry from the shortness of time, and the confusion from the constantly intruding crowd, almost wholly preclude the possibility of strict accuracy. Different qualities in plows, and a difference in setting, if not entirely different plows, are needed for different soils and purposes—a day is needed for each plow, for full trial for all these different qualities and purposes. The proper decision of such questions as this is of the highest importance, involving not merely the success or failure of a few manufacturers, but in a greater or less degree the success of thousands and tens of thousands of our farmers, whose purchases are largely influenced by such decisions, and to whom an aggregate of hundreds of thousands may be yearly saved by a selection of the very best and most easily running implement, which may do the most work at the least expense to the flesh and strength of the team.

Compared with the previous year, the show of animals was generally more extensive at Utica. The whole number of horses, cattle, sheep, and swine is stated to have been 683, which are enumerated as follows:—114 horses—viz., 28 stallions, 36 matched horses, 7 geldings, 32 mares and colts:—274 horned cattle, being 48 Durhams, 11 Herefords, 9 Devons, 4 Ayrshires, 21 Natives, 124 oxen, 12 steers, and 8 fat cattle. Sheep, 64 Long-wooled, 112 Middle-wooled, 58 Merinos, 23 Saxons. Swine, of all breeds, 34.

There were many more horses at Utica than at Poughkeepsie, though we think the proportion of fine ones was in favor of Poughkeepsie. The show of Durham cattle did not embrace so many animals of the first quality as were at Poughkeepsie. And in this department we think the show compared less favorably with former ones than in any other respect. It is true there were some fine Durhams at Utica; but with the exception of some half-dozen animals, it would have been an easy matter for many neighborhoods we could mention, to make at any time a better display of this description of stock. In Durham cows and heifers the show was particularly deficient. We mention this not in the spirit of fault-finding, but in the hope of bringing out a better representation another year, which we know the state is abundantly capable of doing. We have not space to particularize, but noticed fine animals in this class from the herds of Messrs. Sherwood, Vail, Prentice, and Bell.

The Herefords were about the same in numbers and quality as at the last year's show. Of the eleven head shown, nine were offered by Mr. Corning of this city, and the other two, offered by Mr. Hyatt of Rochester, were derived from the same stock. The Devons made a very pretty show, and there were among them some fine animals which were much admired. We were pleased to see so many of this breed, and of so good a quality, for it is undoubtedly a race well suited to many sections of the country. In Ayrshires there was no competition—Mr. Bement being allowed to sweep the board in this class. Of grades, there was a long array, and we noticed among them many apparently good and useful animals,—particularly some Durham and Native heifers offered by Mr. J. B. Nott, and a yonng cow of the Devon and Native, by Mr. Washbon.

Of Natives we thought the exhibition decidedly inferior to last year. We must confess we think the practice of giving premiums for such stock as most of that which was shown in this class, appears to us as not likely to encourage improvement.

The fat cattle embraced but few animals, but among them were two or three of great excellence, considering the time and opportunity they have had to become fat. The show of working cattle may be said to have been a decided improvement on the last year. There were two teams of ten yoke each offered for premium, one of which was owned by Messrs. Wadsworth, of Geneseo, and the other was from various individuals of the town of New Hartford. Several yoke were presented for trial, some of which were excellent cattle, and would have done credit to any exhibition in any part of the country—not excepting the far-famed county of Worcester, Massachusetts.

In sheep, the show was upon the whole perhaps equal to last year. In long-wooled breeds the competition was not numerous, but we noticed some fine bucks and ewes. In South Downs the competition was principally between Messrs. McIntyre, Sherwood, and Wakeman. Among the Saxons shown were some of very fine fleece, but we were sorry to see the competition in this class so limited. Among the Merinoes we observed some good specimens. All those offered from out of the state came from Litchfield county, Connecticut. Messrs. Blakesly, Nettleton, and Atwood, offered excellent Merinoes, and Mr. N. B. Smith some fine mixed Merinoes and Saxons.

The swine department was not as well filled as last year. We noticed good animals of the Berkshire and Leicester breeds, from Col. Sherwood and Mr. Nichols, and some very pretty pigs of the Suffolk, and Suffolk and Middlesex breeds, which were brought from Vermont, owned by Wm. Stickney, Esq., of Boston.

The poultry department was well filled; embracing a numerous display of the various fancy and favorite kinds of geese, ducks, turkies, barn-door fowls, (hens,) and pigeons. No part of the grand exhibition attracted more attention than this. From morning till night the coops and cages were constantly thronged with men, women, and children.

Much inconvenience was experienced at the plowing-match, in consequence of the ground to be plowed being in three separate and detached lots, two of which were nearly a quarter of a mile apart. Sixteen teams, of a pair of horses each, contested for the premiums. The work was generally well done, yet there were a few who considerably excelled the rest. The ground was not of a character to make the smoothest work, especially where the plowing was as deep as required by the committee, that is, seven inches. This was owing to the abundance of small stones with which the plow came in contact towards the bottom of the furrow.

Stump Machine.—A machine which excited much attention, was Norcross' Patent Stump Machine, exhibited by E. P. Evans, of Lodi, Cattaraugus county, N. Y. It consisted substantially, of a large tripod frame, surmounted by a cap resembling an inverted potash kettle. Through this cap a large wooden screw passed, and was turned by means of a large lever 15 ft. long, by a horse attached to its outward extremity. The lower end of the screw was fastened by a huge chain to the stump to be extracted. The horse, walking round, exerted by a combined action of the lever and screw, a force 400 times as great as his own strength, (not estimating friction,) which would withdraw an ordinary stump with great ease. A large and very tough oak tree, three feet in diameter, standing on the show ground, was cut down on the last day of the fair for the trial of this machine. The experiment, which was witnessed by a vast concourse, was unhappily unsuccessful, not apparently from a want of efficiency in the machine, but from the basal frame having been hastily made of *soft wood*, merely for exhibition and not for use, the proprietor not having had sufficient time to procure better. A considerable portion of the stump in question was torn out before the machine gave way. We were assured by different individuals, that from 20 to 50 pine stumps had been extracted with this machine in a day, usually about 25. Its simplicity and cheapness are certainly strong recommendations, a machine with farm right, being only 75 dollars, the actual cost of making being much less.

Nothing of the kind could be more interesting at the next State Fair, than a full practical exhibition of the different stump machines, which have been already in use in this state. This might be effected by offering a suitable and special premium for this purpose; and by the selection of a stumpy field,—or a stumpy field might be easily manufactured for the occasion by cutting down a few trees, of which this country always affords an abundance. Cultivation in a very large portion of this state, perhaps in a large majority of its territory, is greatly impeded by the almost indestructible pine stumps which thickly cover the fields; and it becomes a matter worthy of suggestion to the State Agricultural Society, whether the offer of 40 or 50 dollars as a premium for the best and most useful machine for the removal of these impediments, would not be as useful, as for the same amount in premiums for the best plows, especially as much attention comparatively has been given to the latter, and little to the former.

Hussey's Reaping Machine.—This most valuable machine was exhibited by Mr. Hussey at the late show at Utica. We have never yet had the pleasure of seeing this implement in operation, but we are acquainted with several farmers who have been in the practice of using them, and without an exception they speak of it in the very highest terms. All represent it as gathering the grain very clean, making a great saving in this particular over any other mode of harvesting. The operation of the machine requires but one man and a boy, in addition to two horses to draw it, and with this force it will cut in the most perfect manner an average of fifteen acres a day. To bind the grain as fast as the machine cuts it, requires generally eight men. The machine has been much simplified in its construction within the last year or two. It is not liable to get out of order, and will often work through the whole season without the knives being sharpened. Mr. Hussey received from the Society a gratuity of $15, as some compensation for the trouble taken to give the public an opportunity to examine this valuable machine. The price is from $100 to $170, according to size and the quantity of work they will perform.

On the afternoon of the last day of the Fair, the assembled thousands gathered round the temporary platform erected on the grounds, to hear the Annual Address from Josiah Quincy, Jr., Esq., of Massachusetts. This address was eminently worthy of the occasion. Without the slightest aim at lofty eloquence, its arguments in favor of the superiority of agricultural occupation, over the fretful and feverish life of speculation and ambition, were powerful, convincing, overwhelming. It was "without art, graceful—without effort, strong." We scarcely ever heard any thing of the kind, so truly valuable and appropriate for such an occasion.

After the address the reports of the various awarding committees were read from the stand.

A very interesting appendage to the Fair, during the three days of its continuance, was the exhibition of Morse's Magnetic Telegraph. Wires were run upon the roofs of the houses from the lower part of the city, to a building erected for the purpose on the show grounds, a distance of a mile and a half, and between these two points, a constant interchange of messages was kept up by the galvanic fluid. To those who had never before an opportunity of witnessing the operation of this wonderful invention, which is almost a *literal* fulfilment of Pollock's figurative lines, "He wove his garland of the lightning's wing, in sportive twist," it was a matter of thrilling interest, to see a man with a pen a mile and a half long, and with the electric fluid as his ink, tracing characters instantaneously, and as distinctly legible as those on which the eyes of the reader are now fixed. Specimens of the writing, executed on the spot, were distributed to many of the visitors.

The following resolutions were adopted at the close of the able address delivered by Mr. Quincy. Hon. John A. King offered the following resolution, which was unanimously adopted:

Resolved, That the New York State Agricultural Society are under great obligation to Hon. Josiah Quincy, Jr. for the able and eloquent address this day delivered to the Farmers of New York, and that he be requested to furnish the Society with a copy of the same for publication in the Transactions of the Society.

On motion of H. S. Randall, of Courtland county,

Resolved, That the Society are indebted to the Mayor and citizens of Utica for their spirit and liberality in carrying out all the preparatory arrangements for the State Fair, and their hospitality in receiving and entertaining the immense multitude, who could not be accommodated in the hotels.

Resolved, That we tender our thanks to the ladies and gentlemen of Utica, who gave us their aid and exertions in preparing and arranging the halls of exhibition on the show ground.

Resolved, That we tender the thanks of the Society to Dr. Alexander Thompson, of Aurora, for his unrequited services preparatory to and during the Fair, in the direction and arrangements of Floral Hall, the designs and decorations of which elicited the universal admiration of the thousands in attendance at the Fair.

Resolved, That the Society take great pleasure in testifying to the unremitted efforts of T. S. Faxton, J. Butterfield, and the citizens of Utica generally, in carrying out most successfully the pledge given by the gentlemen named, on behalf of the citizens.

Resolved, That we tender the thanks of the Society to P. V. Kellog, Sheriff, and to his deputy Mr. Johnson, and the others in his employ, for the admirable arrangements by which complete order was preserved on the ground.

Resolved, That the thanks of the Society are justly due and most cordially tendered to the officers and superintendents of the several rail road companies from Albany and Troy to Buffalo, for their liberality in transporting animals for the Fair free of charge, and visitors at reduced prices. B. P. JOHNSON, *Pres't.*

L. Tucker, *Sec'y.*

Receipts.—The receipts for memberships and admissions at the Fair, including a donation of $25 from Hon. Francis Granger, of Canandaigua, amounted to about $4,300, being $650 more than received at any previous exhibition.

EGYPTIAN OR EMIR BARLEY.

In the report of Mr. Ellsworth, for 1844, mention is made of what is called the "Emir or wheat barley." It is said to have been raised in Lancaster county, Pa. According to the description—"the straw of the grain is similar to that of the common barley, with the same formed ear externally; but it is not attached to the grain, that being formed like wheat, of course without husks, and this is the cause of its great weight, which is about sixty pounds to the bushel. Its growth is precisely similar to spring barley, requires to be sown at the same time, and used for the same purposes; and thus far has succeeded quite as well as the common barley."

Our correspondent, W. B., of Lauren District, S. C., is very anxious to obtain some of this kind of barley. He has formerly had it, but lost the seed by having suspended farming for a few years, and removing to another district. He says, "I am fully satisfied from the trials I have made that it will produce from 30 to 50 bushels per acre, and that our soil and climate suit it. It will bear stable manure, whereas the increased application of that article to wheat, invariably tends to throw it into straw, and causes it to lodge." He offers "five dollars for one bushel of it, delivered at any seaport in the U. S., so that it can be shipped to Charleston, S. C."

We cannot see, from the description, how this barley differs from the "naked or bald barley," which has been more or less known in the country for several years.

Marking sheep.—The best paint is *dry Venetian* red. It combines with the oil of the wool and is indelible. A thief stole 25 from me and tried his best to cover up the mark with tar. But it would not do—the guilty blush was there.—*Solon Robinson.*

LIST OF PREMIUMS

Awarded at the New-York State Fair, Utica, Sept. 1845.

DURHAM CATTLE.

Bulls.—1st. To E. P. Prentice, Albany, "O'Connell," $15—2d. J. M. Sherwood, Auburn, "Arrow," $10—3d. Geo. Vail, Troy, "Symmetry," Diploma.

Specially commended.—Mr. Crosby's bull "Osceola," the bull "Young Echo," Mr. Talcott's "Cortes," and Mr. Doolittle's "Mohawk Chief."

Two year olds.—1st. To Bell & Morris, Morrisania, "Marius," $10. No others in this class deemed worthy of a premium.

Yearlings.—1st. To W. W. Ballard, Southport, "Victor," $10—2d. Geo. Brinkerhoff, Albany, "Peter Parley," Colman's Tour—3d. Horatio N. Carey, Marcy, "Oregon," Diploma.

Bull Calves.—1st. To Z. B. Wakeman, Herkimer, "Meteor," Col. Tour—2d. Bell & Morris, "Prince," Diploma.

Cows.—1st. J. M. Sherwood, "Philopena," $15—2d. Bell & Morris, "Victoria," $10—3d. R. C. Nicholas, Geneva, "Flora," Dip.

Two year old Heifers—1st. J. M. Sherwood, "Sybil," $10—3d. H. N. Carey, "Lilly," Dip.

Yearling Heifers.—1st. To H. N. Carey, "Rose," $10.

Heifer Calves.—1st. To Z. B. Wakeman, "Sylvia," Col. Tour—2d. J. M. Sherwood, "Dahlia," Dip.

HEREFORD CATTLE.

Bulls.—1st. To Erastus Corning, Alb., "Sir George," $15—For the best two year old, to T. H. Hyatt, Rochester, "Don Quixotte," $10.

Cows.—1st. and 2d. To Erastus Corning, for "Aston Beauty," $15, and for "Mary," $10. To T. H. Hyatt, 1st, for two year old Heifer, "Emma," $10.

DEVON CATTLE.

Bulls.—1st. To H. N. Washbon, Butternuts, "Young Baltimore," $15—2d. E. P. Beck, Sheldon, "Wm. Wallace," $10. To B. P. Johnson, Rome, 1st., for two year old, "Ivanhoe," $10—To E. P. Beck, for yearling, "Criterion," Dip.

Cows.—1st. To E. P. Beck, "Victoria," $15—2d. H. N. Washbon, "Baltimore," $10.

Heifers.—1st. To H. N. Washbon, "Utica," $10—2d. To E. P. Beck, "Flora," Dip.

To H. N. Washbon, for his Calves, Dip.

AYRSHIRE CATTLE.

Bulls.—1st. To C. N. Bement, Albany, "Sheltie," $15—for his yearling bull, "Kenwood," $10.

Cows.—1st. To C. N. Bement, "Alice," $15—for his two year old Heifer, "Fairy," $10.

GRADE CATTLE.

Cows.—1st. To Dolphus Skinner, Utica, $15—2d. H. N. Carey, $10—3d. F. Ingersoll, Vernon, Vol. of Transactions.

Two year old Heifers.—1st. To H. W. Doolittle, Herkimer, $15—2d. H. Crocker, Utica, $10—3d. J. B. Nott, Guilderland, Vol. Trans.

Yearling Heifers.—1st. To H. W. Doolittle, $5—2d. A. J. Bell, Westmoreland, Col. Tour—3d. H. W. Doolittle, Vol. Trans.

Heifer Calves.—1st. To Andrew M'Bride, Marshall, Col. Tour.

NATIVE CATTLE.

Cows.—To H. H. Eastman, Marshall, $15—2d. F. D. Grosvenor, Utica, $10—3d. Henry Waters, Earlville, Vol. Trans.

Two year old Heifers.—1st. To H. H. Eastman, $15—2d. W. L. Mould, Paris, $10—3d. E. F. Head, Kirkland, $5.

Yearlings and Calves.—1st. A. J. Bell, $5—Best calf, G. W. Drew, Kirkland, Col. Tour.

Bulls.—No premiums were offered on bulls in the classes of Native and Grade cattle, but the judges recommended, 1st., to Horace Palmer, Rome, "Bolivar," Col. Tour—2d. Philander Budlong, Oneida co., Col. Tour—3d. To Luther Smith, Otsego, Vol. Trans.—4th. S. M. Foster, New Hartford, Vol. Trans.—Geo. Goertner, Canajoharie, for bull calf, Dip.

WORKING OXEN AND STEERS.

Ten Yoke.—1st. To J. S. & W. W. Wadsworth, Geneseo, $20—2d. To Russell Blackstone and others, New Hartford, $10.

Single Yokes.—1st. To Abram Hurd, Norway, $15—2d. J. S. & W. W. Wadsworth, $10—3d. Luther Comstock, Kirkland, $8—4th. H. N. Carey, $6—5th. E. Sheldon, Cayuga co., $5—6th. Austin D. Neal, New Hartford, $4—7th. S. B. Rhodes, Paris, Vol. Trans.

Three year old Steers.—1st. To Hiram Gridley, Kirkland, $15—2d. J. S. & W. W. Wadsworth, $10—3d. R. Blackstone, New Hartford, Dip.

Two year olds.—1st. To M. L. Butler, New Hartford, $10—2d. Seabury Scoville, Marshall, Col. Tour—3d. B. T. Case, Bristol, Dip.

Yearlings.—1st. To S. W. Gunn, Kirkland, $8.

FAT CATTLE.

Yokes of Oxen.—1st. To Chas. Godfrey, Geneva, $15—2d. Jas. Callanan, New Scotland, $10—3d. C. Booram & Co., Buffalo, Col. Tour.

Single Ox or Steer.—1st. To Hugh Crocker, Utica, $10—2d. E. P. Prentice, Albany, $5.

Cows.—1st. To C. Booram & Co., $10—2d. E. Corning, "Gay," $5—the same, for "Matchless," Vol. Trans.

HORSES.

Thorough Bred Stallions.—1st. To C. T. Albot, Stokes, "Consternation," $20—2d. To N. S. Hungerford, Van Buren, "Sir Henry," $10—3d. C. F. Crosby, Watervliet, "Florizel," Vol. Trans,—4th. T. J. Thompson, Cherry Valley, "Sir Charles," Dip.

"Horse of all work."—1st. To Stephen Fancher, Lysander, "Young Eclipse," $20—2d. Wm. Ferguson, Marshall, "Kentucky Hunter," $10—3d. T. D. Moody, Canton, "Blucher," Vol. Trans.—4th. E. Merriam, Leyden, "Blucher," Dip.

Draught Stallions.—To Erastus Corning, Albany, certificate for his horse "Sampson," as the best horse in his class, having received a premium in the same class last year. 1st. John Van Hoesin, Oneida co., "Patriot," $20—2d. P. & G. Warren, Manlius, "Dragon," $10—3d. Benj. Petit, Bridgwater, "Honest Tom," Dip.

Three years old Stallions.—1st. To Luke Coan, Westmoreland, "Black Messenger," $15—2d. John M. Tiffany, Norwich, "Young Godolphin," $10.

Discretionary Premiums.—To Isaac Fairchild, Onondaga co., "Beppo," Col. Tour—Mathew Clarke, Oneida co., "Sir Roderick," Vol. Trans.—G. B Rowe, Canastota, "Young Sir Charles," Dip.

Matched Horses.—1st. To Ardon Merrill, Rome, grey horses, $10—2d. J. Butterfield & Co., Utica, black horses, 2 Vols. Trans.—3d. Lewis Joy, Trenton, Dip.—A Diploma and Vol. of Trans. for 1845, to Welch & Mann, for five pairs of cream colored matched horses.

Geldings.—1st. To J. Butterfield & Co., $10—2d. Abraham Soles, Schenectady, Vol. Trans.—3d. G. W. Gardner, Utica, Dip.—J. Lennebacker, Utica, Dip. (discretionary.)

Mares and Colts.—1st. To Geo. Fordon, Geneva, $20—Joel B. Nott, Albany, for his mare "Iodine" and colt "Effingham," $10—3d. A. Close, Paris, Dip.

Three years old Mares.—1st. To Isaac Fairchild, Fabius, "Fanny Grey," $10—2d. W. C. Burrett, Paris, Vol. Trans.

Two year old Mares.—1st. To Geo. Fordon, Geneva, Dip.—2d. J. Fairchild, Vol. Trans.

Discretionary.—To Roswell Morgan, for pair of Arabian colts, Vol. Trans.—Joel B. Nott, for a yearling colt, "Chlorine," Vol. Trans.

Mules.—To Joseph Cloyes, Morrisville, for one pair of Mules, Vol. Trans.

SHEEP.

Long wooled Bucks.—1st. To J. M'D. McIntyre, Cotswold, $10—2d. Wm. Huxford, New Hartford, Bakewell, Col. Tour—3d. W. Rathbone, jr., Springfield, Dishley, Dip.

Long wooled Ewes.—1st. To J. J. Boshart, Mohawk, $10—2d. W. Rathbone, jr., Col. Tour.

Long wooled Lambs.—Premium equally divided between Geo. Brinkerhoff, Albany, and Fred. B. Hollis, Gilbertsville, $5.

Middle wooled Bucks.—1st. J. M'D. McIntyre, $10—2d. Fred. Easton, Mt. Morris, Col. Tour—3d. Z. B. Wakeman, Dip.

Middle wooled Ewes.—1st. To J. M'D. McIntyre, $10—2d. J. M. Sherwood, Col. Tour—3d. Z. B. Wakeman, Herkimer, Dip.

Middle wooled Lambs.—To J. M'D. McIntyre, $5.

Merino Bucks.—1st. To H. & J. Carpenter, Poughkeepsie, $10—2d. J. M. Sherwood, Col. Tour—3d. Reed Burrett, Dip.

Merino Ewes.—1st. J. M. Sherwood, $10—2d. Israel Smith, DeRuyter, Col. Tour.

Merino Lambs.—J. M. Sherwood, $5.

Saxon Bucks.—1st. To S. B. Crocker, Vernon, $10—2d. S. H. Church, Vernon, Col. Tour—3d. J. R. Jones, Vernon, Dip.

Saxon Ewes.—1st. To S. H. Church, $10—2d. S. B. Crocker, Col. Tour—3d. D. C. Barnes, Deerfield, Dip.

Saxon Lambs.—L. T. Marshall, Vernon, $5.

Sheep from other States.—Diplomas to I. H. Nettleton, J. N. Blakesley, N. B. Smith, and Stephen Atwood, all of Litchfield co., Ct., for superior Merino Sheep.

Fat Sheep.—1st. To John Reeves, Lysander, $10—2. To J. M'D. McIntyre, Albany, Col. Tour—3. Geo. Brinkerhoff, Albany, Vol. Trans.

SWINE.

Boars.—1st. To C. R. Nichols, Darien, Leicester, $10—2d. J. M. Sherwood, Berkshire, Col. Tour—3d. L. T. Marshall, Vernon, Dip.

Sows.—1st. To J. J. Boshart, Mohawk, Berkshire and Leicester, $10—2d. Robert Eells, Westmoreland, grade Berkshire, Col. Tour—3d. Peter Smith, Utica, Dip.

Pigs.—1st. To Robert Eells, Westmoreland, $3—2d. Jas. Plant, Utica, Dip.

POULTRY.

To L. Tucker, Albany, best lot of Dorking Fowls, $3—To the same, for best pair of Turkeys, (wild) $3—To the same, for best and greatest variety of Fowls, $10—To Geo. Bement, Albany, best lot Black Polands, $3—To the same, for best pair of Geese, (African) $3—To the same for best pair of Ducks, (Muscovys) $3.

John Paris, Albany, for ten varieties of Pigeons, a fine display, Dip.

Master E. R. Johnson, Rome, for the great variety of fowls exhibited by him—although he had not enough to sweep the premium, his specimens were very fine indeed, and the taste displayed in the arrangements of his coops deserves encouragement—Dip.

Mr. Robinson's fowls called "Sampsons," Dip.

PLOWS.

1st. To Howard Delano, Mottville, "Diamond Improved," $15—2d. Thos. D. Burrall, Geneva, "Shell Wheel," Premium last year, certificate—3d. Brainerd & Comstock, Rome, "Diamond," No. 5, Premium last year, certificate—4th. E. Wilson, Vernon, "Diamond," No. 5, Premium last year, certificate—5th. Miner, Horton & Co., Peekskill, "No. 22," Silver Medal—6th. John B. Gaylord, Auburn, "No. 6," Dip.—To Alvah Jefferson, Darien, "Michigan Subsoil," $10.

FARM IMPLEMENTS.

Farm Wagons—1st. To Peter S. Eastman, New Hartford, $10—2d. J. S. & M. Peckham, Utica, Vol. Trans.

Harrows—To Oren Barton, Tyler, (Geddes Harrow,) Col. Tour.

Scarifier—Oren Barton, $5.

Cultivator—Oren Barton, Col. Tour.

Fanning Mills—1st. To I. T. Grant & Co., Scaghticoke, Junction, Silver Medal—2d. Clow & Trulon, Mentz, Vol. Trans.—3d. Jas. Patterson, Canandaigua, Dip.

Horse Power—To A. D. Childs, Rochester, $10.

Threshing Machines—1st. To A. Douglass, Skaneateles, $10—2d. Hart, Higham & Co., Vulcan Works, Utica, Vol. Trans.—3d. Ellery Hicks, Dip.

Drill Barrow—To Abm. Randall, Oneida co., for barrow to plant potatoes and corn, Col. Tour.

Straw Cutters—1st. To J. G. Case, Utica, (Sanfords,) Silver Medal—2d. J. C. Rich, Penfield, Vol. Trans.—3d. Martin Sanders, Cortland, Dip.

Corn and Cob Crusher—To J. A. Pitts, Rochester, $10.

Farm Horse Cart—To Wm. Carroll, Albany, Dip.

Revolving Horse Rake—1st. To Jas Smith, Clarkson, Col. Tour—2d. Albert Brockway, Bridgewater, Vol. Trans.

Ox Yokes—1st. To A. Munroe, Galway, Col. Tour—2d. Wm. Hill, Marcy, Vol. Trans.

Grain Cradles—1st. To E. S. Hager, Frankfort, $3—2d. David Flanders, Stockholm, Dip.

Hay Fork—Taylor, Buttolph & Co., Dip.

Grass Scythe—H. C. White, Albion, Dip.

Hoes—R. & E. Clark & Co., Unadilla Forks, $2.

Corn Sheller—J. D. Briggs, Saratoga, Dip.

Corn Cutter—J. M. Cleveland, Adams, $2.

Manure Forks—Taylor, Buttolph & Co., Dip.

Reaping Machine—O. Hussey, Baltimore, Md., $15.

PLOWING MATCH.—20 ENTRIES.

1st. To Frederic Smith, Westmoreland, $15; plowman, Wm. Jackson, Diamond Plow, Brainerd, Comstock & Co., Makers—2d. Elon Comstock, Rome, $12; Stephen Pope plowman, same Plow as No. 1.—3d. Thos. D. Burrall, Geneva, $10; Burrall's Plow—4th. O. R. Babcock, Bridgewater, Col. Tour—5th. H. N. Carey, Marcy, Vol. Trans., M. Mayhew plowman, Livingston co. Plow.

Boys under 18 *years of age*—To E. W. Butler, Rome, 16 years of age, Darien Plow, No. 5, $10.

BUTTER.

Best lot from 5 cows—1st. To E. R. Evans, Marcy, $25—2d. Thos. Hawks, Columbia, $15—3d. Geo. Vail, Troy, $10.

Best 25 lbs. made in June—1st. To R. S. Ransome, Perryville, $10—2d. O. C. Crocker, Union, Col. Tour—3d. P. Case, New Hartford, Vol. Trans.

Best 50 lbs. made at any time—1st. To Melas Adams, Martinsburgh, $15—2d. S. M. Foster, New Hartford, Silver Medal—3d. O. Cole, Litchfield, Silver Medal—4th. D. Eells, jr., New Hartford, Silver Medal—5th. W. Ottley, Oaks Corners, Silver Medal.

CHEESE.

On ten Dairies—1st. To H. Burrall, Salisbury, $20—2d. R. Eells & others, Oneida co., $10.

Another lot of the dairies presented by A. L. Fish, of Litchfield, Herkimer co., were very superior, and had the committee been authorized to award two of the premiums to the same county, this lot would have received the second premium—Silver Medal.

Over one year old—1st. To Robert Eells, Westmoreland, $15—2d. Fred. Ingersoll, Vernon, Silver Medal.

Less than one year old—1st. To W. S. Ford, Salisbury, $15—2d. W. Ottley, Silver Medal—3d. F. Hallenbeck, Herkimer co., Silver Medal—4th. N. Wilcox, Winfield, Silver Medal—5th. J. Smalley, Norway, Silver Medal.

Spencer Brown, of Newport, Herkimer co., for two samples of round or navy cheese, Dip.

More than 18,000 pounds of cheese exhibited in this class, and every cheese was of superior quality.

MAPLE SUGAR.

1st. To Joel Woodworth, Watertown, $15—2d. Moses Eames, Rutland, $10—3d. W. E. White, Walton, Col. Tour—4th. Erastus Bigelow, Sangerfield, Dip.—5th. Sidney Spring, Eaton, Dip.

SILK.

Sewing—1st. To Clark Avery, Perryville, $15—2d. D. Irish, Perryville, $10—3d. J. Hutchinson, River Head, Col. Tour.

Reeled.—1st. To Mrs. Irish, Perryville, $10—2d. Clark Avery, Col. Tour—3d. Benj. Blackman, Verona, Dip.

Cocoons—1st. To Clark Avery, $10—2d. John Osborn, Utica, Col. Tour—3d. Benj. Blackman, Dip.

FRUITS.

Greatest variety of table Apples, Ellwanger & Barry Rochester.	$5
2d do do. table Apples, David Thomas, Cayuga county,	3
3d do. do. table Apples, J C. Hastings,	Vol. Tr.
Best 12 sorts table Apples, Oliver Phelps, Canandaigua,	$3
Greatest variety table Pears, D. Thomas, Cayuga,	3
2d greatest " " " Ellwanger & Barry, Rochester,	Vol. Tr.
Greatest variety winter Pears, David Thomas Cayuga Co.,	Vol. Tr
Best 12 Quinces, Oliver Phelps, Canandaigua,	do.
Best 12 Peaches. N. Goodsell, Greece, Monroe county,	do.
" 24 Plums, Henry Green, Utica,	do.

Best 6 bunches Native Grapes, W. Mervine, Utica,	Vol. Tr
“ 6 bunches Foreign “ S. D. Childs, “	do

VEGETABLES.

12 best table Turnips, Dr. A. Brigham, State Lunatic Asylum Utica,	$1
12 best Carrots, G. S. Dana, Utica,	1
12 best table Beets, David Gray, Jr., Marcy,	1
12 best Onions, C. F. Crossman, Rochester,	1
3 best heads of Cabbage, D. Gray, Jr., Marcy,	1
12 Tomatoes, D. Grey, Jr., Marcy,	1
10 Egg Plants and tree of do., C. E. Goodrich, Utica,	1
Best half peck Lima Beans, Dr. A. Brigham, do.,	1
3 best squashes, “ “ “	1
Best half peck table potatoes, James Rees, New Hartford,	2
2d best half peck table potatoes, R. Eells, Westmoreland,	1
Best seedling Potatoes, 4 specimens, ½ peck each, H. N. Langworthy, Irondequoit,	5
12 ears best seed Corn, Charles W. Eells, Kirkland,	1

DISCRETIONARY.

Potatoe Onions. J. Greenleaf, Brockport,	Vol. Tr. and 1
C. E. Goodrich, for several samples of Watermelons and Cantelopes, and to G. W. Cromwell for Watermelons.	Vol. Tr. each.
Sweet Corn, C. E. Goodrich, Utica,	1
D. Gray, Jr., for great variety of Vegetables,	Vol. Tr.

DOMESTIC MANUFACTURES.

Woolen Blankets.

1st.	George W. Henry, Martinsburgh,	$5
2.	Jacob S. Van Allen, Black Rock,	4
3d.	Mrs. V. R. Voorhies, Amsterdam,	3

Flannel.

1st.	Chester Buck, Lowville, Lewis Co.,	$5
2d.	George W. Henry, Martinsburgh,	4
3d.	Wm. Otley, Oak's Corners, Ontario Co.,	3

Woolen Cloth.

1st.	Samuel Churchill, Little Falls,	$5

(No other specimens found by committee, although two others entered on list.)

Woolen Carpets.

1st.	Hiram Mills, Martinsburgh,	$5
2d.	William Otley, Oaks Corners,	4
3d.	Mrs. V. R. Voorhies, Amsterdam,	3

Brussels Carpets.

1st.	Hotchkiss & Smith, Auburn,	$5
2d.	Thompsonville Co., Conn.,	3

Rag Carpets.

1st.	Mrs. Benjamin Blackman, Verona, Oneida Co.,	$3
2d.	“ Benjamin Plant, New Hartford,	2
3d.	C. Robinson, Clinton,	1

Kersey.

1st.	E. M. Bateman, Venice, Cayuga Co.,	$3
2d.	S. W. Abbott,	2
3d.	George W. Henry, Martinsburgh,	1

Double Carpet Coverlet.

1st.	Miss Adeline Jones, Westmoreland,	$4
2d.	John Winslow, Watertown,	3
3d.	Abram Koonz, Albany,	2
4th.	Susan H. Bronson, Vernon,	1

Knit Woolen Stockings.

1st.	Mrs. Acsah Coe, Columbia,	$2
2d.	“ Hannah Bostwick, Lowville,	1
3d.	Chester Buck, “	Dip.

Linen Cloth.

1st.	Joseph Wells, Denmark,	$5
2d.	Aaron Bailey, Cherry Valley,	4
3d.	Wm. Ottley, Oaks Corners,	3

Linen Diaper.

1st.	Mrs Achsah Coe, Columbia,	$5
2d.	George W. Henry, Martinsburgh,	4
3d.	Levi T. Marshall, Vernon,	3

Hearth Rugs.

1st.	George B. Cary. Richfield,	$5
2d.	Mary Tunnecliff, Warren, Herk. Co.,	4
3d.	Geo. B Cary. Richfield,	3
4th.	Miss Manahan, Utica,	2
5th.	Mrs. Peter Miller, Turin, Lewis Co.,	1
6th.	C. Robinson, Clinton,	Dip.

Linen Sewing Thread.

1st.	Peter Crispell, Jr., Ulster Co., 1 lb.,	$2

Linen Knit Stockings.

1st.	Mrs. Calvin Aldrich, New Hartford,	$2
2d.	Mrs W. C. Burrett, Paris,	1
3d.	“ Squire M. Mason, New Hartford,	Dip.

Silk Stockings.

1st.	Mary E. Dayton, Vernon,	Dip.
2d.	Mrs. D. Irish, Perryville,	do.
3d.	Thomas Potter, Utica,	do.

Cotton Stockings.

1st.	Mrs. Morris,	$2
2d	“ Sophia Willard, New Hartford,	1
3d	“ D. Skinner, Deerfield,	Dip.

Tow Cloth.

1st.	Mrs. Wm. Potter, Marcy, Oneida county,	$1
2d.	Mrs. Wm. Otley. Oaks Corners,	Dip

DISCRETIONARY PREMIUMS.

G. Farmer, Mohawk. Steam Dairy Operator,	Diploma.
A. E. Jackson, Boonville, Cheese Press,	“
Mrs. L. T. Marshall, Vernon. Shawl, Mitts, and Gloves,	$3
Mather Beecher, Remsen, Bark Mill,	Vol. Trans.
S. Purdy & Co., Whitesboro, oak churn, molasses can,	Vol. Tr.
N. P. White, Whitesboro, Dentist plate work,	Dip.
Lombard, Elbridge, improved fence,	Vol. Cult.
Miss Olive Austin, Smyrna, knit Veil, Caps, &c.	$3 & Dip.
Warnick & Bryan, Utica, Tobacco, Cigars, and Mustard,	Dip.
Mrs. Gumgungtuner, Utica, Millinery,	“
Benedict & Barney, Syracuse, Gold Pens,	“
Mrs. D. Skinner, Deerfield, Marine Palace of shell work two Ottomans, and pair of shoes, highly creditable to her taste and ingenuity,	$3
Curtis & Van Arsdale, Kirkland, Brown Earthen Ware,	2
Noah White, Utica, Stone Ware,	3
Wm. Carroll, Albany Spring Cart,	Vol. Tr.
Lucretia Tyler, Lawrence, Horse Netting,	$3
James Sangster, Buffalo, Miniature Noah's Ark,	3
Gaius Clark. Syracuse, Congress Desk,	Vol Tr.
Miss Mary E. Spencer, Utica, Emb. Shawl,	Dip.
Jas H. Dunbar, East Hamilton, Pr. Fringe Mittens,	$1
Miss L. C. Morris, Auburn, Shell work,	5
Miss Gay, Troy, Shell flowers and Bead bags,	2
Grove Lawrence, Syracuse, bbl. Patent Salt.	Dip. and Vol. Tr.
Joseph Miller, Utica, miniature ship and frigate,	$3
Elon Comstock, Rome, Agricultural and Horticultural Implements,	$5 and Dip.
Miss Julia N. Tucker, Albany, Embroidered Port Folio,	Dip
D J. & A. I. Smith, Syracuse, Hand Railroad Car,	Dip.
Mrs. Mary E. Storms, Utica, Shell box,	$2
Wm. Butler, Phelps, Coon skin robe,	Vol. Tr.
G. W. Henry, (blind,) Frankfort, Brushes,	$2
David Kendall, New Lebanon, Thermometers,	Dip
J. T. Farrand, water drawing machine,	Vol. Tr
Mrs. Voorhies, Amsterdam, four cases manufactured articles,	$10 and Dip.
Brainard, Comstock & Co., Rome, Plows,	Dip
Walker and Gavit, Albany, best Daguerreotypes,	Silver Medal.
Miss L. M. Eames, New Hartford, knit window curtains,	Dip.
“ L. M. Pierson, Sullivan, counterpane,	“
Mrs. Luke Cone, Westmoreland, straw hat,	“
E. K. Browning, Utica, machine cards,	$3 and Dip.
Hopkins, Sergeant & Co., Auburn, box machine cards.	$3
Henry Lawrence, Chenango county, compound lever tug-buckle,	Dip.
Four church bells, A. Meneely, West Troy, very superior, having received premium heretofore.	Cert.
Miss C. Devereux, Utica, sofa cushion and worked table cover,	Dip.
Mrs L. Jones, Utica, case of wax ornaments, an elegant article,	$3
Jonathan Coxon & Co., Utica, brown earthern ware,	$3 and Dip.
Geo. Geddes, Onondaga county, five samples seed corn, all very fine,	Dip.
S. C. Coffin, Portland, Chatauque county, oil paintings, highly commended as specimens of early effort in the art.	
Miss C. W. Gridley, Utica, specimens of oil painting.	Dip.
Miss O'Toole, and Miss Mary Putnam, Rome, two samples of raised worsted work, very creditable to the exhibitors,	Dip.
G. W. Brownson. Amsterdam, specimens of corn brooms,	$2
Miss M. J. Morris, Auburn, samples of lace work,	3
Mrs. Acsah Cole, Columbia, Herkimer county, two pair cotton woolen blankets,	$3 and Dip.
Miss Georgiana S. Manning. Syracuse, worsted worked reticule,	$3
Mrs. Hamilton Spencer, Utica, embroidered chair,	Dip.
Mrs. C. M. Bennett, Penn Yan, Yates county, an ottoman cover,	Dip.
J. Parish, Mendon, Monroe county, for a washing machine patented to Nathan Parish, Rush, Monroe county.	Vol. Tr.
John Wilkinson, Union Vale, Dutchess county, presented a convenient plan of a barn, commended.	
Solomon Phelps, Lowville, a sausage cutter,	Dip.
Mrs. Mary Bradley, Utica, embroidered bed spread,	$5 and Dip.
Male members of State Lunatic Asylum, case carved toys,	Dip.
Female “ “ “ “ embroidery and needle work,	Dip.
Catholic Orphan Asylum, Utica, raised worsted work,	Dip.
Miss Margaret Hawthorn, Deerfield, embroidered apron,	$2
“ C. M. Curtenius, Utica, two specimens finely shaded worsted work,	$3 and Dip.
Mrs. Geo. R. Fairbanks, Adams, bed and table spread,	$3
Mrs. Geo. B. Cary, Richfield, worsted worked chair bottoms,	$3
Miss Augusta Dye, Penn Yan, embroidered piano cover,	$2 and Dip.
“ M. J. Johnson, Little Falls, needle work on paper,	$3
Mrs. Wm. Otley, Phelps, pieced bed spread,	$3
E. P. Webster, Utica, carved miniature cottage,	$2
Miss Abby Allen, Carlisle, embroidered screen and sofa pillow,	$2
Wm. Potter, Marcy, pair horse blankets,	1
Jno. Kirkland, Kirkland, worsted table cover,	Dip.
Solomon Phelps, Lowville, sausage cutter,	“
James Goold, Alb., two horse pleasure sleigh,	“
Joseph D Briggs, Saratoga, corn sheller,	“
B. S. Seymour, Westmoreland, window and door butts and fastenings,	“
Elijah Hurlburt, Waterloo, clover machine,	“
[illegible] Clough, Whitesboro, self setting saw mill apparatus,	“
[illegible] Cady, Newport, Yates' Patent Lock.	“
Dumbarton Glass Factory, Durhamville, Glass,	“

☞ For premiums on Flowers, Stoves, and Flour, see page 326.

GAPES IN CHICKENS.—Turpentine, applied with a feather, internally, to the throat, will in all cases cure this disease. [Tried and found efficacious.]

THE MAYDUKE CHERRY.

It is a little singular, that nearly all pomological writers refer to the Mayduke as a standard for the time of maturity in cherries. The ripening of an early cherry is indicated by comparing it with the Mayduke, or it is a given number of days earlier or later than this well known variety.

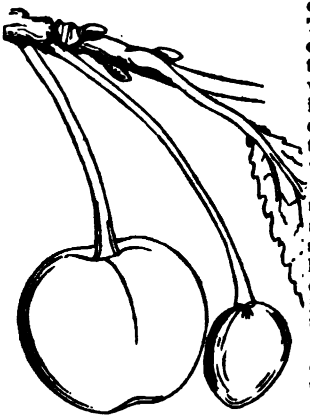
Fig. 93.

Now it happens that the Mayduke is the most variable in its season of maturity of all known cherries. Fruit of a dark red color is often seen on one branch, and that which is nearly green on another. It is thus not uncommon that there is a difference of six weeks on the same tree. The same difference may occur on different trees, one tree being some weeks ahead of another. Hence serious disappointment sometimes results where trees of this variety are purchased and come into bearing, from the frequent lateness in ripening; and cultivators, supposing they have received a very early variety, often consider themselves as having been grievously imposed upon.

The two outline figures at the head of this article, exhibit this difference in the growth and maturity of the fruit, and represent two cherries which grew the present season on the same branch, and within *two inches* of each other; the larger being a dark red, while the smaller was light green. They were drawn accurately from the specimen, exactly of the natural size, and at the same time, (the 19th of 6 mo., June.) There was nearly as great a disparity in several other specimens.

The inappropriateness of taking this variety as a standard for time, is further increased by the fact that it is scarcely ever picked from the tree in a fully ripened state, but most commonly while it is yet only of a dark red color, instead of black as it should be; and before it has attained more than two-thirds of its full size. Some cultivators of fine fruit have been astonished on tasting fully ripened specimens, at the difference between such specimens and those picked at the usual season.

FROST IN VALLEYS.

It is familiar to many that night frosts under a clear sky, are most severe in sheltered valleys, and lightest on exposed hills, where the difference in altitude is not so great as much to affect the temperature from the natural decrease which always takes place as we ascend from the surface of the earth. The tendency of the cold air to sink into hollows, or to become cooled more rapidly by radiation, without the counteracting influence which air in motion always exerts, was finely exhibited by the severe frost which occurred at the commencement of the present summer. A number of thrifty young hickories, about fifty feet high, stood in a depression which was about twenty feet deep. The young shoots had grown a few inches, and being fresh and succulent, were very easily touched by frost. Accordingly, after that cold night, about one-half the young leaves on the tree, occupying the lower half, were completely killed and had turned black; while the upper part of the trees, which reached above the valleys, remained as fresh and green as ever.

Dr. Kirtland, of Cleveland, mentions an experiment in Elliott's Magazine, where the thermometer situated in a valley, sunk during a frosty night, down to 27°, while on a neighboring hill only sixty feet higher there was no frost whatever, the thermometer scarcely sinking to 32°.

Such facts may remind those who are about setting out tender fruit trees, as peaches, nectarines, and apricots, that exposed hills, if not greatly elevated, are much better than warm valleys, where the frost is not only more intense, but the increased temperature in summer tends to promote a more rapid and succulent growth, which is less capable of withstanding the severity of winter.

THEORIES TO SUIT CIRCUMSTANCES.

It has not been very uncommon in the history of farming for theories to be manufactured as a sort of apology for bad management or neglect. We see this in various ways. A very common one is to account for the dissemination of weeds by the supposition that the cultivated crop has actually undergone transmutation, and has been converted to the weeds. Where such vegetable intruders grow and multiply with great rapidity, and by means which may be perhaps often concealed from observation, it becomes exceedingly convenient thus to explain this increase, as well as to apologize for a want of more vigilant care in their eradication.

Another illustration of this disposition is given by A. J. Downing, in the excellent article appended to his "Forest and Fruit Trees of America," on the *Duration of Varieties.*

It was for a long time, he observes, a popular opinion, that when a good variety of fruit was once originated from seed, "it might be continued by grafting and budding, for ever,—or at least, as some old parchment deeds pithily gave tenure to land—'as long as grass grows and water runs.'" In opposition to this opinion, the theory advanced by President Knight, was, that all trees of any particular variety, being only parts from the original tree, of limited duration itself, must all die about the time, or soon after the time, that the parent tree dies. "Certain French writers," observes A. J. Downing, "about this time gladly seized Knight's theory, as an explanation of the miserable state into which several fine old varieties of pears had fallen, about Paris, owing to bad culture and propagation. They sealed the death warrant, in like manner, of the Brown Beurré, Doyenné, Chaumontel, and many others. * * * Notwithstanding this, and that ten or fifteen years have since elapsed, it is worthy of notice that the repudiated apples and pears still hold their place among the best cultivators both in England and France. The "extinct varieties" seem yet to bid defiance to theorists and bad cultivators."

* * * * * * *

"The apparent decay of a variety is often caused by grafting upon unhealthy stocks. For although grafts of very vigorous habits have frequently the power of renovating in some measure, or for a time, the health of the stock, yet the tree, when it arrives at a bearing state, will, sooner or later, suffer from the diseased or feeble nature of the stock.

"Carelessness in selecting scions for engrafting, is another fertile source of degeneracy in varieties. Every good cultivator is aware that if grafts are cut from the ends of old bearing branches, *exhausted by overbearing,* the same feebleness of habit will, in a great degree, be shared by the young graft.

"Unfavorable soil and climate are powerful agents in deteriorating varieties of fruit trees. Certain sorts that have originated in a cold climate, are often short lived and unproductive when taken to warmer ones, and the reverse. For this reason the Spitzenburgh apple soon degenerates, if planted in the colder parts of New-England, and almost all northern sorts, if transplanted to Georgia. But this only proves that it is impossible to pass certain natural limits of fitness for climate, and not that the existence of the variety itself is in any way affected by these local failures."

The continued propagation of pears upon the quince stock, for the production of dwarfs, and the continued reproduction from these dwarfs or stunted trees, is given as a reason why the pear, though naturally a much longer lived tree than the apple, so often suffers by a decline of the varieties.

There are many interesting facts, bearing on this subject, stated in the valuable article before mentioned, a few of which we here repeat, and which we doubt not, will prove interesting to some of our readers, as well as to show them the treasure which they would possess in the work alluded to:

"The oldest known variety of the pear is the Autumn Bergamot—believed by pomologists to be identically the same fruit cultivated by the Romans in the time of Julius Cæsar—that is to say, the variety is nearly two thousand years old. It grows with as much vigor. and bears as regular and abundant crops of fair, fine fruit in our own garden, as any sort we cultivate. Whole orchards of the Doyenné (or Virgalieu) are in the finest and most productive state of bearing in the interior of this state, and numberless instances in the western states—and any one may see, in September, grown in the apparently cold and clayey soil near the town of Hudson, on the North River, specimens of this "outcast," weighing three-fourths of a pound, and of a golden fairness and beauty of appearance and lusciousness of flavor worthy of the garden of the Hesperides,—certainly we are confident never surpassed in the lustiest youth of the variety in France. The same is true of all the other sorts when propagated in a healthy manner, and grown in suitable soil and climate."

"To add force to this view [already stated in this article,] we will add, that we have had the satisfaction lately, of seeing trees of the condemned varieties taken from healthy interior districts to the sea-board, where they have already borne fruit as fair and unblemished as ever;—thus proving that the variety was not enfeebled, but only so much of it as had been constantly propagated in a soil and climate naturally rather unfavorable to it. While in favorable positions it maintained all its original vigor." * * * * * *

"A skillful cultivator in Ohio informed us of a case in point. Some years ago he planted two Doyenné pear trees, both apparently healthy. One was from the sea-coast, and the other was from western New-York. The fruit of the former, when it came into bearing, cracked, and showed all the symptoms of decay common where it came from. The other always bore fair fruit. After several years careful treatment, he has at last restored it to the original health of the variety."

LIVE STOCK IN CONNECTICUT.

SHEEP.—Connecticut has many fine-wooled flocks of sheep, some of which we had the pleasure of examining in our late excursion though the state.

John Ward, of Salisbury, near Falls Villagè, has a flock of 700 Saxons. Their fleeces average 2¼ pounds, and sold last year at 60 cts. per pound. In another part of Salisbury, we saw a small flock of Cotswolds, belonging to John C. Coffing, Esq. They were purchased of Mr. Devine, of Washington Hollow, Dutchess county, N. Y.

R. G. Camp, Esq., of Litchfield, has a very superior flock of 170 Saxons. They were derived mostly from the noted flock of Charles B. Smith Esq., of Torringford, Ct. The wool of Mr. Camp's sheep is very fine, and the fleeces averaged this season, 2 lbs. 14 ounces, which sold at 66⅔ cts. per pound. Mr. Smith imported two bucks from Saxony, in 1843. Both of these bucks Mr. Camp has used in his flock. His lambs of the present season, many of them, are certainly very fine.

Mr. Lucas, of Goshen, has a small flock of mixed Saxon and Merinos, which are remarkable for the weight of their fleeces. Twelve ewes, six old ones and six yearlings, eight of which reared lambs, gave this season 61½ lbs. of well-washed wool—being an average of five pounds and two ounces.

Henry Watson, Esq., of East Windsor, has one of the best and most profitable flocks we have met with. He is a veteran in the breeding of sheep, as well as other stock. He, in connection with Mr. Hurlbut, of Winchester, purchased some of the best Saxons of the first importation of Messrs. Searle, of Boston, in 1824. His present flock are of various grades of the Saxon blood then obtained, crossed with the pure Merino. His wool is fine, and he obtains the highest prices for it. At several manufacturing establishments where we happened to call, we saw or heard Mr. Watson's wool given as an example to wool-growers of what was wanted in quality and condition, *for fine wool*. This year it brought 50 cents per pound, sold in his neighborhood. Last year he sold it in the dirt, obtaining a price equal to 60 cts. per pound for washed wool. His fleeces average over three pounds, washed. Bucks' fleeces weigh from 5 to 6¼ pounds.

CATTLE.—In some districts of Connecticut, there are very good cattle, of the various improved breeds. Several enterprising citizens imported stock from England at an early day. Among those who were first to distinguish themselves in efforts to improve this branch of husbandry, were the late Gov. Wolcott, of Litchfield, Messrs. Samuel and Elizur Wolcott, and Col. Jeremiah Wadsworth, of East Windsor. These gentlemen, previous to the commencement of the present century, and in some instances previous to the year 1790, introduced into their respective neighborhoods, various bulls and cows, either imported or bred from stock which had been imported. It is impossible to decide with any certainty, what was the blood of the cattle brought here so many years ago. Gov. Wolcott, it is said, procured some animals of Mr. Heaton, of Throg's Neck, Westchester county, (N. Y.) According to the history given of these cattle in an American edition of Culley's Essay on Live Stock, published forty years ago, they were Short Horns, procured from the banks of Tees, in Yorkshire, England, and brought by Mr. Heaton to Throg's Neck, in 1792. Judging from the animals of the present day, which seem to possess most of their blood, the original stock was similar in character to the ordinary Yorkshire or Holderness Short Horns. Large, rather rough and coarse boned, thin skinned; when well fed, inclined to give large quantities of milk. Cattle having various degrees of the blood of this Heaton stock, (we presume,) are often met with in Connecticut under the name of the "*Eaton breed.*" Gov. Wolcott also introduced some animals, having, as was said, more or less of the Alderney blood in them.

The Hon. Truman Smith, of Litchfield, (for whose kind attentions we desire to return our thanks,) waited on us to several places in his neighborhood, and afterwards furnished conveyance and accompanied us to Goshen. He showed us several cows which were evidently remarkable milkers, said to be descended from the stock of Gov. Wolcott. They were called of the "Alderney breed," but their leading characteristics denoted a predominance of the Yorkshire blood. One of the cows belonged to Mr. Lyman, of Goshen.

Goshen, as we mentioned in an article in our last number, is noted for its cheese-dairies, and several of the farmers have at various times made efforts to improve the milking qualities of their cows, by introducing bulls of the improved breeds. Mr. Lucas, in connection with Mr. Towner, purchased a Durham bull of John Hare Powell, of Philadelphia, some ten or twelve years ago. A numerous progeny came from this bull, and so far as we learned, it was the unanimous opinion that he considerably improved the dairy qualities of the cattle of the neighborhood. Mr. Lucas has a very well-shaped bull, five years old, got by a Durham bull said to have been imported by Mr. Hichcock, of New-York, (afterwards owned by Dr. J. H. Smith, of North Canaan,) and from a Durham cow of Mr. Morgan's, of Hartford. Also several thrifty steers from this bull. At Mr. John C. Coffing's, in Salisbury, we saw a fine lot of eight or ten cows, mostly half-blood Durhams, which appeared to be excellent milkers.

As we above mentioned, it is generally admitted that the half-blood Durhams are decidedly better milkers than the common stock. Yet it is very obvious that most of the dairy farmers pay but little attention to the blood or qualities of their cattle. Most of them buy their cows; and many large herds which we saw presented a most incongruous collection of ugly shapes, and animals indicating but few good qualities for any purpose. Why need this be so? Does not the experience of every farmer teach him that some cows are worth nearly double what others are? And would it not be altogether better in the long run, to raise stock always from those which possess in the highest degree the properties which constitute their value? From our own observation we have no hesitation in saying that a proper attention to this subject for a period of twenty years would *double* the nett income of their cows.

We cannot avoid remarking here, that we noticed in many instances, a very inveterate, and we must think, unreasonable prejudice, against all colors in cattle but *red*. In some instances we heard farmers say they found no fault with the Durhams, "except the color." We put the interrogatory, whether the intrinsic value of the cattle depended on color? They could not say that it did; but they did not *like*, in other words, did not *fancy* such and such colors! It is passing strange that among people who in general claim to discard the influence of *fancy*, at least in agricultural operations, a prejudice like this should be allowed to control the judgment. Why should not that breed be chosen which is best adapted to the purposes of the farmer, without regard to qualities of mere fanciful value? Let this be done, whether the breed found most suitable be the Durham, Hereford, Devon, Ayrshire, or any other. There can be no special excellence in one color more than another—the only advantage resulting from attention to this point, is, that as each particular breed has a color more or less peculiar, that color, whatever it may be, is an indication of the purity or genuineness of the blood.

Messrs. S. and L. Hurlbut, Winchester, have a fine herd of Devons. There are some twelve or fifteen head of full-bloods, and perhaps as many more which are so nearly full-blood that an ordinary observer would scarcely be able to distinguish the difference. Messrs. H. have been breeding this stock for more than twenty-five years. They purchased of Wm. Patterson, Esq., of Baltimore, in 1819, the bull *Holkham*, whose immediate progenitors were sent as a present to Messrs. Patterson & Caton, by Mr. Coke, late Earl of Leicester. Holkham was kept by Messrs. H. till he was fifteen or sixteen years of age. He was then sold, and subsequently came into the state of New-York. He continued to be a vigorous and sure stock-getter till he was twenty years old. His progeny in Connecticut were very numerous, and their deserved popularity did much to establish the reputation of the Devons in that state.

Messrs. H. have sold many bulls and bull calves, of the Devon blood—either pure or of different grades. We understood them to say that they had sold over fifty which came to the state of New-York. Their present herd is certainly a beautiful one, and seems exceedingly well adapted to the climate, soil, and purposes of that section. They are hardy, active and tractable, making the most capital working cattle, especially where quick and spirited teams are required. They also fatten well, and their beef is represented as of superior quality. Their points and appearance for dairy qualities is generally superior to what we expected to see. Several of the cows are evidently superior milkers. Two or three of them, nearly full-bloods, have, on special trials, made from twelve to fourteen pounds of butter each per week, on grass feed only.

There is no doubt that certain families of the Devons are good milkers. In England, Mr. Bloomfield, a tenant of the Earl of Leicester's, obtained a high prize for his herd of Devon cows, on account of their superiority as *butter stock*. Mr. George Patterson, of Baltimore, has made several purchases of stock from Mr. Bloomfield, and we believe their reputation for the dairy is fully sustained in this country. Messrs Hurlbut have now a bull and several young cows which they purchased of Mr. Patterson, of the stock derived from Mr. Bloomfield. They are beautiful animals. The bull is a very superior one—far superior in symmetry, handling, and in deed in every good point, to any other Devon we ever saw.

At Farmington we saw very good cattle. We are particularly indebted to Timothy Cowles, Esq., and to Dr. Carrington, of this place, for their polite attentions in showing us the fine farms and stock of this rich and beautiful neighborhood, and several of the neighboring towns. Mr. Cowles is an extensive farmer. He has for many years been in the practice of fatting oxen in the winter season, to be sold at the New-York and Boston markets in the spring. Hay is the most important article in fattening, though corn meal and sometimes potatoes are used to finish the process. But the hay is made with great nicety—the grass is cut while it is green, not past bloom—carefully kept from rains and dews, and put in the barn in the most perfect condition. This hay is so nutritive that animals thrive as fast on it as on the best of grass feed.

Mr. Cowles is one of the very few farmers we have met with, who in selecting stock for fattening, regard the important quality of *handling*. Mr. Cowle's observation early taught him the importance of this quality, and for nearly forty years he has been in a great degree governed by it in selecting his stock. He showed us several yoke of very fine oxen, belonging to himself, some of which he intends for slaughter next winter, and also pointed out to us in an adjoining pasture, several other yokes of oxen, belonging to Mr. Deming, and some of his other neighbors. In general, the best of these oxen showed marks of a high Devon cross; but a few of them were half and quarter blood Durhams, crossed with the mixed Devon and native. One of these, belonging to Mr. Cowles, was on the whole, the finest ox we saw in Connecticut. Mr. Cowles had also a very large, though rather coarse ox, a cross of the Durham, which was bred and reared by his brother, the late Richard Cowles. He has likewise an excellent cow of the same breed, which took the first premium at the show at Hartford last year.

Mr. John T. Norton has a fine dairy of twenty selected cows. He is crossing these with a Durham bull of a noted milking family, bred by Mr. Prentice, of this city. Dr. Carrington has also some very pretty stock—a bull and some heifers—some of which show in a good degree the leading points of the Durhams.

[*To be continued.*]

DOMESTIC ECONOMY.

COOKING TOMATOES.—Mr. BEECHER, of the Indiana Farmer, speaks with the enthusiasm of an epicure on the subject of tomatoes. He says whoever does not love them, "is an object of pity." There's no accounting for taste. The editor of the Boston Courier, for instance, repudiates Mr. Beecher's taste, and compares tomatoes to "rotten potatoe-balls"! But we give Mr. Beecher's directions for cooking tomatoes. We have long been accustomed to eating those cooked in a similar way, excepting adding the eggs, and cheerfully endorse his opinion of the excellence of the mode. What he says about cooking them "enough," is important. The directions are said to be for a mess amounting to about three pints when cooked.

"Begin by parboiling two onions. While this is doing peel the tomatoes, which is easily done after hot water has been poured over them; cut them up and add the onions, also a teacupful and a half of bread crumbled fine, a table spoonful of salt, a heaping teaspoonful of black pepper, a lump of butter of the size of a turkey's egg, or about four table spoonsful. Beat these thoroughly together and set them over a slow fire to stew. *They should cook slowly and for a long time;* never less than three hours, but the longer the better. About fifteen minutes before they are to be used, beat up six eggs and stir them in, and put them on fresh coals and give them one grand boil up, stirring them all the time. When so cooked, no directions will be needed how to eat them.

The art of cooking the tomato lies mostly in cooking them enough. They should be put to work the first thing after the breakfast things are out of the way, even if you do not dine till three."

WASHING BUTTER.—We are aware that good butter makers disagree as to the propriety of working butter in water. In times past, we have made some experiments in this line. We have also persuaded others to make fair trials by washing a part of a churning in cold water, working the other part thoroughly without water. The result in all cases has been, that that from which the buter-milk was expelled without water, *kept best*. We notice some pointed remarks on this subject in the Indiana Farmer & Gardener, edited by Rev. H. W. BEECHER.

Mr. D. Embree, who states that he has followed the business of butter-making and kept dairies, sometimes of fifty cows, does not agree with another writer in that paper as to washing butter. "I am satisfied," says Mr. E., "that it extracts the good flavor from it, and that it will not keep so well as when water is not used. We salt our butter the first working, and after it cools, say twelve hours, all the buttermilk and watery particles from the salt can be worked out. I would ask any person to try an experiment, by taking 3 lbs. of butter made without having any water come in contact with it, put one pound in ice-water, one in cold spring water for, say, two hours, then expose them all to the same temperature for a few hours, and they will be able to answer a question I was asked while attending Washington market, by an old butter maker who came and stood by my tub. "Why is it, that my butter, which I took out of a cold spring since daylight, is so soft that I can hardly keep it in my tub, while your's, which must have been out almost all night, is as firm as a rock?" I would wish them to keep the pounds separately, but in the same way, for a month, and then try them."

Mr. Beecher adds, that on receiving the above, he conferred with a noted butter-maker, who says, "When butter is to be immediately used, she prefers washing it; but if it is to be kept any length of time it should not be washed."

To KEEP HAMS IN SUMMER.—Place a layer of coarse salt in the bottom of a barrel, put down a ham and cover it with salt, then another, and so on till the barrel is full. The barrel must be kept in a *dry* place. The hams will come out perfectly good, if they were put in good.

TRANSMUTATION.

L. A. MOODY, Esq., of Cabotville, Mass., states a case of supposed transmutation upon which he wishes our comments. The case, according to his relation, may be stated in substance as follows: In 1838 he had a field of ten acres of wheat. It was new ground—the wheat having been sown among "girdlings." The crop became too ripe before it was cut, and shattered a good deal in gathering, but yielded about twenty-five bushels of good wheat per acre, besides from two to five bushels per acre, by the estimate of his neighbors, wasted on the ground. After harvest the stubble was plowed in, and the wheat (or what was deemed such,) came up so abundantly, that instead of planting the field to corn the next spring, as had been designed, it was resolved to leave it in possession of the wheat. But as the crop approached maturity, and the heads made their appearance, it was all at once discovered that what had been taken for wheat was *chess*, with the exception of a few scattering heads." It is added—"if all the chess which grew in the previous crop of wheat had been sown, it would not have stocked more than one acre as well as that spontaneous growth." (!)

Mr. Moody says he had always before "ridiculed the idea of wheat turning to chess," but "of course," he continues, "after such tangible evidence and practical demonstration, (?) I could say no more against it. * * I cannot believe it possible for *bona fide* transmutation to take place, neither can I account for the fact of my having ten acres of chess on a field seeded with wheat, and if you can give a satisfactory solution of the mystery you will confer a great favor."

We are by no means confident that we can give what will be to Mr. Moody "a satisfactory solution of the mystery." To fully explain the case, everything pertaining to it should be known; and without distrusting the faithfulness of the account before us, it is not improper to say that it fails to give a thorough knowledge of the circumstances; indeed it is impossible that this knowledge could be obtained without a personal examination of the field at the time the first named crop was harvested, as well as at subsequent periods.

It will be noticed in the first place, however, that the case furnishes no direct evidence of transmutation. There were ways enough in which the chess might have grown without the necessity of resorting to a belief in any supernatural cause for its production. The stubble of a wheat crop was plowed in. It is admitted that this crop had some chess in it, though but a small quantity was thought to have been gathered with the wheat. But the wheat was very ripe when it was harvested. So must the chess, whatever there was, have been very ripe, and every one knows that in this state, especially if it has been wet after being cut, it sheds its seed very easily. Besides, the chess, from being of a shorter growth of straw than the wheat, would not be so cleanly gathered by the sickle or cradle; so that several circumstances would conspire to cause an undue proportion of what chess grew in the first crop to be left on the ground. Again, the chess is more hardy than wheat; nearly every plant which came up would probably live through the winter, and if any vacancies happened by the wheat plants being killed, they were quickly filled by the spread of the chess. That the chess should have been taken for wheat, —*good and true*—until it headed, is not strange. There are but few, comparatively, whose observation is sufficiently close to distinguish wheat from chess in their early stages. It is not uncommon to find farmers confounding different species of grass (and wheat and chess are indeed but grasses,) under the same name.

But if transmutation actually takes place, we contend it can be demonstrated, and this, so far as we know, has never yet been done. It was alleged that wheat and chess had been detected growing from the same root; but on examining the roots produced as a sample of this, both species of plants were found separate and each traced to its original source. It was supposed that wheat and chess had been seen in the same head; but a critical examination showed that a panicle of the chess had only been wound (either artificially or otherwise,) into the wheat-head, and thus occasioned the illusion.

In conclusion, we would suggest to the advocates of transmutation, the adoption of a plan for experiments by which their theory, if correct, can be proved beyond a doubt. Take a quantity of earth suitable for the growth of wheat, and subject it to such a degree of heat, (say 200 deg., for ten hours,) by placing it in an oven or on a stove, as will destroy the vitality of any seeds it may contain. Then put the earth in pots, each of sufficient size to admit the full growth of a wheat plant, and after having sufficiently moistened the earth, plant in each pot one or more kernels of wheat, being particular to note the exact number planted, and also the exact number of plants which come up. Subject the plant to any process which is deemed most likely to cause transmutation. If any of these plants produce chess, it may be set down as proof that it sometimes comes from wheat.

NATIONAL WEALTH.

Every one knows that heavy imports and light exports will in time render any nation bankrupt, while the reverse cannot fail to enrich. It hence becomes an object with every patriot to discover and promote such kinds of business as will increase the exports of the nation.

A large part of the United States is finely adapted to the cultivation of *fruit*. American apples of the best quality sell at very high prices in Europe. In one case a successful cultivator in this state, by a very careful selection of the finest, obtained twenty-one dollars per barrel for Newtown pippins, sold in the London market, and nine dollars per barrel is the usual price he obtains there for his best fruit.

Now, every cultivator knows that hundreds of bushels may be obtained from an acre under the very best management and cultivation. What then could more contribute to national, as well as to individual prosperity, than extensive plantations of those varieties of the apple, pear, and other fruits, as are best adapted to conveyance to a distance. There is no doubt that if the northern and middle states were able to furnish large quantities of the very best kinds, that markets would be opened in many parts of the world where such articles are now unknown. An acre of fruit will often yield more than ten times as many bushels as an acre of the best wheat, and at far less expense in labor. There is no question, therefore, that millions of dollars worth might be yearly sent out and scarcely interfering with the amount of grain and other farm crops already raised. Nor need any fear of overstocking the market, while our own cities and large villages are so scantily supplied with the best sorts, some of the finest having yet rarely ever passed the bounds of the amateur's garden, and most of the best being yet unknown to nineteen-twentieths of purchasers.

NEW PUBLICATIONS.

"Views of Canada and the Colonists—embracing the experience of a resident; views of the present state, progress, and prospects of the colony; with detailed and practical information for intending emigrants; by A Four Years' Resident."—In a recent tour through a portion of Canada, we had the good fortune to make the acquaintance of the author of the above work, (Mr. J. B. Brown, now of Montreal,) from whom we are happy to acknowledge the receipt of a copy of it, which we have read with much interest and satisfaction. This work was written and published at Edinburgh, during a recent visit of the author to his native country, in order to supply the information so necessary for those who contemplated emigrating to the Canadas; and it contains a larger amount of information relative to these thriving colonies, and exhibits their social and political condition and natural advantages, with more apparent candor and truth, than any thing we have before met with. To emigrants, intending to settle in the Canadas, we should think it would prove of great service. The statistical portions of the work, seem to have been prepared with care, and are, we presume, entitled to full credit. He furnishes statements of the agricultural products of some of the most populous districts; from which we make the two following extracts, believing they will be regarded with general interest. The first refers to the "London District," so called, Canada West, which in 1843, it is stated, contained 109,706 cultivated acres, and possessed a population of 29,657. It produced—

	Bush.		*Bush.*
Wheat, ...	246,045	Peas, ...	112,734
Barley, ...	16,075	Indian Corn, ...	79,851
Rye, ...	10,162	Buckwheat, ...	23,558
Oats, ...	224,769	Potatoes, ...	268,619

The live stock owned in the district, by the official returns of 1842, were

Neat Cattle, ...	47,678	Sheep, ...	43,327
Horses, ...	7,232	Hogs, ...	2,929

The Niagara District is composed of two counties, having twenty-three townships, and a population of a little over 38,000, and 150,000 acres of land under cultivation. In 1842, the district produced—

	Bush.		*Bush.*
Wheat, ...	249,000	Peas, ...	96,000
Barley, ...	42,000	Indian Corn, ...	48,000
Oats, ...	249,000	Buckwheat, ...	69,000
Rye, ...	9,000	Potatoes, ...	804,000

The live stock in that year comprised 35,000 neat cattle, 54,000 sheep, 33,000 hogs, and 10,000 horses.

The work is for sale by Armour and Ramsay, Montreal.

A Universal Pronouncing Gazetteer, containing topographical, statistical, and other information, of all the more important places in the known world; with a map. By Thomas Baldwin, assisted by several other gentlemen. Philadelphia; Lindsay & Blakiston—1845. 12 mo. pp. 550.

Every teacher, every reader of travels or of history, and indeed every intelligent citizen must join with us in welcoming the appearance of this work. The need of a complete and correct system of geographical pronunciation, has long been felt by all classes of the community, and from a careful examination of the book before us, as well as from the ample testimony of a number of the most distinguished literary gentlemen in different parts of the Union, we entertain no doubt that the great desideratum has at last been effectually supplied.

The present work exhibits the clearest evidence of a scrupulous attention to accuracy in every part, and the high character of the authorities cited, both in the geographical and orthoepical department, cannot fail to increase the confidence of all respecting the great value and correctness of the Pronouncing Gazetteer. The book is necessarily of limited dimensions, to fit it for introduction into our common schools; it is however more comprehensive than many other gazetteers of much greater size. It contains a neat and handsome map of the United States, exhibiting the various canals and railroads up to the present date. To use the words of S. S. Randall' Superintendent of Common Schools of this state, "the information brought together in this work, is exceedingly valuable, as well as varied and interesting; and I know of no other source from whence it can be so profitably and readily derived."

It must be a source of gratification that both the plan of the work and its execution are wholly original and American, and cannot fail to add to the reputation of American literature.

Farmer's Library and Monthly Journal of Agriculture.—Each succeeding number of this work comes to us with increased interest. The August No., a notice of which was crowded out of our columns, concludes the republication of Petzholdt's Lectures to Farmers on Agricultural Chemistry. The Journal Department contains many interesting articles, the first of which is a Dissertation on Horse-Breeding, and the Trotting Horse of the United States, prefaced by a lithographic portrait of the celebrated trotting mare *Lady Suffolk*. The second is an obituary notice of Gen. T. M. Forman, of Md., with a Curious History derived from him, of the importation of Lindsey's Arabian. Other articles follow on Under Draining, Irrigation, Entomology, Comparative value of different kinds of Sheep for the New York farmer, &c., &c.

The September number is decidedly the most interesting that has been issued. It commences the republication of The Principles of Agriculture, by Albert D. Thaer. From the attention we have been able to bestow, we think this a highly valuable work, evincing deep investigation and sound judgment on the part of the author. The articles in the other part of the work, are, A Brief Sketch of the Qualities of the Short-Horned Cattle, and their Introduction into Maryland, with a lithographic portrait of a bull of that breed; On the good and bad points of Cattle, and the formation of fat and muscle, by Mr. Read, V. S.; Sugar, its culture and manufacture; Comparison of Guano with other manures; Entomology; Silk Plant; Native or Wild Maize; Trials of Sulphuric Acid and Bones for Turnips. The frontispiece to this number is a beautiful colored engraving of the Cotton Plant in its various stages.

American Journal of Insanity.—This publication has just entered on its second volume. It is issued quarterly, each number containing 96 pages octavo. We have but just glanced at the first number of the current volume, (which is the only specimen of the work we have seen,) but notice that its contents are varied, and embrace articles on several interesting subjects—as "Historical and Descriptive Account of the Bloomingdale Lunatic Asylum," with a handsome engraving of that institution—"Modern Improvement in the Construction, Ventilation, and warming of Buildings for the Insane,"—"Lunatic Asylums of the United States"—"Selected cases of Insanity"—"Progress of the Periodical Literature of Lunatic Asylums,"&c. The work is edited by the officers of the New York State Lunatic Asylum, and published by Bennett, Backus & Hawley, Utica, at one dollar per annum, in advance.

Medico-Chirurgical Review, for July, 1845.—This work comes as usual, well filled with articles of the greatest value. It is published quarterly, each number containing 288 pages octavo. The American edition is issued by Messrs. R. & G. S. Wood, 261 Pearl-street, New-York, at $5 per annum, in advance.

North Carolina Planter.—The two first numbers of this publication have reached us. It is an octavo of 24 pages, published monthly at Raleigh, N. C., at one dollar a year in advance. Edited by Thos. J. Lemay.

The two numbers we have received, are filled with interesting articles. We trust the work will be the means of arousing the farmers of North Carolina to the importance and profit of developing the rich natural resources of the state.

Popular Lectures on Science and Art, by Dr. Lardner.—We have received this interesting and very valuable work, up to the ninth number. Each number is well worth twice the price for which it is sold. The eighth and ninth Nos. contain articles on the Effects of Lightning—Popular Fallacies—Protection from Lightning—Magnetism--Electro-Magnetism--The Thermometer—Atmospheric Electricity—Evaporation, &c. Published by Greely & McElrath, Tribune Buildings, New-York. Twenty-five cents.

TRANSACTIONS OF THE N. Y. S. AG. SOCIETY.

The Editor of "The Cultivator" had determined to take no notice of the various attacks, (criticisms they cannot be called,) which have from time to time been made upon the annual vol. of Transactions issued by the N. York State Agricultural Society; and he is only induced now to refer to them, by the very ungentlemanly manner in which the name of one of the best agricultural writers and most estimable men of our state, has been brought before the public in connection with the last volume. It may not be improper to state that the 1st and 2d vols. of the Transactions were prepared for the press by the editor of this paper. That they are not what he could have desired they should be, he very cheerfully admits; but that better volumes could be made from the materials submitted to him, by any one, he does not believe, though his labor upon them, as well as all his labors in behalf of the society, for three years, were bestowed without fee or reward. The preparation of the 4th vol. of Transactions was also assigned to the editor of the Cultivator. On looking over the papers in his hands, he came to the conclusion that a decided improvement might be made in the arrangement and preparation of the matter; but not choosing to make the improvements which he deemed necessary, on his individual authority, he submitted his plan to the Executive Committee, by whom it was unanimously approved; and at his request, a committee was associated with him, consisting of Hon. J. P. Beekman, the last President of the Society, and Dr. Lee, the Cor. Sec'y, to superintend, so far as it might be necessary, the preparation of the copy for the volume. Among the improvements, it was proposed to exclude, so far as possible, all matters not of permanent value, and to arrange all the papers, whether emanating from the state or county societies, under appropriate heads. In this arrangement, the Executive Committee and the Committee of Publication, unanimously concurred. To make the compilation as it should be done, the editor found would require more time than his duties would admit of his devoting to it: he therefore engaged John J. Thomas, a gentleman every way admirably qualified for the task, to perform this labor, which he did to the entire satisfaction of the Executive Committee. Mr. Thomas, it may be proper to say, had no authority to insert or omit any article, he merely acting as compiler under the direction of the Publishing Committee, by whom his labors were unanimously approved. The imputation, therefore, that Mr. Thomas had any part in rejecting the contributions of others to make room for his own, is as destitute of truth as it is scandalous on the part of the writer making it, who must have known, if he knew any thing about it, that Mr. T.'s contributions to the volume consisted of Prize Essays, the premiums for which were awarded by committees appointed by the Executive Board, who made their awards without the knowledge of the writer's names. From the entire mass of papers submitted to him, every thing was selected which was deemed of permanent utility; and as to these papers *alone*, could the editor have recourse, he could by no possibility have made the volume better; and, with the exception of a few grumblers, it has received the approbation it deserved. Those who complain that the volume does not compare with the Journal of the Royal Agricultural Society, would do well to remember that we have as yet no class of professional writers in this state, or in this country, who have given sufficient attention to the theory or practice of agriculture, to enable them to furnish such essays as grace many of the pages of the journals of the Royal and Highland Societies. We can expect little more at present than the simple details and practical observations of men who have paid more attention to the labors of the husbandman than to those of the student of nature. From the attention now given to the subject, however, we may look for a gradual and a rapid improvement in our agricultural literature.

PLANTING CHESTNUTS

The rapid growth of the chestnut, the excellence of its timber, and its fine ornamental appearance, render it a desirable object of cultivation. The fruit which it produces too is not the least consideration.

Many, however, who attempt raising the trees, partially or wholly fail in causing the seeds to germinate. This is usually owing to the seeds becoming *dry* before they are planted. A few days exposure to dry air is sufficient to prevent their growing. Hence, as soon as they are taken from the tree they should be at once planted before drying a day, or mixed with moist sand, and kept in that condition till planted. They should not be covered more than an inch and a half deep if the soil is heavy, nor more than two inches if it is light; but a still better way is to plant them half that depth, and then spread on a thin covering—say one inch of peat, or rotten leaves, which will keep the surface soft and moist.

It must be remembered that mice are exceedingly fond of the nuts, and if planted near grass lands, or other places frequented by mice, the young plants will be missing the next season.

PITT'S CORN AND COB-CUTTER.

In our August No. we briefly mentioned this machine. Mr. Pitts has recently exhibited it in this city, and we have had an opportunity of examining it more particularly. It seems to us completely adapted to its purpose. Its advantages are—1. Great simplicity of construction; not being liable to get out of order, but in case of injury, readily repaired. 2. Portableness; occupying less space than the common grind-stone used by farmers. 3. The facility with which it will grind corn and cob in any condition; its peculiar construction enabling it to work equally well whether the corn is in a damp, green, or dry state. 4. Its adaptedness to grinding shelled corn, coffee, peas, or beans, without any alteration or change of gear. 5. The grain is not heated in being ground; thus obviating the tendency of the meal to sour or ferment.

It does not make *fine* meal, but it is fine enough for any description of stock, and is indeed, we believe, about as fine as corn-meal is preferred for ordinary domestic purposes at the south. It *is* readily adapted to any power. With one horse, one man will easily grind six bushels an hour—though twelve bushels an hour have been ground with the same force. They will soon be for sale in Albany, Boston, New-York, Philadelphia, and Baltimore. Address H. A. Pitts, Winthrop, Maine, or John A. Pitts, Rochester, N. Y.

DEEP PLOWING.

We have occasionally urged the importance of deepening the soil, by turning up and mixing with the surface, small portions of the subsoil, where its nature is such as to produce beneficial effects. We have known many instances of the beneficial effects of such a course. Dr. D. H. Robinson, of Farmington, Ontario Co., N. Y., being compelled to prepare a piece of grass land for wheat, late in summer, plowed it very deep, not less in any place than eight inches, but averaging nine or ten inches. This was thoroughly harrowed, with a small dressing of rotted manure, and sowed upon the inverted sod. The product was thirty-five bushels per acre, on land where twenty bushels are usually considered a heavy crop. Another very skilful farmer of our acquaintance, finds so much benefit from the mixture of the subsoil, that he considers a decided advantage would result, so far as raising wheat is concerned, if six inches of the surface of his land were entirely removed and carried off.

Subsoil plowing would doubtless be useful in such cases to a certain extent; but we would more particularly recommend thorough *trench* plowing—one plow to follow the first, so as to loosen and throw up the soil to the depth of at least one foot,—the last team to be double and attached to a strong plow.

BENEFITS OF AGRICULTURAL FAIRS.

An immense interest is evidently awakened throughout the country in favor of these meetings, and it is only necessary that they be properly conducted, to ensure their great and permanent usefulness.

There are, or may be, important advantages of a social, may we not be permitted to say *political* nature, connected with these annual gatherings of those devoted to the agricultural interest. A free and familiar intercourse should be had by farmers, on all topics connected with their calling. The various modes of protecting and advancing this interest—the most important of all interests, both in a national and individual sense—should be freely discussed and understood. As no other opportunity is more favorable, let the great meeting of the New-York State Agricultural Society, be made an annual Agricultural Congress, where the ways and means of advancing the cause of agriculture and the interests therewith connected, shall be fully considered. Let this plan be adopted and continued, till an union of feeling and concert of action among this class, shall cause their influence to be felt and *answered* in our national councils! till the farmer shall receive from our legislative bodies the respect to which his acknowledged usefulness entitles him!

From the advantage which these shows afford for the sale or exchange of animals, the purchase of implements of husbandry and articles of every description, it is very desirable that the feature of *fairs* should as far as possible be incorporated into the general system of agricultural associations. To all classes it would be convenient, but to purchasers and breeders of stock, the opportunity of comparing the merits of different breeds, herds, and particular animals, and obtaining by purchase or exchange, such as each one needs to carry forward his improvements, would be of incalculable benefit. If, for instance, the show of the New-York State Society could be permanently located at some point easily accessible, the purchasers and sellers of all kinds of stock, from a large portion of the country, would resort thither in crowds; and the longer the system was continued, the greater would be its advantages, and the greater would be the numbers annually drawn together.

We have been induced to make these latter remarks, from knowing that numerous sales of stock and implements took place at the late exhibition at Utica. From what we saw and heard, we have reason to believe that sales were effected at this exhibition to a much greater extent than at any previous one: indeed, we are informed by those whose position enables them to possess correct information on this subject, that the sales made at this time, were more extensive than at all previous shows of the society included. Sheep, of both fine and long-wooled breeds, were purchased for various sections of the country, from Maine to Mississippi. Horses were purchased for different sections—the pair of matched or carriage horses which took the first premium, being bought by Mr Gilmor, of Maryland. Cattle of various breeds, also, changed owners to a considerable extent, and at fair prices.

The *Tribune* suggests another improvement in conducting these fairs, to which we cordially respond, viz: that "there be a succession of off-hand, farmer-like addresses, by all who shall be deemed able and shall avow themselves willing to shed light on any department of agriculture." By having suitable men engaged beforehand, to speak on various subjects—as stock of different kinds, cultivation of different crops, manures, &c., we have no doubt that a great amount of information of the most practical and valuable kind, would be elicited. We hope to see these suggestions carried out, and the usefulness of the society perfected and extended to the utmost limit.

FOREIGN.

By the latest arrival we have our foreign exchanges to the first of September. It seems to be well established that the wheat crop of Great Britain will prove a full average. The harvest was very late, owing to the prevalence of cold and wet weather. Much of the grain was beaten down in the fields, and great anxiety was at one time experienced lest it should be injured by sprouting; but it is stated that the expected losses in this particular are not of a serious nature. Numerous accounts are given of the injury to the potatoe crop by the *rot*, which by the description seems to be similar to the disease from which so much damage has been experienced in this country for the last few years. Throughout the kingdom there appears to be plentiful supplies of hay and pasture herbage; by which the graziers are considerably benefitted, and stock has been brought into fine condition. Advices from Scotland and Ireland are favorable to the yield of wheat, barley and oats.

Dr. Dana's Essay on Manures.—We notice that this valuable paper is copied at length into the London Farmer's Magazine. It is a sterling production, and we are pleased to see that it is appreciated on the other side of the water.

TRANSPLANTING APPLE TREES.

All hardy fruit trees, more especially apples, will bear a considerable portion of manure in the soil, provided it has previously been well intermixed with the soil and thoroughly rotted.

A very successful experiment was made two years ago by the writer, the results of which are now very striking, by digging very large holes for apple trees, and filling them with a mixture of soil and rotted manure. A thorough intermixture of the soil and manure was effected, as they were gradually filled in, by means of a large toothed iron rake. The holes were about seven feet in diameter, and a foot deep. In setting out the trees, common garden earth only was placed in contact with the roots, consequently the effect of the mixed rotted manure was not visible the first year. The present year, however, its influence has been most obvious in the rapid growth of the shoots, and in the uncommonly dark and rich hue of the large and luxuriant foliage.

It is hardly necessary to add that the soil as a matter of course was kept clean and in a mellow state, and that the trees were tied to an upright stake, driven into the hole before filling, to prevent shaking and loosening by the wind.

STATE OF THE CROPS.

Connecticut.—Mr. J. S. Yeomans, Columbia, under date of Sept. 1, says—"The grass crop was not an average; oats good; corn will be injured some by drouth, but I think there will be more than an average crop."

Canada West.—Mr. J. B. Bagwell, near Toronto, writes that winter wheat turned out well—20 to 40 bushels per acre—25 bushels being the general average of the neighborhood. Quality good. Spring wheat light—injured by rust—not more than 15 to 20 bushels per acre, but gave straw enough for 25 to 30 bushels. Italian spring wheat is on the whole the best of the spring varieties for that section. It is a week or ten days earlier than the other varieties. Oats very short, hay light—no rain of consequence since the middle of June. Early potatoes a failure—late ones may do better if frost holds off. Peas not an average. Corn nearly worthless. Fruit of all kinds scarce, being mostly killed by frosts in May.

Potatoes had better be dug as soon as possible. Turnips, cabbages, &c., may stay in the ground till Nov.

LIST OF PREMIUMS,

Awarded at the New York State Fair, Utica.

[Continued from page 318.]

FLOWERS.

Greatest variety and quantity, Fred. W. Boyce, Utica,	Gold Medal.
2nd do. do., Ellwanger and Barry, Rochester,	$5
3d do. do., Mrs. Prof. Jackson, Schenectady,	Vol Tr.
Best Floral Ornament, F. W. Boyce, Utica,	Silver Medal.
2d " " Mrs. Lyndes, "	$3
3d " " Ellwanger & Barry, Rochester,	Vol. Tr.
Best seedling Dahlia, F. W. Boyce, Utica,	$3
" 25 varieties Dahlias, Mrs. Prof. Jackson, Schenectady,	5

DISCRETIONARY.

12 beautiful Dahlias, I. H. Chedell, Auburn,	$2
Collection rare Flowers, Mrs. Lawrence, Utica,	Vol. Tr.
Do. do. Mr. J. E. Hinman, Utica,	do.
Do. do. Mrs. Benjamin, "	do.
Lemon Tree, &c., &c., S. D. Childs, "	Col. Tour.
Rare plants, &c., J. B. Marchesi, "	Vol Tr..

Premiums on Flour.

John Rowling, Jr., Manlius, good,	Dip.
Jno. Williams, Rochester, better,	$3
J. G. Rowling, jr., Manlius, best,	5
Baily, Wheeler & Co., Utica, Air Tight Parlor Stove, 1st pr.,	"
E. Tyrrel & Son, Utica, Atwood's Empire Cooking Stove, 1st premium..	Dip.
Robinson and Vanderbilt, Albany, four light pleasure wagons,	"
D. A. Lyons, Utica, light pleasure wagon,	$3
Wm. Little, Edwards, double acting bellows,	Dip.
Cha's Pope & Co., Syracuse, plating	"
O. Reynolds, Webster, best beehive,	"
Bailey, Wheeler & Co, Utica, air tight parlor stove,	Dip.
Ray & Madole, Norwich, Chenango county, steel hammer, good workmanship,	Vol. Tr.
Thomas Potter, Utica, knitting and lace machines, very ingenious articles,	Dip. and Vol. Tr.
Benjamin S. Walcott, Agent of the N. Y. Mills, presented a number of pieces of corded dimity, bleached shirting, twilled jeans, French (pantaloon,) plain and corded skirts; articles which were of superior excellence,	Dip.
Mrs. H. Rhodes, South Trenton, Oneida county, a box of butter elegantly wrought into representations of various implements,	Dip.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, September 22, 1845.

COTTON.—Upland and Florida—inferior, 6¾a7—fair and good fair, 8¼a9. Mobile and New Orleans,—inferior, 6¾a7¼—fair and good fair, 9 to 9½a10. According to the Tribune,

"Total sales for the week ending this evening,	7,500
" " since the 1st inst.,	14,000
" Receipts, "	7,200
Stock on hand this day,	35,000"

BUTTER.—Western, 11a14—Goshen, 18a25.

CHEESE—5½a7.

FLOUR—Michigan and Ohio, $4.37½a$4.50—Genesee, $4.75a $4.81¼.

GRAIN—Wheat, Genesee, $1.03¾—barley, 67 cts.—corn, southern, 53 cts —oats, 41a42 cts.

HEMP—Dew rotted, American, per ton, $90—Sisal, $120.

HOPS—per lb. 13a15 cents.

HAMS—scarce, 8½a9 cts.

BEEF—Mess, $9.

LARD—8a8½—firm and wanted.

PORK—mess $11a$14.

TOBACCO—Kentucky, per lb. 3 cents—Connecticut seed leaf, 8a10.

WOOL—(Boston prices.) Sept. 22:

Prime or Saxony fleeces, washed per lb.	$0.37a0.40
American full blood fleeces,	35a0.37
" three-fourths blood fleeces,	33a0.34
" half blood do	31a0.32
" one-fourth blood and common,	28a0.30

Water for Calves.—A correspondent of the Ohio Cultivator, speaks a kind word for *such calves* as cannot speak for themselves, and says they need a supply of good water and partake of it freely, even if liberally and constantly supplied with milk.

STODDARD'S STRAWBERRY.

PERSONS wishing to obtain the Seedling Strawberry noticed in the Cultivator for August last, p. 251. can obtain them by addressing Col. J. S. Stoddard, Palmyra, Wayne Co., N. Y. Price, $5 per 50 plants. They can be sent by Express to any part of the country.

MACEDON NURSERY.

THE partnership formerly existing between Thomas & Smith, having been dissolved, orders for fruit trees will be received by J. J. THOMAS, Macedon, Wayne Co., N. Y.

A thorough revision of his list of fruits having taken place, and new ground extensively occupied, trees of many varieties can be furnished of only small size before another year.

RENSSELAER INSTITUTE.

A PRACTICAL, SCIENTIFIC, AND MATHEMATICAL SCHOOL.

THE winter term of this institution will commence on Wednesday, the 5th of November next. The course of studies pursued is still the same with that pursued when under the charge of Prof. Eaton, with the addition of Theoretical Mathematics.

The following is a brief view of the branches pursued in the Institute.

1. Theoretic Mathematics.
2. Practical Mathematics with special application to Surveying, Navigation, and Civil Engineering.
3. Natural Philosophy, including Mechanics, Hydrostatics, Hydraulics, Pneumatics, Optics, Electricity, and Magnetism, with their applications.
4. Chemistry, exerimental and practical. This science will be taught and illustrated with particular reference to Agriculture and the Arts.
5. Natural History, including Botany, Geology, Mineralogy and Zoology.
6. Occasional lectures will be given on subjects pertaining to Taste, Morals, and the Christian Religion.

Besides the courses of lectures by the Faculty, each student is required to give lectures on the branch of science which he is pursuing, illustrating his subjects—in Mathematics and Natural Philosophy by surveys, measurements, observations, or experiments of his own—in Chemistry with experiments performed with his own hands—and in Natural History, as far as possible, by specimens of his own collection; and he thus acquires theoretic and practical knowledge, as he is explaining it to others. In this method of instruction it is hardly possible for a person to pass through the appointed lectures, illustrations and experiments, without attaining an intimate and familiar acquaintance with the studies prescribed. The learner becomes himself the teacher, and he must first learn in order thus to explain his subject to others.

Rev. N. S. S. BEEMAN, D. D., Prest.
WM. P. VAN RENSSELAER, } V. Pres'ts.
Hon. DAVID BUEL, }
GEORGE H. COOK, } Professors.
JOHN WRIGHT, M. D., }

The price for tuition will be $15 per term—two terms in the year—one commencing on the first Wednesday in November, and continuing 20 weeks, and the other commencing on the first Wednesday in May, and continuing 22 weeks. Those who perform a course of experiments with their own hands, are charged $8 extra for chemical substances and apparatus, unavoidably destroyed.

Board can be had from $2 to $2.75 per week.

Oct. 1, 1845—2t.

FARMS FOR SALE.

FIVE FARMS in Loudon county, Virginia, will be sold at public auction on the premises, at noon, the 25th day of October next.

These farms are portions of the estate called "Oak Hill" in Loudon County, the late residence of Ex-President Monroe, deceased; are about 30 miles distant from Alexandria, Georgetown, and the city of Washington, and about 9 miles from the banks of the *Potomac* and the *Chesapeake and Ohio Canal*, where there is every facility for cheap transportation of produce to tide water.

Farm No. 1, contains 200 acres, more or less, and is now occupied by Joseph Hawkins; on it is a frame dwelling-house and sundry other improvements, several good springs, and running water through its whole extent, with a fair proportion of arable, meadow, and woodland bordering on *Little River*.

No. 2, is generally known as Boggins' Farm, and is of size to suit a purchaser. It contains 60 acres of superior meadow land, and a fair proportion of arable and woodland, with *Little River* passing through it.

No. 3, lies between the farm occupied by Mr Hawkins, and that on which Capt. Mattocks resides. It consists of 200 acres, more or less, about 150 of which are cleared and arable, the balance well timbered land.

No. 4, contains from 250 to 350 acres, more or less, at the option of the purchaser. It lies south of Farm No. 1; 100 acres of it being arable, the balance consisting of wood land, and a fine meadow lying on *Little River*.

No. 5, is composed of 200 acres, more or less, of *red land*, lying directly upon the *Alexandria and Winchester Turnpike*, having upon it a comfortable *dwelling house*, two wells of pure water, together with a *barn* and a *brick wagon stand*. The two houses, independent of the land, rent for $85 per annum. This property bordering as it does on the main road and stage route to Alexandria and Washington, offers great inducements. It is admirably adapted for grazing cattle, being most excellent grass land.

These farms are composed of good soil, capable of great improvement, and producing good crops of *Wheat*, *Corn*, *Rye*, *Oats*, *Potatoes*, *&c.*, *&c*, They are superior lands for the purpose of grazing cattle, and as Stock Farms.

The terms of sale will be most favorable, say *one-fourth* down, and the balance in one, two, and three years, with interest.

Further description is deemed unnecessary, it being presumed all who wish to purchase, will examine for themselves.

Offers for any of the above property will be received till the day of sale, and any further information afforded on application, in person, or by letter to the subscriber. S. L. GOUVERNEUR.

Washington, D. C., Sept. 15, 1845—1t

BOOKS FOR SALE.

AMERICAN Farmer's Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale at the office of "The Cultivator."

SHORT HORN DURHAMS FOR SALE.

9 HEAD of this valuable breed of animals are now offered for sale by the subscriber, having more than he can well keep on his farm, viz: Rose, 9 years old, a good milker, having given 25 quarts per day, on pasture only. She is in calf by my prize bull Meteor, and will drop her calf about the middle of August. Empress, nearly as good a milker as Rose. She dropped her calf about a month ago, and will be bulled by Meteor. Eunice, 6 years old, white, bulled by my imported bull Duke of Wellington, 25th of June, a good milker; her dam has given 32 quarts of milk a day on pasture only. Julia, four-year-old heifer, recently bulled by Meteor. Lily, two-year-old-heifer, white, bulled by Meteor, 9th of June, and three yearling heifers, roan, red, and white, got by Wellington and Meteor. A yearling bull, got by Meteor, out of a cow bred by Charles H Hall, Esq., of Harlem. The Cows above named were bred by the Bullocks, of Albany county, and their descendants. This stock has the reputation of being good milkers. Gentlemen desirous of procuring the blood of the celebrated herd of Thomas Bates, Esq., of Yorkshire, can do so, with a cross of the Bullock stock, as the sires of the young animals are from that gentleman's herd, and the cows are in calf by the same bulls. This strain of blood can hardly fail to make good milkers. Letters, post paid, will receive an answer. The animals will be sold from $100 to $125 a head. A credit from 6 to 12 months will be given for approved paper. GEO. VAIL.

Troy, July 25, 1845—2t.

FARM FOR SALE.

THE subscriber offers for sale the farm upon which he now resides, situate in the village of Auburn, in the county o Cayuga, and containing 100½ acres.

This farm lies upon the south side of the western turnpike, (now Genesee-st., Auburn,) and is well known as having been the residence of Hon. Nathaniel Garrow, deceased, for many years.

The buildings, fences and other erections thereon, are ample and in good repair; the soil will vie with that of any other farm in Western New-York, for fertility, variety and earliness of vegetation. Great attention has been paid ae well by the former as also by the present owner, to the selection and cultivation of choice fruit, and there is now upon the farm, in full bearing, a great abundance of the best varieties of apples, pears, cherries, peaches, grapes, &c. &c. The farm is well watered, durable springs, which give a never failing and ample supply.

The location is believed to be as desirable as that of any other arm in the state, as well for farming purposes as also for the residence of the gentleman or a man of business, being withing a few minutes walk from the Rail Road Depot, and within a few rods of the Female Seminary.

A credit will be given, if desired, for a large portion of the purchase money, for a term of years upon payment of interest annually. Inquiries may be made of the subscriber upon the premises, of Luther Tucker, Esq., Editor Cultivator, Albany, or of David Wright, Esq, Auburn. JOHN REMER.

Auburn, N. Y., July 14, 1845.—3t.

A LAKE FARM FOR SALE.

THE subscriber offers for sale the Farm owned by Hon. Jedediah Morgan at the time of his death, situate on the east side of, and adjoining, the Cayuga Lake, about two miles south of the village of Aurora, in the town of Ledyard, (formerly Scipio,) containing about 360 acres, with a good porportion ot Timber Land, on which he oak and hickory predominate. The road leading from Auburn, to Ithaca, via Aurora, passes through the Farm, dividing it into two nearly equal parts.

The land is of an excellent quality, as well for wheat and other grain as also for grass.

The situation and location is believed to be as eligible, and to combine as may advantages, as any other farm in the county. The first point of land which makes into the Cayuga Lake, above the village of Aurora, is a part of the farm.

A large proportion of the purchase money can remain, secured by bond and mortgage, upon annual interest. Any person wishing to view the farm, can do so by applying to C. C. WHITE, the tenant upon the premises. The whole will be sold together, or in parcels. to suit purchasers. Letters of inquiry addressed to the subscriber, *post paid*, will be promptly answered.

DAVID WRIGHT,
Trustee of the Estate of Jed'h Morgan, dec'd.

Auburn, July 14, 1845.—August 1—3t.

NEW AND IMPROVED POUDRETTE,

MADE by the Lodi Manufacturing Co., may be had by application at the office of the Company, No 51 Liberty-street, New-York, or by addressing a letter (post paid) with directions how to ship, &c., to "The Lodi Manufacturing Co., New-York." The price for it, delivered anywhere in New-York city, free of cartage, &c., is as follows: For one barrel, $2.00; for two bbls., $3.50; for three barrels, $5.00; four barrels, $6.68; five barrels, $8.00; six barrels, $9.75; and for any quantity over six barrels, $1.50 per barrel. Pamphlets and instructions for its use, may be obtained gratis at our office.

The Lodi Manufacturing Co., defy competition in the art of making a *cheap*, *powerful*, and *lasting* manure, and strenuously invite a fair trial between *an equal cost* of their poudrette, and an equal cost of the best guano in existence.

It is hoped that the successful trial of poudrette upon wheat, on Long Island, the last season, will encourage many others in other parts of the country, to make a trial of its effects this season. Quantity per acre for wheat is 10 barrels, or 40 bushels sown broadcast with the seed, and harrowed in

Sept. 1—2t.

NEW-YORK AGRICULTURAL WAREHOUSE.

HAVING taken the commodious store, No. 187 Water street, the subscriber is now opening the largest and most complete assortment of Agricultural implements, of all kinds, ever yet offered in this market. Most of these are of very highly improved pattern—warranted to be made of the best materials—put together in the strongest manner, of a very superior finish, and offered at the lowest cash prices.

Seeds for the Farmer.

Such as improved Winter and Spring Wheat, Rye, Barley, Oats, Corn, Ruta Baga, Turnep, Cabbage, Beet, Carrot, Parsnep, Clover, and Grass seeds, improved varieties of Potatoes, &c., &c.

Fertilizers.

Peruvian and African Guano, Poudrette, Bonedust, Lime, Plaster of Paris, &c.

Fruit, and Ornamental Trees and Shrubs.

Orders taken for these, and executed from a choice of the bes nurseries, gardens, and conservatories in the United States.

Horses, Cattle, Sheep, Swine, and Poultry.

Orders executed for stock of all kinds to the best advantage.

Wire Cloths and Sieves.

Different kinds and sizes of these constantly on hand.

The subscriber requests samples sent to him of any new or improved implements, seeds, &c. &c., which if found valuable, extra pains will be taken to bring them before the public.

A. B. ALLEN, 187 Water-st., New-York.

Sept. 1—2t.

FRUIT TREES.

THE subscribers are now ready to receive orders for *superior Fruit Trees*, viz: Apples, Plums, Pears, Cherries, Peaches, Quinces, &c., &c., from *their new and extensive nursery*, Their assortment, which they offer for sale the coming fall, is very large and fine. The trees are handsome, thrifty, and of the most suitable size and age for transplanting, and being propagated by the proprietors themselves with the most scrupulous care, either from bearing trees in their own grounds, or from others of undoubted genuineness, and being in every other respect until they are sent from the nursery, under their *immediate personal supervision*, they can be confidently recommended.

It is expected that all orders coming from persons unknown to the proprietors, will be accompanied by a remittance, or that some responsible reference will be given. Orders are entered on the order book, to be forwarded as soon as practicable in the fall. Orders respectfully solicitied, and will receive prompt attention.

WILSON, THORBURN & TELLER, or
WM. THORBURN, Seedsman, 38 Broadway,

Albany, *Sept.* 1—3t.

☞ A liberal discount made to those who purchase to sell again or by wholesale.

FAN MILL AND CRADLE MANUFACTORY.

THE subscribers continue to manufacture Fan Mills and Grain Cradles of the very best quality. The subscribers have recently improved their Fan Mills, so that wheat and all other kinds of grain and seeds are thoroughly cleaned by being run through the mill once. Said improvement has been secured by letters patent, bearing date the 10th day of July, 1845.

Notwithstanding the labor and expense which we have bestowed upon the improvement of our Fan-Mills, we are enabled to furnish the "Patent Fan-Mills" at the same prices which we have received for mills heretofore manufactured by us.

We manufacture four different sizes of Fan-Mills, seven sieves to each mill. Prices from $21 to $27. according to size.

Orders from abroad promptly filled, and a liberal discount to dealers.

I. T. GRANT,
D. H. VIALL.

Schaghticoke, Junction P. O., Rensselaer Co, N. Y.

We the subscribers certify that we have witnessed the operation of I. T. Grant & Co.'s "Patent Fan-Mill," upon wheat and all kinds of grain and seeds, and have no hesitation in pronouncing it superior to any mill now in use. The operation of cleaning wheat is performed with one-half the time and labor required by other mills, as it chaffs and screens at the same time. All kinds of grain and seeds are thoroughly cleaned by being run through the mill once. We cheerfully recommend. and advise all farmers who wish to purchase a fan-mill, to purchase the "Patent Fan-Mill" manufactured by I. T. Grant & Co.

John M. Mott,
L. D. Eddy,
Cha's J. Wilber,
James H Rice,
Moses Buckley,
P. G Williman,
Calvin Morse,
James H. Jones,
H. K. Duer,
John Case,
Henry P. Stuntz,
Philip H. Stuntz,
Edwin Smith,
James G. Gordon,
George W. Corry,
Francis Crocker,
Wm. B. Gordon.

I know little of the utility of the fan-mill above described except from information. I am, however, personally acquainted with almost every one of the above subscribers, and have no hesitation in saying that the most implicit confidence may be reposed in all they certify. JOB PIERSON.

I am intimately acquainted with the Hon. Job Pierson, who has signed the above certificate. He is a highly respectable man. (formerly member of Congress,) and I have great confidence in him.

W. L. MARCY.

For sale at WARREN'S, in Troy, WM. THORBURN'S, Albany, and D. L. CLAWSON'S, 192 Water-street, New-York.

Sept. 1—3t.

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FINE WOOLED BUCKS FOR SALE.

SEVERAL Bucks, of various ages, and of the best quality, both for fineness and weight of fleece, as well as for shape and constitution, can be had if applied for soon. A part of them are *pure* Merino, and a part a cross of the Merino and Saxon. Address, *post-paid*,

SANFORD HOWARD,
Albany, Oct. 1. Office of the Cultivator.

SEEDLING APPLE-TREES FOR SALE,

BY J. J. THOMAS, at his Nursery, Macedon, Wayne Co, N. Y., one year old, and from 5 to 10 inches high, at $3 per thousand No charge made for packing, for orders of 5000 each; or 50 cts. per 1000 for less. Orders to be post-paid and accompanied with remittances.

Oct 1—1t.

MACEDON NURSERY.

THE unsettled accounts of the late firm of Thomas & Smith, Macedon, are left with the subscriber.

The original object of this establishment, viz: "the propagation of select varieties of *Proved* Fruits only," will be rigidly adhered to.

It is gratifying to be able to state that an extensive collection now coming into bearing, has enabled me to add several kinds of great value to the stock before cultivated, which in due time will be offered for sale. WILLIAM R. SMITH.

Macedon, Wayne Co., 8 *mo.* 25*th*, 1845.

BRINKLEYVILLE ESTABLISMENT.

THE subscriber offers in market, most articles in the nursery line, as fruit trees, &c., to suit more especially, southern latitudes. But his large number (especially of the Scuppernong,) of choicest American grape vines, he hopes will accommodate those desirous of speedy success in fine profitable vineyards. Medium prices of well rooted vines from 15 cts. to 75 cts. each, according to kinds, size, and numbers taken at once. Cuttings from 25 to 60 cts. per dozen. Early planting important south. Wines from 25 cts. to 75 cts. per bottle, and from $15 to $50 per barrel. according to quality and age. Cordials higher than wines. SIDNEY WELLER.

Brinkleyville, Halifax Co., N. C., Oct. 1—1t

SALE OF VALUABLE STOCK.

I WILL offer at public sale, at my farm, 5 miles from Baltimore, on the 30th day of October, at 10 o'clock A. M., the following valuable stock, consisting of two full bred Holstein Bulls, 4 and 2 years old: one imported Holstein Cow: two full bred Heifers, (Holstein,) 3 and 1 year old; 5 Heifers, ¾ Holstein, giving milk; 3 heifers, ¾ Holstein, giving milk; 12 *half breed* Holsteins, good milkers. E. KENLY.

Oct. 1—1t.($1)

PLOW CASTINGS FOR CASH.

THE undersighed has just received the agency from a large and well known manufacturer to sell his plow castings, and is enabled to offer them at a lower price than ever sold in this market, for cash or approved paper. Southern dealers and others supplied at short notice. JAMES PLANT.

New-Yok, Oct. 1—1t. 5 Burling slip.

FRUIT TREES.

THE subscriber offers for sale, at the *Kinderhook Nursery*, an unusually fine assortment of Fruit Trees, comprising the choicest varieties of Apples, Pears, Plums, Cherries, Peaches, &c, now cultivated.

The trees are of good size and exceedingly thrifty. The stock of Cherries, Peaches, and Apples, particularly, is very large, and of beautiful growth.

Also on hand, an excellent stock of Ornamental trees, comprising European Mountain Ash, European Linden, Evergreens, &c., &c.

Also, stocks and seedling trees.

Catalogues will be furnished gratis to all applicants It is particularly requested that all orders be forwarded as early as possible, say by the 15th of October, so that they may be executed as soon as the season will admit.

Trees packed in the very best manner, and delivered at the Kinderhook Steamboat Landing, or Railroad Depot, free of expense.

Kinderhook, August 14, 1845—1t* HENRY SNYDER.

ALBANY AGRICULTURAL WAREHOUSE AND GENERAL AGRICULTURAL AGENCY.

23 *Dean-street, Albany, N. Y.*

THE undersigned will open on the 1st of October, a warehouse for the sale of every variety of improved farm implements both at wholesale and retail. He intends to make his warehouse a general depository of the best implements manufactured in this and other states, and confidently believes that his experience of many years as a practical farmer, and for the last few years as proprietor of an agricultural store in Rome, N. Y., together with his general acquaintance with manufacturers of farm implements, will enable him to select the best articles in use. Particular attention will be given to the sale of seeds of every description. Persons having valuable implements or choice seeds to dispose of, are invited to deposit them here for sale. The store may be found in the new building, No. 23 Dean-street, adjoining the store of Vose & Co., in the rear of Stanwix Hall. It is also within a few steps of the Mohowk and Hudson, and the Boston Rail-Road offices. ELON COMSTOCK.

Oct. 1, 1845.

PRINCE'S LINNÆAN GARDEN AND NURSERIES,

Flushing, L. I., near New-York.

THE GREAT ORIGINAL ESTABLISHMENT.

THESE Nurseries are not only the largest in the Union, covering near 60 acres, but the collection of Fruit and Ornamental Trees, and Plants, is the *most extensive and select* in America, being the result of investigation during a century. The specimen grounds comprising 1700 trees from which the Nurseries are ingrafted, thereby ensuring their accuracy. The collection contains more than 500 *new and rare varieties* of fruits, and above 1000 rare varieties of flowering shrubs, and roses, that are in no other nursery. The new descriptive Catalogues, with reduced prices, and directions for culture, will be sent to every post-paid applicant, and all orders will be executed with that accuracy and dispatch which characterize the establishment. The public are cautioned against a spurious use of our name and title, by an Attorney at Law, named Winter.

Oct. 1—1t. WM R. PRINCE & Co.

MOUNT HOPE BOTANIC GARDEN AND NURSERIES, ROCHESTER, N. Y.

THE subscribers respectfully announce to their friends and the public, that their present stock which they offer for sale the ensuing fall of 1845, and spring of 1846, is the finest ever grown in Western New-York, and unsurpassed in quality by any establishment in the country.

The collection of fruits comprises the most esteemed varieties of the APPLE, PEAR, PEACH, PLUM, QUINCE, CHERRY, APRICOT, NECTARINE, ALMOND, GRAPES, &c.

Pears on Quince Stocks intended for growing in the pyrimidal form, and will bear the year after transplanting; they may be planted from six to 8 feet apart, and are consequently admirably adapted for garden culture.

Three thousand trees of the valuable native apple, the "*Northern Spy*," are yet on hand, generally acknowledged to be one of the best varieties cultivated.

Strawberries, all the celebrated new varieties, including *the remarkably large and productive new seedling* "STODDARD'S WASHINGTON ALPINE."

Gooseberries and currants, of the largest and finest varieties.

Raspberries of all kinds.

The collection of Roses is very fine, including a very choice assortment of standard or tree roses, 4 to 6 feet high; these are beautiful objects for lawns or borders—most of them are perpetual or ever-blooming.

Also a large collection of *Ornamental Trees and Shrubs*.

The trees are well grown, thrifty, and beautiful, and have been propagated with such care as to ensure correctness. All are warranted genuine as represented.

A new descriptive catalogue is in the course of preparation, and will be forwarded *gratis* to *all post-paid* applications.

Trees and plants packed in the best style, and shipped to any port or place that may be designated.

Oct. 1—1t ELLWANGER & BARRY

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

Vol. II. ALBANY, NOVEMBER, 1845. No. 11.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

Seven copies for $5—Fifteen copies for $10,00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

OFFICE IN NEW-YORK CITY, AT

M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,

where single numbers, or complete sets of the back volumes, can always be obtained.

☞ "The Cultivator" is subject to newspaper postage only.

Foreign Correspondence.

MR. NORTON'S LETTERS—No. XVII.

Laboratory of Ag. Chemistry Association,
8 Bank-st., Edinburgh, Aug. 20, 1845.

L. Tucker, Esq.—I have just been reading the proof sheets of an article of Prof. Johnston's, and think I can scarcely give you anything more interesting or useful, than some extracts from it, which Prof. Johnston has kindly permitted me to make.

He first speaks of the great bulk of the potatoe crop, which by the cost of its transport, prevents the farmer who has no near market, from growing it over a large extent of ground. It is therefore of much consequence if he can convert the potato into some more portable articles, which will at the same time meet with a ready sale. One of these articles is farina, or potato flour.

"Into this manufacture," says Prof. Johnston, "great improvements have recently been introduced, and the farina is converted into British *Tapioca*, into syrup, and other articles, which find a more or less ready market. The waste fibre of the potato, which formerly was considered fit only for manure, is now converted into a wholesome nourishment for cattle, and even the washings of the starch, where skill and economy preside over the process, are collected and employed as a manure. Mr. Binning Home mentions that these washings, when allowed to run into the potato drills, had given, near Stirling, a larger crop of potatoes than was yielded by other parts of the same field to which guano and farm-yard dung had been applied. The farina, or starch, has hitherto commanded a ready sale in the Liverpool market; and such was the success of a manufactory established in 1843, on the Bay of Wigton, that in 1844 several others were in process of erection, so that the outlet of the potatoe crop in that locality was greatly increased. The principal buyers of the potatoe starch have been the calico printers, and others engaged in the cotton manufactures."

Potato farina or flour has been laboring under a prejudice against its use, and the mixing of it with wheat flour practiced by some bakers, has been considered an adulteration.

"In Germany a method has lately been introduced of making flour from potatoes, which has not, I believe, been tried in this country, but which is recommended as giving a better, a more palatable, and a more abundant article of nourishment than the common process of preparing potatoe starch. This method consists in washing the potatoes, cutting them into slices, as we do turneps, steeping these slices for twenty-four hours in water containing one per cent of sulphuric acid, (oil of vitriol,) drawing off the acid water, washing them several times with pure water, drying them in a stove or oven, and then grinding them in a common grain mill. The flour thus obtained is pure white, and the refuse siftings or bran seldom exceed five per cent of the weight of the dried potatoes. The sulphuric acid in this process extracts the coloring matter of the potatoe, with certain other substances which would give the flour an unpleasant taste. This flour will not make good bread if used alone—it requires to be mixed with from one-half to one-third of wheaten flour."

"In growing potatoes for the manufacture of starch, (farina,) an attention to various circumstances is necessary in order to secure the largest yield of this substance. The soil, the manure, the variety of potato, its state of ripeness, and the length of time during which it has been kept, affect the quantity of starch it is capable of yielding. Some unpublished experiments made by Mr. Fleming, of Barrochan, last year, and liberally communicated by him, are very interesting. The results are exhibited in the following table:

Relative proportions of Starch and Water contained in 100 lbs. of different varieties of Potatoes manured with Dung, with Guano, and with half Dung and half Guano together.

Varieties.	Manure Applied.	Starch.	Refuse.	Water.
		lbs.	lbs.	lbs.
Perth Reds, ········	guano alone,	15·3	14·6	69·9
··· ··· ········	half dung, half guano.	15·5	15·2	69·5
Rough Reds, ········	guano alone,	16·0	18·5	66·5
··· ··· ········	dung and guano,	17·1	18·1	64·8
White Dons, ········	guano alone,	9·0	14·5	76·5
··· ··· ········	dung and guano,	10·2	14·9	74·9
Connaught Cups, ····	dung alone,	14·5	15·6	70·0
··· ··· ····	dung and guano,	14·4	14·3	71·2
Buffs, ··············	dung and guano,	14·8	14·0	71·2
Berwickshire Blues, ·	dung and guano,	14·3	15·6	71·0

Remarks.—The potatoes were lifted before they were quite ripe. The starch was made from the whole potatoes, well washed but not scraped. The starch was dried before an open fire, and the refuse at 300° F. in an oven. I found it difficult to get all the parcels of starch to the same degree of dryness.—*W. Fleming.*

"There is a great difference, as the above shows, in the proportions of starch extracted from these different kinds of potato. The white dons, for example, yielded little more than half of what was obtained from the rough reds. On the whole, the red potatoes seem to be the best starch givers, and it appears to make little difference whether guano and dung be employed alone, or together in the proportions of half dung and half guano. The difference in the proportion of water between the white dons and the rough reds is very striking, amounting to about 2¼ cwt. in the ton. Such facts as these are of importance both to the starch maker in buying his potatoes, and to the grower of potatoes who raises them for sale to the manufacturer.

A method has lately been recommended by Mr. Böggild, of Copenhagen, for making the potatoe more available and profitabe in feeding cattle than it has hitherto been. Potatoe starch is easily converted into grape sugar, and he proposes to take advantage of this, in order to bring the whole potato into a soluble state, to make it more easy of digestion, and thus to increase its feeding properties.

"He washes his potatoes well, steams them thoroughly, and then, *without allowing them to cool*, he cuts them in a cylinder furnished with revolving knives, or crushes them in a mill, and mixes them with a small quantity of water and 3 lbs. ground malt to every 100 lbs. of the raw potatoes. This mixture is kept in motion, and at a temperature of 140° to 180° F., for from one to five hours, when the thick gruel has acquired a sweet taste and is ready for use. Given in this state, the results of experimental trials are said to be—

1st. That it is a richer and better food for milk cows than twice the quantity of potatoes in the raw state.

2d. That it is excellent for fattening cattle and sheep, and for winter food. That it goes much farther than potatoes when merely steamed; and that it may be economically mixed up with cut hay and straw."

A letter from Copenhagen, dated April 29th, 1845, says, "This invention has been more and more appreciated and applied in my native country, (Norway,) and in Denmark, and the great advantages with which stall feeding may be introduced at considerable less expense than formerly, render it suited to general promulgation. The method has more and more gained adherents, and further comparative experiments made by scientific and experienced persons, have proved its superiority. Thus one of these experiments establishes that an increase of 1¼ lbs. of flesh is obtained from 25 lbs. of potatoes—that the feeding of horses with this mash is found to be applicable and cheap, and they all confirm that potatoes used in this manner as food amply afford double the nutritive powers compared to the food formerly used."

I have heard of no experiments on the above method in this country as yet, and therefore cannot say how much credence is to be given to these statements; the matter however, is certainly worthy of a trial. A common cider mill would crush the steamed potatoes with great ease, and there is nothing in any part of the process involving much expense. Indeed I think all the hints contained in the above extracts are worthy of attention from our intelligent farmers, especially those who are far inland, away from readily accessible markets. Very truly yours, JOHN PITKIN NORTON.

MR. MITCHELL'S LETTERS—No. XI.

Geneva, Switzerland, Sept. 8, 1845.

LUTHER TUCKER, ESQ.—Within a fortnight past, I have walked over half the distance from this to Paris. Some things seen by the way, may perhaps be jotted down with interest to your readers. Wine is the great crop, and vineyards stretch along by bits, and by hundreds of acres as far as the chain of the Juras, which separate the eastern districts of France from Switzerland, and which yield immense quantities of charcoal and timber, and in little basins of the hills oats and potatoes, with stinted crops of hemp and barley. The vines are tied to stakes forty inches in height, three to four feet apart each way—are kept closely trimmed, and in many vineyards, so late as the present month, the vine dressers were plucking off the young shoots. The ground is kept light, free from weeds, and generally without intermixture of other crop; though I have seen in a few instances sugar beets and hemp growing with the vines. A light soil is preferred, and of situations, one upon the slope of a hill facing the south, is most productive—not always in quantity, but in what is of more consequence—of a better quality of wine. Particular vineyards enjoy great reputations for producing a delicious wine, which they maintain for centuries, and fields immediately beside them, though of similar exposure, and possessing the same mineralogical character, are found to fail in producing the desired flavor. The famous Burgundy wines are grown along the line of my route. The vineyards principally lie upon the slope of a chain of hills, from 800 to 1000 feet in height; the soil is of a yellowish red loam, producing good crops of Indian corn, clover, and hemp. Old vines produce the best wine—young vines, the most. The method of making, in general terms, is to tread the grapes with heavy wooden shoes in troughs, until all are broken, when they are placed in a large vat with the must, where fermentation takes place; after which the liquor is removed to lesser vats, and changed from one to the other every two or three months until fit for the cask. The wine of the young vines, or of the poorer soils, (poorer in producing delicacy of flavor,) and the produce of a poor season make up the common drink of the country, or the *vin ordinaire;* which may be found in every little auberge by the way, and in nearly every house. Its price, when ordered at the humbler taverns, is about 10 sous, or 9 cents a bottle. It is rather better than poor cider and not so good as good beer. The *vin ordinaire* of the towns is of course much better. The best of the wines sell from seven to eight francs a bottle upon the spot, ($1.30,) but only when 8 or 10 years old. Barley was another considerable crop met with upon the plains of France, but was generally weak and unpromising in appearance. The oats very late, but in many parts a good crop. The smaller grasses I scarce saw at all; some crops of clover and of vetch were of only ordinary quality. Sugar beets no better than the average of ours at home. Beans and hemp good. Upon the plains at the foot of the Juras, I was surprised to see for the first time this side of the Atlantic, large fields of Indian corn, covering from 10 to 20 acres. It was late, wanting a full month or more of ripening, (3d Sept.,) and quite small. It was neither planted in hills or drills, but stood scattered over the ground some ten inches apart, and the culture, though it must have been very inconvenient, was thorough. The fields passed would have turned 30 to 40 bushels to the acre. The season has, however, been most unfavorable—a succession of cold and wet until within a fortnight past. The vintage will be late, and it is thought, very much poorer than usual. The mode of conducting agricultural operations, so far as witnessed along the line of route, was very inferior and unbusiness like. Land laid down to the grasses left in an exceedingly rough state—hay-making lazily gone through with, and not unfrequently large quantities molded and ruined. I passed some twenty pieces of grain, which had been cut, and laid with the cradle, and then left until the kernels had sprouted from the dampness. The plowing was poorly done, and light crops the necessary consequence. I saw no ditching or draining—no subsoiling—no irrigation—which latter indeed would be difficult, since but one or two brooks were crossed from Paris to the mountains. There are no hedges or fences except in the immediate neighborhood of some of the larger towns, and cattle when pastured are attended by keepers. Pasturing in the fields is, however, not common, except upon some rich meadows which are subject to overflow, and which, with their wide extent of green, and scattered poplars, and immense herds of cattle, offered a very grateful contrast to the general monotony of the country. The appearance of the vineyards is by no means so rich as the stranger who has heard only of *La belle* France—a land teeming with oil, wine, and silk, might suppose. At a distance upon the hill slopes, they have much the appearance of a New England brush pasture; nearer by, they have an aspect peculiar to themselves, but unless when the grapes are turning—no more inviting than so many brambles, nor one half so beautiful as the broad, long, glossy green leaves, and feathery spindles, and silken ear-tops of our American corn-fields. The implements of husbandry are almost universally of the clumsy and unuseful construction; the plows entirely of wood excepting a point of steel upon the nose, of a huge size, and worked over the axle of a pair of wheels, as described in my Jersey letter of last June. The hand implements are even more awkward than the larger ones; shovels have handles four to five feet in length; hoes are very similar to the bog-hoes of our country; scythe snaths are formed of natural crooks of extreme clumsiness, and forks for hay are mostly of wood, tipped with rams' horns. Immediately under the Juras, and this side them, the plows and scythes are of better character; the former resembling much our own, and without wheels. The scythes are short and broad, of thin metal, and lightly hung upon a stick into which the tholes are framed. They cut easily and closely, as I took occasion to prove by actual trial, upon the banks of the Rhone. The working cattle are to the west, horses and mules; in the interior some oxen appear, and to the east, and in the mountains, oxen are used almost exclusively. The horses are not superior except in power of endurance, and the harnesses are most cumbersome and slovenly. The oxen draw, yoked together by a straight beam passing directly across the top of their heads and bound strongly around the horns and forehead. As a consequence, their heads can be moved only up and down, and then only by common agreement. When worked singly, as they often are, the collar and trace is used. The oxen, except upon the mountains, are of good size and finely built. The cows are generally small; few are seen along the post-roads of France, but in the valleys among the mountains, vast numbers are pastured, and great quantities of cheese are sent thence to the city markets. Its quality is vastly inferior to the English or American, and its price ranges from 7 to 14 cents per pound. Butter is worth in the Paris market from 25 to 40 cents a pound. For dressing various dishes, and for frying, a cheap oil is used instead of either lard or butter. Potatoes fried in olive oil is a very common dish of the country. A plain boiled potato was not set before me from the time I left Southampton, until I reached Geneva. I need not say, they are now a luxury.

Teasles were frequent along the whole route through France, growing wild, but I saw none cultivated. Plums have been seen in abundance. Apples are not common except in particular districts, and are there inferior. Almonds and walnuts are plenty. Wine and bread with a bit of cheese is the common food of the country workers. They are indolent in habit and dirty in person. The grain is mostly reapt, and a good American cradler would lay as much in a day, as a whole family of Burgundian workers. Men, women, and children are all in the field, and there seems to be little difference in the respective amounts of their labor. I have seen a girl of eighteen at the plow stilts, and a man of forty driving. What say your Hudson demoiselles to this?

Until again, yours truly, D. G. MITCHELL.

Domestic Correspondence.

APPLICATION OF MANURE.

EDITOR OF THE CULTIVATOR—It has been said that manure is the raw material of the farmer, from which he manufactures his agricultural products. Much, but not too much, has been said in modern days, upon the modes of increasing the raw material. Permit me to call the the attention of cultivators, more particularly to its application. A good manufacturer is careful not only in procuring stock, but more especially, in working up this stock to good advantage. With too many farmers it seems to be the aim to make and apply manure, not stopping to inquire how it can *best* be applied. Green and rotted, composted and clear, it is too often applied, indiscriminately to all kinds of soil, when and where convenience or custom may direct. There can be no question that long manure is best adapted to hoed crops, and well rotted compost for a top dressing. But the principle, to which I would particularly invite attention, is that given by the Creator to Adam, and legible in all nature's works, viz: that seed produces seed after its kind; in other words, that like produces like. Look upon the stately trees of the forest. How have they attained their great dimensions? Who has been their cultivator, and what the mode of their cultivation? He, who does all things well is their culturist, and their food the decayed leaves and branches that are annually deposited at their roots. Man has been slow in learning the simple principle from the Great Teacher. It is but a recent thing that the vine dressers of France have discovered that the prunings form the best manure for the vines. It has long been observed that hog manure is exceedingly well adapted for a crop of corn. Does not the fact that hogs are generally fatted upon corn, furnish the reason of its adaptation? An experiment of a good farmer in this vicinity, bears directly upon this principle. Cutting the tops of corn for fodder, he places the bottom stalks between the rows, and upon these stalks he turns back furrows; without further manuring or plowing, he plants his corn, and his crops are above the average of those in the neighborhood. A similar experiment with potatoes has proved that the tops well covered at the time of digging, will furnish sufficient manure to ensure an equally good crop the succeeding year. Onions it is well known succeed best when sowed on the same ground year after year. Is not the rationale found in the fact that the tops are always left on the ground. Rye, has been known to grow on the same land for a course of years, with undiminished yield, with no other manure than that furnished by the stubble plowed in. Chip manure is universally recommended for promoting the growth of young fruit trees. The wherefore is found in the simple principle we lay down, that like produces like. Nature has furnished all seeds with nutriment in themselves the best adapted for the future plant. Who can doubt but that the pulp of the apple was designed as food for the seed as well as to gratify man's appetite? The blade of wheat and the sprout of the potatoe, as they first shoot forth, feed solely upon the parent stock.

The principle we have thus briefly illustrated and endeavored to prove, has important practical inferences. If the principle is true, no top dressing can be better adapted for grass than the aftermath left to decay on the ground. The manure from stock fed on hay should also be applied to grass lands, while that derived from grain should be applied to farinaceous crops. It is not necessary to carry these inferences further. They will suggest themselves to all readers of reflection.

Lee, Sept. 15, 1845. BERKSHIRE.

GUANO FOR ROSES AND GRAPE VINES.

L. TUCKER, ESQ.—Brooklyn is somewhat celebrated for its shade trees and grape vines, certainly with those who have lived here; and a man in looking up a place to rent, would almost as soon expect to find his house without a kitchen as his yard without one or two grape vines. There is no doubt it has often been the turning point in men deciding about taking a place. Nay, I may go farther, and say that most men would absolutely pay an additional fifty dollars rather than be without these adjuncts; and this feeling seems to be pretty generally appreciated, for a house is no sooner completed here, than down go the shade trees in front, and the little patch of a yard is embellished with—certainly the vines—and as many shrubs and flowers as can be crowded into it. But my purpose is not to describe this delightful city, (which New-York may well be jealous of,) but to give a bit of experience I have had with guano this year. I feel more like speaking of it now, as before me are a couple of heaping plates of the most delicious grapes, of the Isabella kind, I ever saw, which I think is the result of its application. I had read and heard a great deal of the wonderful power of guano upon plants, &c., and having something of a turn for experimenting as well as rural pursuits, and my field for operations being rather small, I concluded to buy a small quantity and try it upon my grape vines and house plants. I had learned about its dangerous effect unless judiciously applied; so I made a mixture of one part of guano to four of earth, a portion of which I applied to a rose bush in a pot, by digging it in about the roots; it had been doing very poorly, so much so that I thought it of small value, and had almost concluded to throw it away, believing it was merely a common garden variety, and utterly useless as a house plant. The effect upon it was truly wonderful; it commenced directly putting out new shoots, and in a short time was covered with blossoms of the most fragrant kind which remained a long time in the stem; it has since done well, and is now bearing three beautiful roses.

I have three grape vines, and being a little *scary* about using guano, I only applied it to one. The three, last year, bore very nearly alike in quantity and size of fruit, as also my neighbors' vines, each side of me. This year my *two* vines, and those of my neighbors have borne only moderately well—not as well as last year quite; but my third vine, about which I put the guano, has exceeded any thing I ever saw, both in quantity and quality, much of the fruit being as large as a fair sized walnut, with a deliciousness of flavor *positively delightful*. I have seen nothing in market or exposed in the streets of New-York for sale, that would begin with it; some of the clusters are tremendous, and I have this evening gathered from one shoot four bunches that would each cover, and well too, an ordinary tea plate. Now, whether this abundant yield is the result of my application it is impossible for me to tell, but sure am I, that my impressions of its probability are so strong, that one like experiment would make me a full believer in the efficacy of guano. A. T.

Brooklyn, L. I., October 10th, 1845.

LETTER FROM ALABAMA.

Luther Tucker, Esq.—It often happens that in this world of disappointment, our plans become frustrated. I have been brought to this reflection by the disappointment of the pleasure of a personal interview with you, as well as the pleasure of being present at the late Agricultural Fair of the State of New-York. I hope soon to receive through the columns of the different Agricultural papers, a full account of all that was done at Utica; but the best written account that can be given, I am apprised will fall far short of the reality. I had long desired to see the different states of our common union, and as far as I could, make myself acquainted with soil, climate, the products raised, the manner of cultivating the lands, &c., and on the 4th of June I set out for the purpose of travelling, having in view the above objects. I found on reaching Montgomery county, in this state, and examining the farms of several of my friends, that they have grown rich by the cultivation of the soil there. Large cotton farmers gave evidence of their wealth.

In passing up the Mississippi in the month of June, you see the extensive sugar plantations in a high state of cultivation. Indeed, as you pass up through the state of Louisiana, you are delighted with the show of comfort that is seen. I spent a month in the state of Illinois. Here I saw the finest lands of the United States. Indeed I have often understood that the best and richest lands of America were in the state of Illinois, and from what I saw I have no doubt of the truth of the assertion; and when the day comes that a set of such farmers as live in Western New-York, settle in Illinois, it must become the granary of a great part of the world.

Having spoken of the farmers of Western New-York, I must say that I was highly delighted at the appearance of farms as I passed on from Buffalo until I reached Albany. Indeed it appeared to me that every rock was made to tell us something, that every spring was turned to some account. Although the drouth had injured the crops to some extent, still such was the industry of the farmers in plowing up their fields and hauling out manure, that it was apparent they would be prepared to supply themselves with a fine crop of wheat and hay for the coming season.

The year 1845, throughout the states of Virginia, North Carolina, South Carolina, Georgia, and Alabama, will be long remembered for the severe drouth that has fallen on the country. The corn crop of this portion of Alabama, from what I can learn, has not suffered so much as the cotton crop. Indeed on my own farm, I make as much corn as I made in 1844, but will not make any over half the cotton of 1844. It is true, I did not plant as much cotton as I did that year, and should I be spared, I intend to plant less another year. My object is to make a large supply of provisions of every kind, and only plant such a crop of cotton as I can prepare in the best possible style. Indeed a large proportion of my crop of 1844, sold for over 10 cts. per lb., so that I think I will find my system in the end the most profitable. Indeed, I have made for the last two years, 16 per cent. on the capital invested in agriculture.

Alexander M'Donald.

Eufala, Barbour county, Ala., 25th Sept., 1845.

VAN ANTWERP'S PATENT CHURN DASH.

This dash was invented and patented by Peter Van Antwerp, of Coeymans.

The theory of this dash is very simple; but still it cannot be fully observed by any description which I can give you; it requires a trial to test its efficacy. I shall endeavor, however, to give as correct a description as possible, and if I am right in my theory, please inform me; if not, explain the true position of this dash.

It is an established and well known fact, that in the common dash, there is a flat surface; and by the ascending and descending thereof, a vacuum is left, which produces a suction, thereby impeding the course of it.

By the construction of Van Antwerp's dash, this vacuum is destroyed—the suction removed—which leaves a free and unimpeded course to the dash, and requiring but half the labor.

1st. Is the handle. 2d. The knob or head of any size, (say from 1¼ to 2½ inches in diameter,) with two rows of holes—six holes in each row—the rows being bored one inch apart. The lower row of holes are bored directly under the space left by the upper ones. 3d. The buckets or paddles, one-half an inch thick, one-half an inch wide at the tenon which enters the knob, and gradually widening to the outer extremities, to about 1¼ to 2 inches.

The upper holes, (the dash standing in an erect position,) are bored at an angle of 45 degrees, downwards; the lower holes are bored at the same angle, upwards; so that when the paddles are placed, the outer extremities of both are on an elevation. The paddles are also on an elevation of 45 degrees, sideways; thereby leaving no flat surface for a vacuum or suction.

Coeymans, N. Y., 1845. A Subscriber.

CULTURE OF WHEAT IN CONNECTICUT, &c.

Luther Tucker, Esq.—If you think the following statement of matters and things, will be of any benefit to the Agricultural community, you will please insert them in the Cultivator: To encourage the farmers throughout New England to sow more *wheat*, I can state that there has been more or less of wheat sowed on my farm for forty-five years, and there has been but two or three years at the most, when there has not been a pretty fair crop. In 1836 or 7, when there was a great scarcity of wheat throughout all the States, there was here an entire failure. On about four acres, I did not receive my seed sown that year. Since then the crops have been very good. For 15 years that I have owned the farm, there has no insect of any kind, injured the crop at all, that I am aware of. This year's crop is superb, weighing 62 lbs. to the bushel, and very plump. I generally soak my seed in strong brine, made of common salt with salt petre, 10 or 12 hours, then mix with slacked lime or plaster paris. This season I have sown on 7 acres 10 bushels of seed, raised near Seneca Lake, New-York. I generally change my seed once in 3 or 4 years.

My rye is likewise very good. I have threshed 45 bushels of rye, 350 of oats, and from 28 shocks, 15 sheaves to the shock, of wheat 36 bushels, with Badger's one horse power threshing machine, and I must say that I think it is one of the best now in use for threshing, and I have seen several different kinds in Western New-York. This machine will thresh 200 bush. of oats or 100 of rye per day, with ease to the horse, and thresh it very clean.

I should like also to state that I own a great prolific sow, which is said to be of the *Townsend thin rind breed*, which has had 79 live pigs at 5 litters: 14 at the first—15 at the second—16 at the third—18 at the fourth, and 16 at the fifth—she has raised 58 of her family. Who can beat this? Claudius Allen.

Cheshire, Conn., Oct. 13, 1845.

RULES FOR PLOWING.

L. Tucker, Esq.—I perceive that at our late Fair, two sets of premiums on plowing were awarded—one for old hands, the other for young men under 18 years of age. While cordially approving of this arrangement, permit me with all humility to suggest that in a future no. of your excellent paper, you should lay down a rule or standard, what constitutes good plowing, as great diversity of opinion exists on this subject. We find one farmer prefers a broad furrow laid flat—another a furrow standing straight on edge, while others give the preference to a narrow furrow at a given angle. How then is a plowman to know what particular description of work is, in the eye of a strange judge, the best? Whereas, if, (prior to the competition,) particular dimensions were prescribed, there would be no risk of any favor or partiality for one kind of plowing rather than another, as a carpenter with his rule and straight edge, under the direction of the judge, could at once decide which competitor best followed out the particular mode of plowing laid down. And I hold that the workman who can come nearest to the dimensions prescribed could easily plow to the satisfaction of any farmer, let his taste on the subject be what it may.

I have attended plowing matches for many years, and though I observe better plows are annually coming out, I do not mark any decided improvement in the style of plowing,—which I am inclined to attribute to the fact that at no plowing matches have particular dimensions ever been prescribed. John McConnell.

Remarks.—We think it would be proper for Agricultural Societies to establish some general standard for good plowing. We find but a small proportion of all the plowing in the country, performed in what could be called a proper manner. One of the greatest and most common errors, is making too wide furrows. This error is more or less prejudicial according to the nature of the soil—the injury being greater as the soil is more compact and tenacious. If the land to be plowed is *sward*, the object is the subversion of the sod in such a manner as that the decomposition of the vegetable matter shall be rendered most valuable and available to succeeding crops, and at the same time leave the soil loose and permeable to the roots of growing plants. To consider in detail all the circumstances which promote decomposition, would require more space than we have at disposal; it may however be remarked that air, heat, and moisture, are essential requisites. But in the case under consideration, it is necessary in the first place, that the vegetable substances in the soil be placed in such a situation as to check life, else their growth will be promoted by the very principles which would otherwise produce decomposition. A complete subversion of the sod is therefore the first requisite, and this should be done in a manner most favorable to its decomposition and the benefit of the crop to be put on the land.

It is obvious that a narrow furrow, lightly laid over, would, more perfectly than a wide one, divide the soil and adapt it to the support of a crop. It is not many months, however, since we heard a farmer remark that he would not care if six or seven inches of a field he intended to plow, could all be completely turned over at once. Few would probably attempt to defend this proposition, and yet the practice of many is so much in accordance with it, they not only turn over as much at once as they possibly can, but in some cases they attempt to cover with the furrow slice that which is not even loosened by the plow.

On the relative advantages of flat and angular furrows, we are aware that much diversity of opinion prevails. For very loose and porous soils, flat furrows may be equally as good, if not better, than those laid at any angle; but excepting for such, we should decidedly prefer furrows laid in such a manner as would admit a space for air underneath.

As to the proper depth of plowing, good farmers also differ. Since the introduction of the subsoil-plow, however, we think the question more easily settled, as the loosening of the sub-stratum by that implement, at once secures all the advantages of deep tillage, while it allows a surface furrow so shallow as to be liable to none of the objections urged against deep plowing.

THE STRAWBERRY.

Mr. Editor—Having noticed one or two (to me) apparent discrepancies in accounts relating to strawberries, I would feel obliged if you or some of your correspondents would harmonize them. First, Mr. Brice J. Goldsborough, in the April No., 1843, of the Cultivator, says he sold eighty (80) gallons of berries from 1371 plants one year old, besides what was consumed in his family, and some given his friends. Mr. Hovey says, (I believe in the 4th vol. of his Magazine,) in allusion to a bed of his seedling, that the bed did not produce twenty quarts, whereas it was large enough to have produced *two bushels*, the bed containing upwards of five thousand plants. Mr. H. according to Mr. G.'s yield, should have expected *forty* bushels, and not *two*. As I wish to plant some, I should like to know which, if either of these statements, I may take for data to guide me, in about the quantity to plant for the production of about a certain quantity of fruit, all things else being equal.

Another discordant matter I would like explained, may be gathered from the following. Mr Longworth, in Hovey's Magazine for July, 1842, writes:—"When at Mr. Cushing's, at Watertown, I was surprised to learn that his Keene's seedling bore fruit in a compartment where there was no other variety near. The Keene's seedling imported by Mr. Buist and myself, is defective in the male organs. * * * * I examined Mr. Cushing's strawberry when in blossom, and found it perfect in the male organs."

Now I would ask, how comes it that one should be perfect and the other defective, when all, (if of the true kind,) must have originated from one parent plant, and all, ad infinitum, must have inherited its peculiarities, of male or female?

Again, Mr. Philetus Phillips, in a circular dated April 1844, says—"In order to possess large and abundant fruit, we must cultivate such as have distinct male and female plants of the same variety."

Here again, I would like to know where the distinct male or female plant of the same variety could come from, as all must have originated, &c., &c., as before stated.

While writing, allow me to call for a little more charity at the hands of your correspondent, S. W., who calls the laboring man of England "dull, leaden-eyed, stupid, obsequious," for we are not exactly so, even in old England. If such expressions grow common, we shall presently have some other of your correspondents stating something to the effect that they have seen barber's blocks on American bodies. J. F.

Rochester, Oct. 7, 1845.

TO DESTROY THE RED ANT.

L. Tucker, Esq.—I take the liberty of sending you a very simple remedy to prevent the ravages of the small red ant, which infests the storerooms and pantries, to the no small annoyance of many a good housewife.

Though rather late in the season to be beneficial to many of your readers, it will not lose its efficacy by keeping till next summer. I was much annoyed by the above named insect this summer, and had tried every remedy that I had ever heard of, but to no purpose. I finally tried chalk, and in this way: I make a thick mark about an inch wide around the article or vessel I wish protected from the ants, at any convenient distance from the bottom of the vessel, and I find they will not attempt to pass over the chalk. I watched their motions for some time. They crawled as busily as ever, up as far as the chalk, where they seem to get very much excited, but not *one* of them attempts to pass over. I have tried the above remedy for over a month without a single failure. C. C. G.

Mobile, Ala., Sept., 1845.

Cattle should not be out in cold weather.

NOTES OF TRAVEL IN THE SOUTHWEST—No. VIII.

BY SOLON ROBINSON.

Visit to Warren county—Vicksburgh—Hill-side cultivation—Orcharding—&c., &c.

Well, dear reader, are you rested? so am I, and so, if you please, we will go ahead again. During a rest of four days at Log Hall, the residence of Dr. Phillips, I have eaten more vegetables than during the four weeks that I have been on the road from St. Louis.

Leaving the examination and description of the Doctor's plantation till another day, let us mount our horses and take a ride over Warren county, and visit the city of the "Walnut Hills," the far-famed town of Vicksburgh. This county is one of several similar ones along the Mississippi river, and presents a most singular formation. It is called hilly, but I think the word side-hills would convey a more correct idea. It seems to me, from careful examination, to have been a deposit of alluvium two or three hundred feet deep. At the bottom, coarse gravel, then fine, then sand, and then a deposit some ten or twelve feet deep, of fine silex, lime and shells; now a bed of rich marly loam, above which is the fine alumina that was held longest in solution. After this deposit had lain long enough to form a stratum of limestone underneath, it was apparently disturbed by an earthquake, which left the surface in the most uneven condition of any tract of country I have ever seen. I saw many side-hills in cultivation lying at an angle of 45 degrees, and singular as it may appear, although there is not a level farm in the county, until the present season, side-hill plows have been almost unknown. Those of Barnaby & Mooer's, that I have seen, are entirely too large. If they will make a light, one-horse size and send them here, they will find a market. The few now in use are the tumbling shares.

If any of my readers are anxious to know how such steep hill sides can be cultivated, they must come and see—I cannot tell them. There are many farms that do not contain a spot of level land large enough to build a house upon; but the fertility of the soil is so great and so inexhaustible while it remains unwashed away, that it has tempted men to overcome difficulties that never would have been encountered upon poorer land. Although the cultivated hill-sides are much steeper and more numerous than those of Capt. Eggleston, yet I believe the same system could be adopted to save this excellent soil from utter destruction. Though it does not appear to wash away quite so easily as the lighter lands up north, yet I find places here gone past all redemption, and worthless for every purpose except Bermuda-grass pastures, over which nothing could range but sheep and goats. In fact the whole country looks more suitable for a sheep range than for anything else, and in no part of the United States could wool be raised to better advantage. Of the feed for them I shall speak hereafter, and as to the deterioration of the wool on account of the *climate*, I have only one word to say, and that is "*fudge!*" If any one chooses to contend for the contrary, I will bring witnesses.

We left the Doctor's place for our ride on the 25th of February, which was so hot that it was very uncomfortable. On account of the high water in the Chittaloosa, the Indian name for the "Big Black," and a much better one, to my notion, we had to go a round about way. We passed during the day, in our twenty miles ride to Vicksburgh, some very good plantations, and as is almost universal in the state, all well fenced, and but very few good dwellings. The cause, I have heretofore spoken of—difficulty of getting lumber—mill streams are among the things wanted.

Vicksburgh is built on the face of a bluff that rises from the river 200 or 300 feet high, and which is broken into sundry other bluffs and ravines, and these are multiplied by lesser ones wherever the water can get a chance to gully out the soft friable soil. The town contains a very quiet and peaceable set of order-loving inhabitants notwithstanding the bad name that they got a few years ago, by a very summary way of ridding themselves of a pack of gamblers, robbers, and murderers. It is a place of considerable business, though not half as much as it was. The railroad from here to Jackson cuts off a good deal of trade. The town is situated at the bottom of a great bend of the river, and as there is no high land on the opposite side, fears have long been entertained that the ever changing stream might make a "cut off" across the narrow part of the bend, and thus leave the town "alone in its glory." Greater changes than this have taken place. "The Walnut Hills" settlement and fort, near which the present town is built, has an ancient and historical name. It was settled by the old French explorers.

About dark we left town with the intention of riding out to a friend's house, about four or five miles—Mississippi miles, and over Mississippi roads, and through, I can't tell how many, Mississippi gates—more than we were able to find by negro directions, in a dark night, till near midnight. Late as it was, we were met at the gate in southern style—a guest never thinking of entering the house without this little ceremony.

Before pushing ourselves off in the morning, we took a stroll over the farm, and the greatest curiosity witnessed was the possibility of raising a crop upon such a wonderful uneven surface. Among the small curiosities was an alder tree eight inches in diameter, and a sumach fifteen inches in diameter. And I was assured that this latter was used abundantly on the Yazoo river for rail timber. It grows tall and straight. I visited upon this place a heavy cane-brake. If it is thought by any of my readers that cane only grows upon low, wet land, let them think more correctly. All these hill-sides were originally covered with an immense growth of cane, now fast disappearing from the country. It grows so thick upon the ground as to make it difficult to penetrate. I was unable to learn the period of time it requires to come to maturity, or whether there is any certain time. A few years ago, I think in 1830, nearly all the cane in this part of the country seeded. It then dies. The seed bears a slight resemblance to oats, and is about as nutritive. All kinds of stock are fond of young cane, and it is by the constant cropping that it is so rapidly destroyed. Its want of durability renders it of little value, though it is often used to make drying scaffolds for cotton. But all scaffolds except folding ones, are nothing but a make-shift.

The next place that I shall take notice of, is that of R. Y. Rogers, five miles from Vicksburgh, and from whom we met a most hearty welcome, and enjoyed a pleasant night visit. Mr. Rogers is one of the best farmers in the state—that is, upon a small scale, and that he does not raise a pound of cotton, affects not the truth of the assertion. For reduced by shipwrecks and other misfortunes from an abundant competency, to one pair of hands, he did not hesitate to use them. I venture to say that with his two or three negroes, and market-cart, which carries every thing he raises to Vicksburgh market, he makes more clear cash than some planters do with 200 or 300 negroes. It will be recollected that 20 to 30 bushels of corn per acre is about the average yield here; but Mr. Rogers has succeeded in raising 90 bushels per acre on his steep side-hills. He however turns his attention chiefly to marketable vegetables, and having but little competition, he reaps the benefit. I saw tomatoes in his garden to-day, Feb. 27, a foot high.

Within a short time past, Mr. Rogers has established a milk-selling business in town, and reduced the price from 40 to 25 cents per gallon. He assured me that it used to be sold for *two dollars* per gallon. After a most pleasant visit with this very intelligent gentleman and his lovely wife, he accompanied us as far as Col. Hebron's, where we met Dr. Bryant and several other gentlemen, and partook of one of the most sumptuous dinners that I have yet seen on my journey. And when we take into account the long distance between the house and kitchen, which Dr. Phillips and myself computed at twenty rods, it appears a still greater wonder how such a dinner could have been gotten upon the table in one day. This wide separation of the house and kitchen, is only an extreme of a very extraordinary fashion. If a similar fashion prevailed in Yankee land, we should hear of sundry enactments to "encourage the building of railroads" between the two points. I will just mention that among the standing dishes at Col. H.'s dinner, was one of his *three year old* hams.

Col. H. is earnestly engaged in a system of culture that I should like to see more universally prevalent here, where it can be followed with such pleasure and profit, and for which the lands of Warren county seem so well adapted. I allude to orcharding. Col. Hebron, Dr. Phillips, and several others, are making extensive efforts to supply the New-Orleans market, particularly with peaches. In a small way, this has already been done at a most enormous profit. Raising fruit and cotton will work well together; for the great hurry with the cotton crop is in picking time, which is long after the fruit season has passed. Many planters will not plant fruit trees only for their own use; in fact many of them not even that, so that the few who do engage largely in the business will be in no danger of over supplying the demand, and may be assured of ready sales at great profits. Peaches in this vicinity ripen the last of May and through June, July, and August. What is to hinder supplying all the up-river towns with early peaches? As soon as sufficient quantities can be produced to make it an object, arrangements can be made to put the fruit in Cincinnati market in five days from the picking. Of course all nearer towns would be supplied, and this too, several weeks earlier than the orchards in the immediate vicinity would do. Not only peaches can be produced in the greatest abundance at such an early day, but various other kinds of fruit. I have not the least doubt but that more money can be cleared with forty acres of orcharding and four hands, than with ten times the quantity of land and labor devoted to cotton. Besides the immense profits arising from the sale of green fruit, a vast amount may be realized from drying it. Every plantation has plenty of hands, old and young, that could be devoted to this business, which are now worth little or nothing for any other purpose at this season of the year. I do not ask farmers to abandon their other crops for fruit, but that they make it an auxiliary. And I would like to suggest to Mississippi wives that if they will put up a few tons of their surplus fruits in the form of such rich and most beautiful preserves as I have eaten at several of their tables, they could be sure of a ready market in New-Orleans at 25 cents a pound at least. A nice little sum of extra "pin money" might thus be accumulated every year, independent of the cotton bales. Will Mississippians consent to make money at this business of raising fruit? If they do not, and that right soon too, I will take it upon myself to recommend some of the experienced fruit growers of the North to go down and do it for them. They will have no fear of ill health upon your Warren county hill-sides, and will soon show you how the thing is done. As for "glutting the market," it may do for your children to talk about that—the present generation will not live to see it. The market can never be glutted nor the culture rendered entirely unprofitable, till the price is reduced to ten cents a barrel, and then hogs can be fattened on them. Col. Hebron told me he realized ten dollars a barrel for peaches last year.

I cannot urge this subject too strongly upon the attention of Warren county citizens—I cannot urge it too strongly upon the planters to become *farmers* in the true sense of the word. I cannot urge it too strongly upon Warren county farmers to become shepherds and orchardists if they wish to see their hill-sides descend unimpaired in fertility to their children, instead of descending to the Gulf of Mexico and the gulf of destruction! Orchards, Bermuda grass, and wool, can all grow upon the same soil, while soil and owners will continue to grow rich. At present, if the owners are enriched, the soil is not.

But there are a good many other things that southerners might learn economy in. And one of the first things to learn is, that out of their own staple we furnish them almost every manufactured article, for which they pay us for carrying the raw material from the gin and press we built for them, done up in our bagging and rope, and sewed with our twine and needles, drawn upon our waggons by our horses in our harness, over roads made with our plows and hoes and spades, to our steamboats, and upon that to our ships; not forgetting to let our commission merchants have a good share of "skinnage;" and then after manufacturing, to return it in the same way to exchange for more of the raw material; by all which means we constantly keep a raw spot in your feelings; but it is not yet sufficiently "galled" to teach you to become *home manufacturers*—the only healing salve that you will ever find to cure the festering sore of "such low prices for cotton that planters cannot live by it." Would you adopt a more prosperous course? Quit planting as you understand it, and become farmers as we understand it—raise upon your farm every thing as far as possible that you eat, drink, wear, and use, and never buy an article of cotton goods except it is of home manufacture—that is, manufactured in the country where the raw material grows—and never bale your cotton in anything but cotton baling made from cotton not worth sending to market in any other shape. Get up and keep up agricultural associations, and give premiums to that farmer who shall come the nearest to raising everything he consumes, and to him who will exhibit the greatest proportion of his negroes clothed in plantation manufacture throughout—and above all things else, read and support agricultural papers.

After leaving Col. Hebron's plantation we passed over another of those great ulcers upon the face of this rich country, a tract of worn out and "thrown out" land,—gullied to death—a frequent sight that the traveller cannot avoid. Then crossing the railroad at "Bovina," a name without a town, but a place that has lately been selected for a site for a cotton factory which I hope will cause the name long to be remembered—then after the fashion of this country, having ridden through sundry plantations, and more than sundry gates, and along a "bridle path" to a new ferry over the Chittaloosa, and through "the swamp," we reached Log Hall, by hard riding, just in time to save us the necessity of spending the night upon a road I should think might be impassible in the dark, and it is next thing to it in day light. But this is one of the ways to get to the worthy Doctor's, and the others are not much better. So we will not attempt to get away again till morning.

Again adieu, SOLON ROBINSON.

VIRGINIA LANDS, &c.

Some time last spring, in writing a short communication for the Cultivator, I remarked that Virginia had the finest sheep walks in the world. Since this I am addressed privately on this subject, and to which I answer publicly.

It is the mountainous parts of Virginia which for this purpose I so highly recommend. I reside in Amherst county, 12 or 14 miles from the Blue Ridge, on the spurs of which I hold some 3000 acres of land, the greater portion of which is rich; and on which I have never failed to make my flock of sheep as fat as I desired. The soil of the greater portion of these mountains is of good quality, being in many places, one, two, and three feet deep. The hornblend and granite lands are rich; the slates are poor. The natural grasses are the green-sward, (or Kentucky blue grass,) and white clover, which never fail to appear so soon as the timber is cleared off. The timber is principally chestnut, of superior quality for building houses and fences; and in many places, locust and other valuable timber. The mountains afford abundance of purest water. No part of the world can excel those mountains in the production of rye, oats, potatoes, hemp, flax, cabbage, beets, turneps, buckwheat, orchard grass, timothy, green-sward, and white clover.

A few days past, a tract of land lying near Amherst Court-house, sold on a credit, for $6 the acre, and another adjoining, at $5 the acre. Both those tracts lie well, the soil being tolerably good, and the subsoil very good.

Near my residence, and on an excellent trunpike road, a few days past, a tract of 353 acres sold on a credit for $4 the acre, a good portion being bottom lands, and the remainder good though hilly.

Our fathers were growers of tobacco, and we are yet too much at the old trade to be growers of wool, or manufacturers of any thing. And again, I say, "what a fortune a Yankee could make here;" just come and see.

The late drouth has curtailed our corn to perhaps less than one-half the usual crop; the oat crop is less than half, and tobacco about half. Corn is selling at 50 cents the bushel, wheat 75 cents, oats 30 cents. Beef from $2 to $4; cows and calves, $8 to $16; common sheep, 75 cents to $1.50. Ordinary wool, 30 to 35 cents. Hire of man per month, $5 to $8; women, about nothing.

This sheet, thus far written, has been lying on my table about ten days, during which time I have ascertained that my identifying the greensward as the Kentucky blue grass, is a mistake. I have both the green sward and Kentucky blue grass, but did not know till now what the latter was. The Kentucky blue grass grows in tufts very much the size and appearance of timothy, only that the blades are of a deep green color, and glossy appearance. It appears to be quite hardy, growing both late and early, and both in wet and dry weather.

The tobacco crop is now improving wonderfully, so that in the state perhaps three-fourths of the usual crop may be marketed.

I desire to say a few more words in reference to our mountain lands. Thousands of cattle are annually fatted on the mountains of Amherst, and thousands of acres on which they roam may be bought for one shilling, and perhaps less.

I suppose it is useless to tell either a Yankee or New-Yorker that the wool growing on a sheep is proportionate and adapted to the climate in which he is, and hence one advantage or profit in feeding sheep on mountains. Sheep are very healthy, and liable to but few diseases here. I have not noticed a sheep with rot for several years; and as to foot-rot I never heard of a case in the state. The greatest pest to our sheep is the worm in the nostril, which is often mistaken for the rot; and although irrelevant, I will take occasion to say, those worms may be dislodged and cast out, by laying the sheep on his back and pouring a spoonful of oil or melted lard in each nostril.

A flock of sheep can feed plentifully on our mountains till near Christmas, and through the winter they can be supported mostly by the growing rye; the snows being light and seldom lying more than two or three days.

Suppose a flock of 600 sheep.

Sheep account.	*Dr.*
To wages, one man 12 months, ...	$100.00
" " one boy "	25.00
" finding man and boy, ...	75.00
" feeding 600 sheep the winter, ...	300.00
	$500.00
	Cr.
By 150 old and young sheep sold, ...	$225.00
" 2000 lbs. wool sold, at 35 cents, ...	700.00
	$925.00
Annual profit on $500 cost, ...	$425.00

A man and boy can attend 1000 sheep, which is perhaps as many as should be together, even in a healthy region.

This estimate does not give a just profit, but let it for the present suffice. ZA. DRUMMOND.

Amherst Co., September 10th, 1845.

REMEDY FOR "THE HOOKS."

MR. EDITOR—The remedy you give for the hooks, in the September No., is cruel and unnecessary. Mr. Youatt, in his book on the horse, describes the *haw*, commonly called hooks, as a cartilage that wipes off the horse's eye, and keeps it clean. When the eye becomes inflamed, the Haw sometimes projects. The remedy which I have known successful in several cases, after a few days application, is to dissolve sixpence worth of white vitriol in a pint of rain water, and put a drop or two in the corner of the horse's eye, two or three times a day. I have been told by one who has seen the effects of cutting out the haw, that the horses in every case became blind, not long after. Some weeks since, our family horse had a bad cough, the consequence of taking cold; after having it about ten days, I gave Homœpathic remedies, twice a day, for a week, at the end of which time the horse was well, and has been ever since. CHARLES H. TOMLINSON.

Schenectady, Oct. 1st, 1845.

THE SCAB IN SHEEP AND ITS CURE.

MR. TUCKER—Until lately, I was under the impression that the flocks of this country were entirely free from this troublesome and infectious disease, but in some of the eastern agricultural papers, I perceive many complaints about it, and various cures suggested, which it would be wrong to let pass unnoticed. I am unable to say what causes the disease, but I do know that it has been for years, I believe I may say for centuries, a source of much trouble to the flock masters of Ireland, and that sheep coming off a journey, where they have been bought at some distant fair, have invariably shown symptoms of the disease, when the stationary flock has been entirely exempt from it. That it is infectious there is no question, and consequently every shepherd should be very careful to remove the infected sheep from the rest of the flock the moment he is discovered. In its incipient stage it is easily subdued, but if allowed to take root without applying a cure, it is very difficult to get rid of. There is no excuse for a shepherd who understands his business, allowing it to make any headway, because the symptoms are so evident, that they cannot pass unnoticed, except from palpable and unpardonable neglect, or from ignorance. On the infected part, the color of the wool becomes changed, and is easily noticed; if the disease breaks out on the neck or shoulders or along the back, which is almost always the case, the sheep is constantly throwing up its head and bending its back, as it were to ease itself by that position; if a blotch occurs on any part of the body where it can turn its head to, it takes the wool in its mouth and endeavors to pull it out. When any of these symptoms occur, the sheep is certainly more or less diseased, and should be immediately taken and examined. The shepherd should always have by him a strong decoction of tobacco, into which should be put good coarse Liverpool salt, in the proportion of 1½ bushels to 40 gallons; the older this tobacco water is, as it is called, the better, so as it loses none of its strength. The shepherd should have a quart bottle, into which to put his tobacco-water, stopped with a cork, through which a quill is put, similar to those bottles from which bitters are served at coffee-houses. If the skin is not very thick and hard, and will yield to the finger and thumb when squeezed, all that is necessary is to divide the wool over the infected part, and from the bottle through the quill, to pour the tobacco-water, and rub it, or rather scratch it well in with the nail of the finger; if the skin is very thick and will not yield to the squeezing of the finger and thumb, you must take the small blade of your penknife, and puncture the skin, closely all over the infected part, to the depth of one-eighth of an inch, then put on your tobacco water, and rub it as before well in with the nail. One such dressing is generally sufficient, but it may be that a second light dressing may sometimes be required. There are ointments recommended by many, the principal ingredient of which is mercury, which should never be admitted to use by any good shepherd. First, if the sheep gets wet while under the influence of it, it is certain death to the animals; next, although such ointment will cure the disease, yet the remedy is as bad as the disease is itself, for it renders such portion of the fleece useless. It raises the scab from the skin and leaves it in the wool, and so disfigures it as to make it unsaleable; besides wherever the mercury touches the wool, it destroys its vitality, making it dry and brittle, and entirely useless to the manufacturer for any purpose; moreover the sheep once dressed with this ointment never regains its constitution, and is liable every spring after, to peel off its wool, from those parts that were touched with the mercury.

The tobacco juice kills the scab effectually, and does not raise it from the skin to disfigure the fleece. In its use in any weather there is no risk to the life or health of the animal, neither has it any bad effect on the wool, and although it stains the wool for the time being, yet when the fleece is washed, such stain then entirely disappears. It should be borne in mind by all owners of sheep, that there is no better *preventive* for scab, than to wash the sheep after being shorn, with strong brine and a brush. Yours very truly, **Grazier.**

PLAN OF A STABLE AND CARRIAGE HOUSE.

The size may be made to suit the wants of the builder. I would dispense with racks, as they add to the expense and are unnecessary. If the mangers be placed about two feet from the partition, the space will be sufficient to hold all the hay needed at one time.

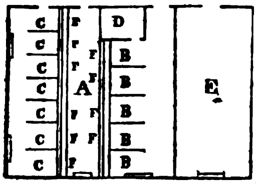

Fig. 94.

From the feed-room, oats, corn, cut hay, &c. may be placed in the manger, through openings in the partition, without entering the stable or passing from stall to stall. The second story is the hay loft from which the hay may be dropped at once into the manger, through openings. In the December number of the Cultivator, 1844, p. 385, are some interesting suggestions relative to the size of stalls, materials, mangers, &c., suitable for this plan.

References.—A, Feed-room. B, C, Stalls. D, Harness and saddle room. E, Carriage-house. F, openings from the feed room. Mangers indicated by parallel lines; windows by double marks. **Yarrow.**

CONSTRUCTION OF ICE HOUSES.

"What is the most approved plan of constructing an ice-house where the springs at certain seasons of the year are within four feet of the surface of the ground."—*Cultivator of Sept.*, 1845, *p.* 291.

Our plan for building an ice-house in any situation, is this:—Lay a good stone foundation in lime mortar, as you would for any other building, raising it about 18 inches above the surface of the earth—10 feet by 15 feet is large enough for the necessities of almost any private family. Have your studs 12 inches broad by 2 inches thick—rafters the same—10 feet from the sills to the plates. Run a partition around the corner, that the entrance may be about 5 feet square—doors 2¼ feet wide. Fill the space within the foundation wall 3 or 4 inches above the top of the sill, with tan bark, so that it shall be at least two feet deep after being well stamped down. Then board the inside tight with well seasoned boards, roof and sides;) nail on a board all round the outside and fill the space with tan bark well jammed in, and so proceed till you arrive at the ridge, making every space and vacancy tight with the bark. Afterwards shingle and clapboard as you like. Thatch, well put on, would probably be best, but shingles are well enough. The partition should be double, and a space of 6 inches filled with tan-bark. The doors should be so constructed as to be filled four inches thick with bark. The whole, except the doors and casings, may be of rough hemlock lumber. This is much after the West India manner of building ice-houses, where ice is kept many months, always entirely above ground, with the thermometer averaging about 80 degrees Fahrenheit.

Great care should be taken in packing in, which should be well covered with straw, with water sprinkled over it, and stowed away during the coldest weather. The doors of the ice-house should be left open during some of the coldest days and nights immediately succeeding—then close all tight—

> "Till tyrant heat, dispreading through the sky,
> With rapid sway, his burning influence darts
> On man and beast, and herb and tepid stream,"

when you will find yourself possessed of the luxury laid by in store. **Farmer C.**

Manlius, Sept. 22*d*, 1845.

BOG CUTTER.—(Fig. 95.)

Mr. Editor—In your September number, under hints for the season, page 286, I saw an inquiry made respecting a tool for cutting bogs or tussocks. We have formerly used the bog hoe as there mentioned, but this is both *slow* and *hard*. Two years ago I invented a tool, (which I believe I have mentioned before, calling it an ox-jointer,) that does the work well. It is a triangular knife.

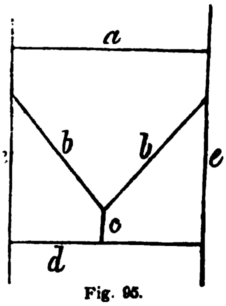

Fig. 95.

The hypothenuse is four feet, made of a bar of iron, 3 inches wide, five-eighths of an inch thick, laid with good steel, with the face side down, that it may keep close to the ground; the ends of the two legs are framed into a short sled, on the under side, and shod over these ends with an old worn cart tire; (the sled is four feet wide and the same in length.) An upright knife is screwed into the angular point of the knife and the hinder beam of the sled, which steadies the knife, and divides the tussocks, making them lighter to remove. I hitch a chain to the end of each runner of the sled, put on one pair of oxen, and ride on the sled. In this way I cut 3 or 4 acres per day. Where the tussocks, knobs, or bunches, are thick, the knife must be ground quite sharp. It will not work among stones. **Samuel Camp.**

Explanaion.—*a.* Forward beam of steel—*b. b.* The two wings of the knife—*c.* Upright knife—*d.* Hind beam of sled.

Plainville, Ct., Oct. 11*th*, 1845.

REMARKABLE CALF.

Mr. Tucker—I paid a visit a few days since to the Messrs. Root, who are among the best of our Genesee farmers, to see a calf in their possession, which has become quite a subject of remark in this region, and is, in truth, a very remarkable animal. He is now over two months old. He weighed 101 lbs., at birth; at the end of four weeks, 203 lbs.; and in two months time, 312 lbs. These weighings were attended by suitable witnesses. His color, is a deep red, and so perfectly formed is he, that the best judges say they find not the slightest room for censure. He is very matured in appearance, though by no means dwarfishly disposed, as you have already learned from the foregoing. The insertion of his tail, especially resembles very much that of a fat ox. He is four feet in girth. He was sired by a two year old of the Durham and Devonshire breeds, seven-eights of the former, and measuring seven feet. His mother is a cross of the same breeds. They are both unusually fine animals. The calf is visited quite frequently from all parts, ladies and gentlemen. We think him quite a wonder here. Some go so far as to say that no such animal can be found in the country. At any rate we should be glad of any information you may be pleased to give us on the subject. **An Amateur**

York, Livingston Co.

APPLES FOR HOGS.

Mr. Editor—I have kept my hogs on apples every fall and winter for ten years past. I put rather more meal with my apples than people usually do when they boil potatoes; but not enough to keep the hogs alive if they had no apples. My hogs usually look better in the spring than any of my neighbor's, that are fed on potatoes. In fact, they thrive and keep fat all winter. I lay my apples in a large bin in my hog-pen, let them freeze when the weather becomes very cold, then cover them up with rye straw and keep them frozen all winter. When I want to use them, I put them on my stove in a large pot or kettle, let them be on just long enough to take the frost out of them and feed them to the hogs warm. Some people only turn warm water on them and thus take out the frost. Boiling or thawing them takes the sourness or acid all out of them, and renders them more palatable and nourishing. I give each hog one-third of a pailfull of apples at a time, three times a day. If I fed them on potatoes, I should give them nearly as many in quantity, as I do apples; therefore, I think a bushel of apples is worth nearly as much for hogs as a bushel of potatoes. It is my opinion that our farmers better set out more orchards rather than cut down what they now have. The old orchards are fast going to decay in this vicinity, and the rising generation will want for apples unless there is more trees set out soon.

HORACE GOODHUE.

P. S. I feed good mellow sour and some sweet apples to my hogs in the fall, both to my fat hogs and shoats, every day, and think that they both make them grow and help towards fatting them.

Westminstor, Vt., Oct. 9, 1845.

CEMENT WATER PIPES.

LUTHUR TUCKER, ESQ.—I was in erested in a communication on Cement for aqueducts, in the third vol. Genesee Farmer, p. 55. I have waited with some anxiety to learn the result of the experiment. At first sight, the communication refered to, appears plain and practicable; yet, to one entirely unacquainted with the business, it is blind, entirely blind on the most difficult point.

I have seen nothing since that date, to throw any new light on the subject, excepting your last August No., recommending common lime.

What should be the thickness of cement around the bore sufficient to bear a pressure of six feet of water?

For a double pumpstock, where the water enters, rises, passing down the opposite side and off to another outlet, what is the method of building, uniting with the aqueduct, and securing from the frost? Also, what is water lime worth at Albany?

I should be happy to receive an answer to the above questions, by some experienced man, either by letter, or through your valuable paper.

Also, by one that knows the expense and utility of cloth for covering buildings; what kind of cloth would be cheapest; what paints are used to make it water proof?

WM. F. GUERNSEY.

Rochester, Vt., Oct. 14, 1845.

We shall be glad to receive an answer to the above, from some of our subscribers.—EDS.

THE PUMPKIN.

ED. CULTIVATOR—In the various excellent tables of analysis which have of late years been supplied to farmers by Liebig, Johnston, Dana, and others, I have been unable to find any analysis whatever of the common pumpkin. Although many thousand bushels must annually be produced in this country, and greatly assist the farmer in fattening and keeping his stock, even Mr. Ellsworth in his last report as Commissioner of the Patent Office, makes no mention of them. As I regularly sow and grow this fruit with my corn, and as it is a general practice with farmers in my neighborhood, I am desirous of ascertaining, if possible, the following facts, and you would much oblige me, and others, by answering the succeeding questions, if the subject has been investigated:

1. What are the component parts of the pumpkin, as compared with potatoes, ruta baga, and carrots, and what is their comparative *chemical* value as food?

2. Do they, or do they not, to any notable extent, deteriorate the land; and do they injure the crop of corn with which they are growing when planted in every two or three alternate hills?

3. In what part does the fattening quality lie; in the seeds *alone*, which are obviously oily, or in the whole fruit; and do they, like peas, add chiefly to the flesh; or like corn to the fat, or do they do both?

4. Is there any peculiar process whereby the crop may be greatly increased, independent of the ordinary manuring and working of the corn, of which, of course, they partake.

As I find this a very valuable and cheap crop for *starting* the fattening of my pork and beef, I should wish if possible, to increase the crop, should I find that it does not lessen the still more valuable crop of corn.

Very obediently yours, CHARLES FOX.

Grosse Ile, Michigan, Oct. 3, 1845.

We are unable to point to any analysis of the pumpkin, but practical farmers know that it is very valuable for feeding stock. It will fatten animals rapidly, and for producing rich milk, we scarcely know any thing equal to it. We have never considered them an exhausting crop to the land; like other broad leaved plants they are thought to draw their nourishment largely from the atmosphere—but we have sometimes had the ground in cornfields so completely covered with the vines, that they hindered the corn from filling and ripening by obstructing the heat of the sun.—[ED.

IMPORTATION OF SPANISH MERINO SHEEP.

Weybridge, Vt., Oct. 20, 1845.

LUTHUR TUCKER, ESQ.—You may well recollect that D. Jay Browne, Esq., of the city of N. Y., last spring gave us several interesting and valuable letters through the American Agriculturist, relating to "Sheep Husbandry in Spain." Having had the pleasure of meeting Mr. Browne last summer, I learned that an earlier importation of Spanish Merinos than we have had any account of, was introduced by William Foster, a merchant of Boston.

I therefore wrote to Mr. Foster, and also to Mr. Sales, the Spanish Professor in Harvard College, whom I also learned was knowing to the fact. From the latter gentleman, I have received the following reply:

S. W. JEWETT.

LETTER FROM PROF. SALES.

Cambridge, Oct. 9, 1845.

MR. S. W. JEWETT—I received your esteemed favor of the 25th of last month in due time, and should have answered it sooner if I could have had the good fortune of seeing my good and old friend, the Hon. Wm. Foster, of Boston, who was the real, and I believe the first importer of merino sheep in this country. Not having been able to find him, having since called at his residence in said city, I left a line requesting him to give me the information you desire, and the following is an extract of what he has this day written to me:

"You will remember that when we came from Spain together, in April 1793, in the ship Bald Eagle, Captain John Atkins, you and I were at that age in which young folks love to take risks, and to do extraordinary things; accordingly, I smuggled from Cadiz, three merino sheep, and a valuable painting of "Rebecca at the well," by Murillo, prohibited under severe penalties. The painting I found a few years ago, (being reminded by you of its existence) in Col. Sargeant's garret. I gave it to the Boston Athenæum, where it is much valued. The three sheep I bought of a drover from the Sierra Morena, on the condition that he should bring them down with the drove, for the shambles, and deliver them outside the city gates, to a certain fisherman, who smuggled them on board our ship. They arrived safe after a long passage and much sickness, and I gave them, as you well remember, to Andrew Craigie, Esq., of Cambridge. Soon after I went to France, where I passed fifteen years of the Revolution. On my return, meeting one day Mr. Craigie at a sale of merinos, where he paid $1000 a piece for them, I asked him what became of the Ram and two Ewes. He answered, very innocently, that he ate them, they being of no value, as we had no manufacturers. That, in fact, he did remember that they were merinos. So ended my speculation."

The foregoing information is, as you see, *authentic* as to your request, and if I can at any time be of further service to you, command me freely.

I remain, dear sir, very respectfully,

Your obedient servant, F. SALES."

HEATED AIR.

"A hot air apparatus," says the late John Loudon, "complete in all its parts, is a desideratum yet to be reached." It is believed that the "Hot Air Furnace," brought into notice, and recently much improved by the subscriber, will give entire satisfaction to those who desire *summer all the year*. Unlike the coal furnace, it does not decompose the air, or in any way unfit it for respiration, but a large volume is constantly introduced at a low temperature. The increasing demand for this apparatus, where it is most known, is the best testimonial in its favor; but numerous references to individuals and public institutions can be given if desired. Post-paid letters of inquiry, or orders, promptly answered if addressed to WILLIAM R. SMITH.

Macedon, Wayne county, N. Y.

BOTANICAL TOUR.—No. IV.

MR TUCKER—On the 5th of May, I left Dandridge in Tennessee, and went thirty miles up the French Broad river, to Mr. Huff's, on the road to the Warm Springs in North Carolina. The next day about noon, arrived at Painted Rock, six miles east of the springs. The road from Dandridge up the French Broad, presents some grand and beautiful scenery; sometimes the river pursues a quiet crooked course along broad and rich valleys, and again it is pent up between mountains, and then it rushes with a foaming current as if anxious to obtain quiet in the plains below. To me the scene was inspiring. I felt new life—new vigor—besides my eyes were gladdened with the sight of some rare and beautiful flowers, among which were the *Dielytra formosa* (D. C.) and *Cladrastis lutea*, (Raf.) or yellow wood. The former grew in the greatest profusion in tufts on the precipitous sides of the rocks, overhanging the river, near the rock. Of the yellow wood, I saw but one tree, but was informed that others grew in the vicinity of the Warm Springs. It has large white flowers, resembling the common locust. I was told that a decoction of its roots was of great use in cases of consumption. After dinner I sallied out among the mountains in the vicinity of Painted Rock, on the road towards Greenville, and collected *Viola hastata* (Mx.) *Convallaria majalis*, (lilly of the valley,) which occurs frequently on the Allegany mountains, and is also a native of the mountainous districts of Europe. *Convallaria umbellata* was also common. *Andromeda recurva* (nobis,) a small shrub, in flower, was of frequent occurrence, but its locality appears to be quite limited, as I did not afterwards find it. *Buckleya distichifolia*, (Torr.) a new genus, occurs frequently on the banks of a small stream a few rods above the rock. It grows also along the road in the vicinity of the Warm Springs. It is a shrub, four to six feet high, with pinnate leaves, and has recently been introduced into the Botanical Garden of Harvard University by Prof. Gray, one of the well known authors of the Flora of North America, which, when completed, will undoubtedly be our very best Botanical work.

Painted Rock is on the line between the States of Tennessee and North Carolina, and derives its name from several large spots of red paint at the height of about twenty feet on the perpendicular rock of a part of the mountain facing the river. These spots are said to have been made by the Indians, but for what purpose I could not ascertain. These rocks are composed of a silicious Graywacke, reposing on a bed of granular limestone, which last occurs at the Warm Springs. A large portion of East Tennessee, or that part of the State lying east of the Cumberland mountains, is composed of strata of Graywacke slate, limestone, and sandstone, alternating with each other, by which it will be seen that it contains the elements of a good soil. It is also rich in iron ore, which is manufactured to considerable extent. The traveller cannot fail to be struck with the luxuriant appearance of the vegetation; even the sides and table lands of the mountain are generally composed of a rich vegetable mould, covered with the pea vine, (vicia,) mixed with native grasses and white clover, affording an excellent range for stock. The white clover seems to delight in these mountain situations, and is already widely diffused. No country can be better calculated for the raising of sheep. The mountains would afford an excellent summer range, while the sheltered situations of the valleys would yield ample protection during the winter. The growth of timber is magnificent, composed in part of numerous species of oak, (*Quercus*,) chestnut, (*Castanea vesca*,) hard maple, (*Acer sacharinum*, sour gum, (*Nyssa sylvetica*,) sweet gum, (*Liquidamber*,) American holly, (*Ilex opaca*,) several species of pine, the white elm, (*Ulmus Americana*,) white beech, (*Fagus sylvestris*,) several species of magnolia, poplar or white wood, (*Liriodendron tulipifera*,) and along the banks of the smaller streams the hemlock spruce, (*Abies canadensis*.) Nearly all of these attain a large size. Possessed of a fine healthy climate, a good soil, with numerous rivers and mountain streams affording water power for manufactories, East Tennessee has all the elements to support a dense and happy population.

S. B. BUCKLEY.

West Dresden, Yates Co. N. Y., Oct. 15, 1845.

INQUIRIES.

A gentleman sends us the following queries in relation to the culture of broom corn. Answers to them would undoubtedly benefit the public generally, and we shall feel obliged to any one who will furnish the information wanted:

"1st. What kind of soil is best adapted to its growth?

"2d. In the present condition of the markets, is the culture profitable?

"3d. What amount in value can be produced on an acre, and what the probable nett profits?

"4th. Is it probable that the increased production will be likely to overstock the market and render the culture less profitable than it is now?

"5th. Is there any difficulty in procuring the seed necessary to plant fifty or an hundred acres, and at what price per bushel?"

FISH PONDS.—B. H. (New Lisbon.) We have often seen ponds of the size you mention, with plenty of fish in them. As to the kinds of fish suitable we are hardly able to give an opinion. If the water is clear and cold, which from its coming from a spring we should naturally infer, trout would probably do well. Pickerel might do well enough for *themselves*, but they have so much of the shark nature that they will exterminate all other species, in small ponds. As to gold fish, we think it likely they could be obtained of Mr. R. L. PELL, of Pelham, Ulster county.

RUSSIAN BEE-HIVE.—The third No. of Johnson's Farmer's Encyclopædia contains a drawing and description of a "Russian Bee-Hive." I wish to enquire, if any of your subscribers have made trial of it, and will report thereof through your journal. No mechanic in this vicinity will undertake to make one from the description there given, and I should like to know if one can be obtained elsewhere. E. G. R.

SOILING—*Greenwood*, (Princeton, N. J.) The first crop usually used for soiling, before red clover will do to cut, is rye, which should be sown on good warm land early in the fall.

CURING PORK.—In runnning over the October No. of the Cultivator, I notice, what I presume, to most of your readers, is a rather new method of preserving pork. You request, if others have practiced the same method, to give information of the results. I have for the last four years practiced the same method with the slight difference of letting it remain unpacked until the animal heat is all exhausted; then pack it with Turk's Island or rock salt, and pour on the brine boiling hot. I likewise heat my pickle for my hams the same way. I think it a decided improvement—it makes pork and hams very tender and of excellent flavor, and keeps them sweet the year round. It is almost universally practiced in my neighborhood with the best results.

PROSPER ELITHARP.

Bridport, Vt., October 10, 1845.

EXPERIMENTS WITH GUANO.

Mr. L. Tucker—Having tried numerous experiments with guano and stable manure, I send you the results. If you think it is worth a place in your truly valuable Cultivator, it is at your pleasure.

1. Four rows of potatoes planted in March—a small quantity of guano strewed in the rows with the potatoes. Four rows planted at the same time, abundantly manured with stable dung. In three rows were more potatoes than in the four manured with guano: the rows manured with guano were easily distinguished by the deep green foliage.

2. Rows of Lima beans manured with guano, about one gill to each hill. The beans sown did not germinate. I believe the guano killed them. I transplanted some in the hills, but I did not observe any difference between the produce of them and the two rows richly manured with stable dung. The foliage of the former was of a deeper green than the latter.

3. Two rows of maize, richly manured with stable dung; two rows with guano, well mixed with the soil; one row with charcoal. The two rows manured with guano were more productive than the other three.

I have tried different experiments with maize and guano. In some I used from half to a gill in each hill, but it proved a failure. The guano should be broken fine, and strewed over the ground as thick as grass seed—after that well mixed with the soil.

4. Two pieces of ground of equal size, the one part manured with guano, the other part with stable dung. They were sown with Ruta Baga Turneps. The part manured with guano proved the best crop.

5. A north border planted with Broccoli. One part manured with guano, the other with stable dung. No difference.

In the summer of 1844, at this place there was a piece of green clover plowed in, and in the autumn it was manured with guano and sown to grass. This autumn it has a good appearance; there is also among it a great crop of ambrosia elatior, ripening off a fine sample of seed. I have been told that this weed will not injure the crop of grass! It reminds me of old Tusser's advice:

"Slack never thy weeding, for dearth nor for cheap,
The corn shall reward it, ere ever he reap,
And 'specially where he do trust for to seed,
Let that be well used, the better to spead."

R. Parnell,
Gardener to D. F. Manice, Esq.

Oatland, Hempstead, Oct. 23d, 1845.

THE PEAR.

Mr. Tucker—I send you some pears, raised from grafts handed to me by an old countryman. As I first introduced it into notice, it is called in Oswego, "Worden's Meadow," (not Bleeker's Meadow.) The tree is every way right; bears young, grows vigorously, and bears large crops of fair fruit every year, and is worthy of extensive cultivation. Fruit from medium to large, form variable with a knobby and uneven surface; flesh very fine grained, melting, juicy, sweet, musky, and high flavored; yellow at maturity. This pear must be picked and matured in the house, which takes place from the 10th to the 15th of Sept., as the seasons vary. It is not so good this season, owing to the drouth.

I discover that the cultivation of the pear is much neglected by our farmers, the objection being that it takes so long to come into bearing; but this is not the case; and for the benefit of farmers, I will mention those that bear young and are good:

Summer Fruit.—Bloodgood, Julienne, Petit-Muscat, William's Bonchretien or Bartlett.

Autumn Fruit.—Andrews, Cushing, Seckel, Frederic of Wurtemburg, Napoleon, Flemish Beauty, Brown Beurre, Vergalieu. Schuyler Worden.

Oswego, Sept. 13th, 1845.

WHARF RATS—INQUIRY.

Mr. L. Tucker—Since the building of the Chenango Canal, a new kind of rat has been introduced among us, called the wharf rat. They seem to possess more cunning in eluding the efforts of rat-catchers, than any species of rat hitherto known among us; and such is their astonishing increase and industry of mischief, that it has become a subject of serious inquiry among farmers living within 8 or 10 miles of the canal, how to get rid of them. I have searched your Cultivator for information, and have seen nothing upon the subject. Will you give us any information which you may have got through any of your various correspondents, and if you have none, you will oblige a numerous class of subscribers by asking for information through your paper.

Binghamton, Oct. 10, 1845. G. E. J.

NEW-YORK STATE AG. SOCIETY.

The monthly meeting of the Executive Committee of the N. Y. S. Ag. Society, was held at the Society's Hall, Albany, on the 9th Oct.—the President, B. P. Johnson, Esq. in the chair.

The Recording Secretary presented a package of Russian pamphlets, received for the Society, from Charles Cramer, Esq. of St. Petersburgh, consisting of,

1. Zembnilsky, on the Localities of Diamonds in Russia—2. Historical account of the celebrated Sanic Diamond, by the same author—3. On the use of Granite in St. Petersburgh, by the same—4. Mineralogical System of Mohs, by the same—5. Kutorga's Description of Petrifactions found near Sympheropol—6. Brykoff, on the Locality of Gryphotes in the government of Orloff—7. Obodoffsky's translation of Buckland's Petrified Sago plants, of the island of Portland—8. Sturm's translation of Fuch's Theory—9. Machin's Chemical analysis of Platina from the Ural mountains—10. Analysis of an Aeseolite fallen in the government of Smorcusk, 1818—11. and 12. Wonders of Nature in North America, Parts 1, and 2, by Charles Cramer.

A copy of the "American Shepherd," was received from the author, L. A. Morrell, Esq.

The thanks of the Society were voted to Messrs. Cramer and Morrell for these donations, which were ordered to be placed in the Society's Library.

A plan and view of the show grounds of the late exhibitions at Utica, were presented, drawn by J. J. Thomas, and views of Floral Hall, and the temples of Ceres, Pomona and Flora, drawn by Dr. Thompson, which were ordered to be engraved for the Transactions.

A resolution was passed directing the publication of Mr. Quincy's Address in pamphlet, as soon as it should be received from the author.

Resolved, That the Treasurer purchase a model of the celebrated Broughton Prize Heifer, for the Society's rooms.

After auditing various accounts and the transaction of other business, the Executive Committee adjourned to the 2d Thursday of November, at 10 o'clock, A. M.

PREMIUMS.—All premiums, whether cash, medals or diplomas, will be paid on application, to Luther Tucker, Rec. Sec'y, No. 20, Market-st., Albany.

Important trial and decision.—The United States Circuit Court, now in session in this city, Judge Nelson presiding, has been engaged for the last three days in the trial of a very important patent case. Benjamin H. Wood, executor of Jethro Wood, sued —— Antony for an infringement upon the patent which Jethro Wood had taken out for "Wood's Plow," an invention of his own. This article is in general use throughout the United States, and scientific writers have said that it has been a more beneficial improvement than any other of the present century, except the steam engine. We understand that the rights of the patentee had been so generally infringed upon as to render his invention almost useless to him, so far as pecuniary benefit was concerned. The jury after a patient hearing of the evidence, and the addresses of the able counsel engaged, returned a *verdict for the plaintiff*. The effect of this verdict is to establish the patent of Wood to this useful invention, and thus put an end to the infringement upon his rights. Counsel for the plaintiff, W. H. Seward, Samuel Stevens and Z. A. Leland, esq'rs; for the defendant, Daniel Wright, esq.—*Albany Ev. Journal.*

MR. COLMAN'S EUROPEAN AG. TOUR—PART IV.

Although some might be disposed to argue as an objection to this, as well as to former portions of this work, that it is not sufficiently confined to the details of agriculture, we must be allowed to say that we have been deeply interested in its perusal, and we doubt not this would be the response of much the larger portion of its readers. The state of our columns when this part of the work was received, precludes our giving a very extended notice of its contents. It is divided into sixteen general chapters, the first of which consist of General Considerations; the others as follows:

Agriculture as a Commercial Pursuit: Markets—Cattle Markets; Falkirk Tryst; The Ballinasloe Fair; The Galway Fair; Smithfield, London; Grain Markets; Grain Markets out of London; The Corn Exchange in Mark-Lane, London; Corn Duties; Mode of Adjusting Labor and Wages; The Dead Markets; Vegetable and Fruit Markets; Market Gardens; Covent Garden Markets; General Markets.

Mr. Colman thinks—"The English farmers have great advantages in their markets and exchanges; and in this matter, to a certain extent, we ought to follow them." * * * "Our farmers sell as they can to agents or purchasers travelling through the country, and buy as they can, and where, by chance, after taking, in many cases, long and expensive journeys, they may find the stock which they need. A wool fair or market is not within my knowledge held in the country, nor a corn or grain market." * * * "These evils might be remedied and a change affected to the great advantage of buyers and sellers, by the adoption of the system of weekly or periodical markets, which prevail throughout England and Scotland. Here are wool fairs, for the sale of wool, of which samples are exhibited; and corn and grain markets, where wheat, barley, oats, rye, beans, and peas, samples of which are exhibited and sold; and markets for the sale of fat cattle, and markets for the sale of lean cattle, and markets for the sale of horses, and markets for the sale of sheep, and markets for the sale of cheese and butter; these markets sometimes uniting several objects, or otherwise limited to some single object."

The immense number of people and animals which are collected at these fairs is astonishing. At the Falkirk Tryst, in Scotland, for instance, Mr. C. says:—"It was estimated, when I was there, that the number of cattle then on the ground exceeded fifty thousand head, and of sheep seventy thousand; and the banker informed me that the money employed in the negotiations would exceed £300,000, or one million and a half of dollars."

CHARACTER OF LIVE STOCK.—Mr. Colman thinks "there is no agricultural improvement in England so great and striking as that which has been affected in their live stock." "I refer," he continues, "particularly to its size, aptitude to fatten, early maturity, symmetry, and beauty. Of the milking and dairy properties of their stock, I shall speak hereafter. A person has only to go into Smithfield Market to remark the perfection to which the art of breeding has been carried, and the distinctness of the lines by which the different breeds are separated from each other. Three great points seem to have been gained. The first is, great size and weight have been attained; the second is, the tendency to fatten, and to keep in fat condition has been greatly cultivated; the third is, that the animal arrives early at maturity. All these are most important points; the last certainly not least; for if an animal can be brought to the same size, without doubling the expense, at eighteen months old, that he could formerly be made to reach not sooner than at three years of age, the quick returns, so essential in commercial transactions, are secured, and the expenses are lessened the profits are greatly increased. Nothing strikes one with more surprise than to see what, in the improvement of stock, intelligence, skill, and perseverance can effect."

The dressed weight of the cattle in the Smithfield Market, at from two to three years old, is stated to be from 656 to 800 pounds, the four quarters. The average dressed weight of sheep is given at 90 pounds. In regard to the quality of the meat, Mr Colman says:—"The fatness of the beef and mutton is remarkable. I have seen single beasts in the United States as fat as any I have seen here; but these are comparatively rare exceptions; and here the general character of the beasts and sheep is, in this respect, most striking." He thinks, however, that our meats have a sweetness and flavor not possessed by those of England, which he attributes to the greater age of our animals, (they not being usually killed until five to seven years old,) and the superior excellence of our Indian corn as a fattening food.

Mr. Colman remarks that *mutton* is the prevailing and favorite dish on all English tables. We add, that it would undoubtedly be so in this country, if there was plenty of the same kind that is used there. "It is," says Mr. C., "a remarkable fact that mutton is the prevalent dish at the public schools and colleges. At the Blue Coat School in London, for example, it is the sole meat for the eight hundred boys, four or five days out of seven. The same is the case, I am told, at Eton; and this not, as I had supposed, from its comparative cheapness, but from experience, and the opinion of medical men, that it is the most wholesome diet, and least likely to interfere with intellectual application and health. The South Down and Leicester sheep are generally preferred, though the small Welsh mutton, for its exquisite flavor, is most esteemed; and the beef and mutton, and lamb, is every where most striking. Indeed, in the English market, lean meat is hardly to be seen."

KINDS OF BREAD.—In regard to the project of introducing Indian corn into Great Britain, which some seem to have entertained, Mr. Colman thinks it impracticable. The idea of feeding the poor on it is in his opinion out of the question. "They will not eat it. If the rich were to adopt it as a luxury, their example or estimation of it might have its usual effects; but to commend it to the exclusive use of the poorer classes as a kind of cheap bread, acknowledged inferior, though it were as sweet as the ancient manna, would be met with that pride of resentment, which anything short of absolute starvation would scarcely be able to overcome." The advantages in a commercial view which would accrue to this country from the admission of Indian corn into Great Britain, Mr. Colman thinks would not be great, as "there is reason to believe if its admission were free, the supplies of this article from the shores of the Mediterranean would nearly preclude the competition of the United States."

ENGLISH APPLES AND OTHER FRUIT.—American apples are acknowledged superior to any brought into the English markets. The English apples are said to be inferior except for cooking purposes. "The superiority of our Newtown pippin," says Mr. C., "is every where admitted and proclaimed. Of other of our fine apples—such as the Golden russet, the Baldwin, the Blue pearmain, and many others—I have seen none, though it is not to be confidently inferred from that circumstance that none are imported. Large quantities of apples are sent from the United States to England and sold to advantage." Pears are considerably cultivated, but Mr. Colman thinks he has seen none equal to the Seckel and the Bartlett produced in this country. Filberts are cultivated in some parts of England for the market. A gravelly soil is chosen for them, "where they are raised on small bushes or trees, with one stem, and suffered to grow not more than five or six feet high. They grow together on the same ground with hops, and pear or apple-trees; and the proportionate number of each to an acre, is stated at 800 hills of hops, 200 filberts, and 40 apple or pear-trees. The hops are said to last twelve years, the filberts thirty, and after that the apples and pears require the whole ground."

POTATOES.—Mr. Colman considers the potatoes grown in England of superior quality, though he thinks them inferior to those grown in Nova Scotia. He complains that he did not find a potatoe in Ireland that he could eat, they being always only partly cooked—the Irish preferring to have them "with the bone in the middle." He was told that the advantage of this was that the potatoes were longer in digestion, and hunger did not return so quick. He found this, however, to be the mode of cooking, not only among the poor, but among rich and higher classes in Ireland. In the south of England Mr. C. states that land is rented at 20 pounds, or a hundred dollars an acre per annum for the production of potatoes for the London markets. The greatest pains are taken to obtain them early. "The mode of sprouting them," he says, "is similar to that adopted by the spirited cultivators at West Cambridge, near Boston, where the setts are started under a bed of fresh horse dung, on the sunny and protected side of a hill."

Grapes.—Mr. C. quotes from a practical gardener, some directions for the management of vines as follows: "With regard to the best way to manage the vine when fruiting, I invariably stop the shoot *one* eye above the bunch; and it is the practice of the best gardeners in England. I generally leave one shoot not stopped without fruit, and to fruit next season, and cut the shoots out that have borne fruit this year. On the shoot-spur system, every shoot is stopped an eye above the bunch, except the top one, and then it must be managed like the rest; all the lateral shoots *must be stopped one eye* above another, until they cease growing, as the more leaves you get, the fruit will swell larger."

Market Gardens.—The extent of ground required for supplying London and the other large English markets with vegetables, is enormous. In reference to London, Mr. Colman remarks that—"Fifty years ago, it was calculated there were two thousand acres cultivated by the spade, and eight thousand by spade and plow conjointly. The extent of cultivation must, of course, be at present much greater." * * * "The account given of the product, in a single case, is quite worthy of remark, it being the statement of a market garden. Radishes, £10; cauliflower, £60; cabbages, £30; celery, first crop, £50; second crop, £40; endive, £30; making a total of £220, or 1,100 dollars for the gross produce of an acre in twelve months!!"

THE CROPS, &c.

Kentucky.—Extract of a letter to the editor of the Cultivator, dated Frankfort, Sept. 17:—"After some weeks travel through this state, I can safely say that the corn crop of Kentucky is considered to be as good as any they have ever grown heretofore; consequently the number and quality of the stock fattened will equal those of any previous year. You will not be surprised to learn that I had no idea of the prices already offering for hogs, when I tell you the farmers themselves had no such expectations a few weeks since. Hogs are anxiously sought after by the pork packers and their agents, and $3 per 100 lbs. *gross*, (that is weighed up alive,) freely offered, the hogs to be weighed and paid for at the fattening pen when fat, and driven at the risk and expense of the purchaser to the place of packing. Many contracts are now making on these terms, and many farmers refuse contracting, preferring to risk the market when they are fat. From what I know of this business, when a little excitement exists so early in the season, I should not be at all surprised before the season ends that $4 gross will yet be given for some lots of hogs in Kentucky. Pork will certainly be *double* the price, or nearly so, that it was last year to the packer. The best graziers say, they never recollect so many cattle to be fattened in Kentucky as preparations are now making for fattening, and many think they will get $4 per 100 lbs. nett, sinking the offal, but the majority seem to think that the numbers fattened will tend to keep the price at, or below, $3.50 per 100 lbs, It seems too, to be generally admitted that the best beef cannot be packed, with the expectation of profit, for the British market, if it comes at over $3 per 100 lbs. nett to the packer. The hemp crop is extraordinary, far exceeding in quantity and quality the crop of last year. I have gone into several fields where they were cutting, and measured the average height of the stalks, and they exceeded 13 feet in length; the crop is now cut and safe in stack, although the wetness of the last few weeks caused the farmers much additional trouble. The tobacco crop is generally admitted to be very fine in quality, and in quantity to be over the average; what I have seen of it fully bears out this remark; but I have not as yet been through the Green River country, which is the great tobacco region of Kentucky, but I have seen men from there who appear very much satisfied with their prospects. This staple is just beginning to be cut now."

Crops in Essex County, N. Y.—M. C. Butler, of Moriah, writes that the wheat and oat crop of this section was good—corn two-thirds of a crop—potatoes half to two-thirds of a crop—hay less than for some years before.

Western Reserve, Ohio.—Extract of a letter from from Mr. Almon Thayer, dated Aurora, Oct. 11:—"The past season has been very dry with us. The hay crop is entirely cut off. As northern Ohio is better adapted to grazing than cultivation, grain is but little grown. Hay is the crop depended on for wintering stock, and a failure of this crop has compelled the farmers of the north to drive their cattle to the southern part of the state to be wintered on corn and corn fodder. The stock is all susceptible of being driven south except calves, which are too feeble to endure a journey of 100 or 150 miles. The farmers in this section are unacquainted with feeding any thing but hay. I would inquire if calves can be successfully wintered on chopped straw and corn-and-cob meal. Corn can be purchased at the south and shipped into this section by canal, at reasonable prices. There is a small quantity of straw and old hay in the hands of most of the farmers, that might be fed to calves, chopped fine, if they would winter well on this kind of feed."

Note.—In answer to the above inquiry, we would say, calves can be wintered on corn-and-cob meal, mixed with cut straw, though we should prefer giving some potatoes or turneps with the meal and straw, or instead the roots, some shorts or bran.—Ed.

RENSSELAER INSTITUTE.

This Institution was founded by the late Hon. Stephen Van Rensselaer, in 1824, for the purpose, as expressed in his own language, of "showing the application of science to the common purposes of life," and of qualifying "teachers for instructing the sons and daughters of mechanics in the application of experimental chemistry, philosophy, and natural history, to agriculture, domestic economy, the arts, and manufactures."

Patriotic design of the benevolent founder has been faithfully executed, and the anticipations of its usefulness fully realized. It may be safely affirmed that no institution has rendered greater benefits to the country than this has done by the education of men who have devoted their efforts to the practical application of science.

We had the gratification of attending for one day, the late examination of the students of this Institution. The examination as it was called, was conducted in a manner to us novel. Instead of being carried on by question and answer, it constituted a series of brief, but interesting off-hand lectures by the pupils, on the sciences of Chemistry, Geology, Mineralogy, Animal and Vegetable Physiology, Botany and Meteorology. In all which, a thoroughness of knowledge was evinced that could not fail to convince every spectator of the excellence of the system of instruction here practiced.

The charge of the Institution at the present time is under Professor G. H. Cook, who was a graduate of the school while it was under the supervision of its first teacher, the late Professor Eaton. Besides other and ample evidences of Prof. Cook's qualifications and abilities as a teacher, it is a high recommendation that he was selected by Prof. Eaton as his assistant, in which capacity he acted for several years to the entire approbation of all. We believe the reputation of the school is at present fully sustained; and with the advantages of late improvements in the erection of new buildings, new and improved apparatus for chemical and other scientific illustration, with the liberal endowment which it has received from the family of its revered founder and the intelligent and enterprising citizens of Troy, we cannot doubt that it will shortly become one of the most popular, as it is certainly one of the most useful Institutions in the country.

For particulars in regard to the course of instruction, we would refer to the advertisement to be found in this number.

FACTS AND OPINIONS,

Condensed from various Exchange Papers.

Oats.—P. Fay, of Southboro', Mass., says the New England Farmer, had the present season, a ten acre field of oats, yielding about 60 bushels per acre. It was well manured, and sowed at the rate of about 4 bushels per acre.

Yellows.—A writer in the Boston Cultivator, states several facts to show that the yellows in peach trees is caused by too free a tillage of the tree, and gives instances where a moderate or slow growth secured the trees from the attacks of this contagious malady. On the contrary, Downing in his work on Fruit Trees, is confident, from many observations, that the yellows is a constitutional disease caused by long continued neglected cultivation, and exhaustion by successive crops. Within our own limited observations, it has attacked trees of all kinds, thrifty and otherwise, and under all circumstances.

Errors.—New theories are constantly springing up from single or very limited observations. Among some of the latest are, that nails driven into trees, and holes bored through them, prevent blight and other diseases. A tree becomes diseased—it is accidentally nailed or bored—if not thus greatly injured, it recovers of itself—and a theory is immediately established and pertinaciously adhered to.

Deep Plowing.—An English writer, speaking of the prejudice against deep plowing, says, "it would puzzle a conjuror to tell why a farmer always digs his garden 20 inches (where he always gets good crops,) and plows for his field crops only 5 inches."

Ashes as Manure.—On the farm of Daniel Webster, according to J. Breck, of the New-England Farmer, on [part of?] a ten acre lot of very light land, 3000 bushels of English turneps were raised last season, with no other manure than leached ashes, at an expense of only seventy-three dollars.

Canker Worm.—The Indiana Farmer and Gardener, gives a method of excluding this insect. A roll or bat of wool, evenly carded, is applied round the body of the tree and tied tightly with a twine round the middle of the roll. The wool rising on each side, the twine is buried and hid. The worms ascending, encounter the wool, but cannot push through and lay their eggs in it.

Putnam Russet Apple.—Dr. Kirtland, in Elliott's Magazine, says that after fifteen years acquaintance with this apple, he does not hesitate to pronounce it the most valuable for extensive cultivation of all late keeping apples, in northern Ohio, where the Newtown Pippin does not flourish. He also states that Shippen's Russet, a different variety, has been widely disseminated under this name.

Revolving Horse Rake.—It is singular that scarcely an agricultural paper has a correct figure of this implement. A figure, which first appeared, we believe, in some of the Boston publications, and since borrowed or copied all over the country, appears to have been drawn by an artist, who had never seen it in operation. He accordingly represents it as running on *the points* of the teeth, like the old hand rake, a way in which it is perfectly impossible for it ever to work. Why cannot we see a true figure with the teeth *flat* on the ground? As it now is, it is no better than to picture a bull walking on his horns, or a boy sliding down hill on his nose.

The Locust.—A farmer in Western New-York, who is losing a large number of fine locust trees by the borer, wishes to inquire of those in the eastern part, who may have had experience in the matter, whether cutting the injured trees down, at the surface of the ground, and suffering them to sprout up afresh, will not produce good young trees—which would be as likely to escape the borer as young trees set out—and of course with less trouble? A reply from those who may be acquainted with facts, would confer a particular favor.

Steeping Seeds.—The New England Farmer describes some experiments on soaking seeds, made this season by J. S. C. Green, of Waltham, Mass. A chemist prepared for him a composition of nitrate, sulphate, and muriate of ammonia, and nitrate of soda and potash. In a solution of these he steeped corn from 17 to 140 hours. When steeped 100 hours, the corn vegetated poorly, but when it remained 140 hours, it did not vegetate at all. Having tried the seed in pots, he determined on 80 hours as the proper time for steeping. He planted a number of strips of three rows each, through a large field of 15 acres, noting the rows on tallies. At the time the editor examined the field the corn was in tassel and the ears well set. The corn which had been soaked exhibited no advantage over the other; on the contrary, if there was any difference, the soaked was not as luxuriant as the unsoaked.

Plowing marsh land.—The mud being too soft and deep to bear oxen or horses, a rope 14 rods long was attached to the oxen at one end and to the plow at the other, thus enabling the oxen to walk on the hard ground adjoining. A plow was made on purpose, turning furrows 20 inches wide. It had to be drawn back at each furrow. In one part, the upland not admitting of the direct working of the oxen, the rope was made to pass round a wheel or pulley, so that the oxen moved at right angles to the direction of the plow. It was manured with compost and sown with timothy, and produced a fine crop.

Peach-worm Repelled.—George C. Dobson, in the Southern Planter, gives a method of preserving peach and nectarine trees, which has succeeded without any failure. Early in autumn, as soon as the young tree attains its growth for the season, the earth is removed from the root, and half a pint of soft *tar* deposited, and rubbed on the body of the tree for six or eight inches above the surface. The earth is then replaced. This process is repeated early in summer each succeeding year, taking care that the trunk is thus kept coated. An ovipositor would make rather slow headway through a coat of stiff tar.

Influence of the Moon.—A correspondent of an exchange paper, states that a rail fence, laid "in the old of the moon," will sink into the ground from six to ten inches in a short time; but if laid at other times it would not sink; that shingles nailed on the roof of a house "in the new of the moon" soon throw out the nails; that a crop *sown* in the new of the moon, is more affected by that planet, than a crop which *grows* during all other stages of the moon's changes, through several months; and that sheep shear heavier "in the going up of the moon," than otherwise. He might have added that wood *drawn* at the new of the moon would afford twice as many cords as if drawn at other times.

Saving Urine.—Mr. Breck, of the New England Farmer, describing Mr. Webster's farm, at Marshfield, says:—"There is no cellar under the barns, but Mr. Webster has hit upon a method to save every drop of liquid manure, and in the best possible way. The planks composing the floors of the cattle's quarters, or byre, as the Scotch call it, are laid with an opening between them of about one-half inch, and so arranged as to be easily taken up. The idea is to place about two feet of loam or other earth, under the floor; this will absorb all the liquid part of the manure as it runs down though the openings, and in the spring will be converted into the finest manure, when it is to be removed and replaced by fresh mold." This is a mode we have seen practiced in many instances, and we think it a very good substitute for a cellar under the barn.

Seed Corn—from the tip kernels of the ear, produced in a distinct experiment, only half as much as kernels selected from the middle of the ear; seed from the buts of the ears yielded about fifteen-sixteenths of those from the middle.

Strawberries.—In Ohio and Kentucky, single plantations of strawberries often cover many acres. The past season, 235 *bushels* were offered for sale in Cincinnati in one day. The price there is usually three or four cents a quart.

Silk Factories.—There are eight silk factories in Mansfield, Conn., the greatest silk manufacturing town in the country.

THE CULTIVATOR.

ALBANY, NOVEMBER, 1845.

☞ The present volume of the Cultivator will close with the next no. (December,) after which, agreeably to our invariable custom, the paper will be discontinued to all who have not ordered and paid for the next year. We give this notice now, lest it should escape the attention of some of our readers, when given in the December no. We shall send out our Prospectus for the vol. for 1846, with our next no., and shall be greatly obliged to such of our present subscribers as may find it convenient to interest themselves in procuring subscribers for the next year.

TO CORRESPONDENTS.

During the past month, communications have been received from C. C. G., C. H. Tomlinson, E. G. K., Alex. McDonald, D. G. Mitchell, A Subscriber, S. F. Christian, T. H. H., Charles Fox, J. F., Samuel Camp, S. B. Buckley, E. P., E. Smith, Claudius Allen, H. Goodhue, Wm. F. Guernsey, J. H. C., J. P. Norton, G. E. J., S. W. Jewett, R. Parnell.

Potatoe Rot.—We have several communications on this subject, the publication of which we are obliged to decline, as they appear to give but little new light in relation to the malady.

Transmutation.—We have received a communication signed "A Farmer *of 45 years' practice in Chenango county*," the principal object of which seems to be to ascertain what we would "acknowledge to be showing" that wheat changed to chess. We refer the writer to our last number, page 322, for a plan which we think perfectly fair, and if he will produce chess from wheat according to that plan, or any other which shall amount to positive proof, he shall receive the $50 premium to which he refers. We conceive it can be of no advantage to publish any more *suspicions* of transmutation—when the thing is *proved* the public ought to know it.

C. C. G., Mobile.—You can order the works you want, through your booksellers or merchants, from New-York. The prices are—Downing's Landscape Gardening, $3.50—Cottage Residences, $2.00.

J. A. W., Norfolk.—We know of no work on the subject to which you allude, worth purchasing.

A. H., Lee.—See communication in another part of this paper, for directions for building an Ice-house.

Crickets.—H. K. C. wishes to be informed of the best way to destroy house crickets. Who will tell him?

S. F. C., Lexington, Va.—Will reply to your inquiries through the Cultivator, as soon as time will permit.

ALBANY AGRICULTURAL WAREHOUSE.

It will be seen by a notice in the advertising department of this paper, that the editor of Cultivator, has entered into partnership with Mr. Elon Comstock, for the purpose of establishing in this city a warehouse for the sale of Agricultural Implements, Field and Garden Seeds, &c. and in connection with it an agency for the purchase and sale of all the improved breeds of stock. The want of such an establishment, in this city, has long been felt, and a thorough conviction of its necessity and utility alone induced the editor of this paper to become interested in it. It will be conducted under the sole management of Mr. Comstock, a gentleman, it is believed, every way qualified to manage it to public satisfaction. The establishment is but just opened; and consequently is as yet imperfectly filled, but it is the intention of the proprietors, to procure, as fast as circumstances will permit, every variety of machines, implements, and seeds required by farmers and gardeners, and to make the establishment at least equal to any similar one in the Union.

ACKNOWLEDGMENTS.

Samples of Apples.—We have received from Mr. J. C. Hastings, Clinton, Oneida county, samples of the following varieties of apples: Detroit Red, (or Black Apple;) Lowell, or Orange; English Fall Pearmain; Rutledge. They are each good samples of their kind. The Rutledge is an apple of the first quality. It is just now (Oct. 4,) in a fit state for eating. The English Fall Pearmain is a good sized apple, of fine appearance, and good quality. The Detroit Red, (or Black,) is a very large showy fruit, of pleasant, but not very high flavor.

Mr. C. McCoun, of Albany county, has also sent us several samples of apples grown on his farm. Among them was a very large apple resembling Pennock's Red Winter, weighing upwards of a pound. There are several other kinds of fine appearance, such as Spitzenburgs, Wine Apple, Lady Apple, and some varieties the names of which we did not recognize.

Seedling Peach.—Mr. Dorr, of this city, has left us a specimen of a seedling peach, which appears to us deserving of propagation. It ripens about the first of October, at which season it is difficult to obtain a good, well-flavored peach. It is of good size, and of a quality equal to most of our *good* summer peaches. Mr. Dorr has also several seedling *clings*, well deserving cultivation.

Catawba Grapes.—This fine grape, which is so prolific and attains such perfection in the vicinity of Cincinnati, seldom acquires its full natural flavor here—owing probably to want of sufficient heat. We have just seen, however, in the garden of Dr. March, of this city, some Catawbas of a quality equal to any we remember ever to have met with. They had though, it is proper to say, an advantage of aspect equivalent to several degrees of latitude.

Seedling Pear.—Dr. March has a seedling pear which he keeps well through the winter. He exhibited some of them at our weekly agricultural meetings in the latter part of April last, in fine perfection. It is a good pear and highly deserving propagation. Dr. M. will furnish a few scions for grafting.

Since writing the above we have received from Mr. Elisha Dorr, of this city, some excellent samples of Catawba grapes, grown in his garden on Lydius street. They do full justice to the high reputation of this famous variety.

We have also received from "A Subscriber" at Brooklyn, Long Island, some splendid bunches of Isabella grapes, in reference to the production of which see an article in this number under the head of "Guano for roses and grape vines." The samples sent are superior to any Isabella grapes we have ever before seen, the bunches being very heavy and the fruit of uncommon size and richness.

☞ We would acknowledge the reception of a barrel of beautiful apples from D. Hill, of Bridport, Vermont. There are several choice kinds—Spitzenburgs, Gilleflowers, Blue Pearmains, Stodards, York Russets, and Fall Pippins, all very large and fair. If such apples as these are produced in the "Green Mountain State," her citizens need not go elsewhere expecting to find better.

Old Cheese.—We have received from Messrs. S. & L. Hurlbut and Mr. Norris Coe, of Winchestea, Connecticut, a couple of cheeses (two years old) manufactured by Mr. Coe, whose dairy was described in our September number, (pages 283, 284.) On trial, they appear fully to sustain the reputation for excellence which Mr. C's cheese has acquired in New-York and the southern cities.

Honey.—We acknowledge the receipt of a pot of superior honey, from Mr. Nathan Howard of Stephentown. From one swarm of bees placed in his improved bee-house, Mr. H. took four boxes of six pounds each, or twenty-four pounds, in ten days. The article is of the very finest quality.

☞ For editorial notice of Mr. Colman's Tour, Part VI., and several other editorial articles, see pages, 341, 2 and 3.

MONTHLY NOTICES.

☞ In our notice of the late State Fair, we inadvertently omitted to refer to the attendance of many distinguished gentlemen from other states. Among them were Dr. Holmes, editor of the Maine Farmer; G. W. Elmendson, editor of the British American Cultivator; M. B. Bateham, editor of the Ohio Cultivator; F. R. Elliett, editor of the Western Reserve Horticultural Magazine; Thomas Affleck, Esq., former editor of the Farmer, at Cincinnati, and now of Mississippi; Mr. Atwood, and Mr. Metcalf, also of Miss.; E. W. Thompson, V. P. Home Dist. Ag. Society, Canada West; Joseph Hartman, delegate from last named society; Franklin Jacques, delegate from the Ag. Society of the Township of York, C. W.; John Torrance, Montreal; John G. Mallock, C. W.; W. N. Hobersham, Georgia; A. S. Cooke, Louisiana; Mr. Felder, of South Carolina; Mr. Haskins, of Maryland; Mr. Gilmour, Baltimore, Md.; Jas. Gowen, Esq., Mount Airy, Pa., who has with a public spirit greatly to be commended, attended the last three exhibitions of the Society, and acted as one of its Judges on improved cattle: J. T. Buckingham, editor of the Boston Courier; Edmund Burke, Commissioner of Patents; Mr. Ballard, of Washington, D. C.; Solon Robinson, of Indiana; Mr. Turner, of Illinois; Dr. Reed, of Washington, Pa.; Judge Smith, and Messrs. Blakesly, Atwood, and Nettleton, of Connecticut; Messrs. Wheeler, Stickney, and others, of Massachusetts; John W. Dana, Mr. Brown, of Ohio; Mr. W. C. Wright, of Vermont, and others.

Sales of Stock.—We lately noticed a couple of fine Durham calves, and some superior Merino sheep designed for the west. The calves, (*Don* and *Dolly*,) are a very promising pair, purchased of Mr. Prentice, of Mount Hope, and are designed for Messrs. George Wolfe and Thomas McGuire, of Keene, Coshocton county, Ohio. The sheep were obtained in part from the noted flock of Mr. J. N. Blakesly, of Watertown, Connecticut, and part from the no less noted flock of Mr. S. W. Jewett, of Weybridge, Vermont. They were designed for Philo Buckingham, of Putnam, Ohio. We trust all these animals will arrive safely at their several places of destination, where we are sure they cannot fail to be highly appreciated.

We learn also that Hon. Daniel Webster, "the Marshfield Farmer," has just purchased of Messrs. Corning & Sotham two heifers, a three-year-old and a two-year-old, of their justly esteemed Hereford herd. They are designed for Mr. W's farm in Massachusetts. We are also informed that Mr. Stetson, of the Astor House, New-York, has purchased a Hereford bull and heifer calf, and a cow from the same herd. For the prices which have been paid for these fine animals, we have no doubt the purchasers will be amply satisfied and recompensed in the real improvement of their stock.

More Heavy Fleeces.—Mr. C. Smith, of Newport, N. Y., writes us that he has lately visited the farm of R. V. R. Horton, of Hubbartton, Rutland county, Vt., and was highly pleased with Mr. H.'s flock of sheep called "Paular Merinos." He says—"they were short legged, large chested, and in all respects superior looking sheep." * * * "Mr. Horton's flock of 100 ewes, sheared 608 lbs. 13 oz. of well-washed wool. One buck, two years old, sheared 12¼ lbs., and others from 8 to 11¼ lbs. The wool is fine and excellent." Mr. Smith adds, that "Mr. Horton has labored long and faithfully to bring his sheep to the position they now hold, and for beauty of form, hardiness of constitution, and quantity of fine wool, they are not excelled by any in New-York or New-England."

Mr. Smith, as well as Mr. Horton, are strangers to us, but we give the above statements just as we give others, that is, wholly on the responsibility of the persons making them.

"Many a little makes a mickle"—So says the Scotch adage, and we have just been told a good example of its truth. A butter dealer in this city has been for two years in the habit of saving the *scrapings* of his tubs, and such small portions as unavoidably became damaged by dust, &c., in opening and examining the tubs. The small parcels thus collected he threw into a tub, and when a quantity had been collected, he clarified it by putting it in hot water where the salt settled to the bottom, and the oil was skimmed off the top. In this way he collected enough to answer his purpose for burning as a substitute for lamp oil. It formerly cost him $20 a year for oil and candles for burning; but he has saved butter, such as was formerly wasted, to answer instead—thus making a saving of $40 in two years!

Egyptian, or Emir Barley.—In our October no. we gave a short notice of a grain which was spoken of in the last report of the commissioner of Patents, under this name, and mentioned also that our correspondent W. B. of Lawrens district, S. C. was desirous of obtaining some for sowing.

Mr. John D. Spinner, of Herkimer, has sent us a sample of bald or naked barley, which may be the kind alluded to by Mr. Ellsworth and W. B. At any rate, it is a handsome grain, and weighs, as Mr. Spinner states, sixty pounds to the bushel, and is also said to be very productive. Mr. S. states that in 1844, he sowed four quarts and it yielded four bushels. He says "if it is the kind of grain inquired for, it can be had at a much less price than W. B. offers."

Since writing the above, we have received a letter from Henry Brewer, of Enfield, N. Y., in which he states that he procured some of the "skinless" barley, (supposed to be the "Emir or wheat" barley,) last spring. He sowed half a bushel of it on 72 rods of ground, and the produce was 16 bushels, weighing 58 lbs. per bushel. It was also much injured by drouth and grass-hoppers. He can furnish a few barrels of it delivered at Ithaca. It can be sent by boats on the canal to New-York or Buffalo. He thinks it a valuable kind of grain. It makes, he says, good flour, which is preferred for cakes to buck-wheat.

Prof. Johnston's Agricultural Catechism.—A friend at Rochester informs us that this valuable little work has been adopted as a text book in the public schools of that city, on the recommendation of the Board of Education. "I think it," says the letter of our friend, "a most invaluable work, and if it could be introduced into all the schools in the land, its benefits would be incalculable.

☞ Mr. Hiram Mills will act as Agent for the next vol. of the Cultivator in Lewis county, and we shall be greatly obliged for any assistance our friends may be able to render him in extending the circulation of our paper in that county.

The next State Fair.—Mr. S. Whalen, of Saratoga county, "desires to suggest, through the Cultivator, Saratoga Springs as the place for holding the next State Fair. All things considered, it is a most desirable location. Independent of the numerous health giving fountains, Saratoga abounds with hotels which at the season of the fair are nearly empty. When these are filled, there are almost an untold number of private boarding houses, which with the hotels cannot fail to accomodate the 30,000 or 40,000 that congregate on such occasions." Albany, Troy, Auburn, and Buffalo, have also been named.

Address of Hon. Z. Pratt before the Greene county Ag. Society. We have received a copy of this address, accompanied by a copy of a resolution of the society submitting the paper for publication in the Cultivator. In the great press of matter on hand we are unable to comply with the resolution, which under other circumstances we should be happy to do. The address is marked generally with the sound judgment and practical sense of the author, who in this instance has labored to impress on his fellow-citizens the great advantages which flow from a development of the natural resources of the country. He says—"We have resources and advantages possessed by no other nation; and a people better fitted than any other, to develop those resources and improve those advantages."

Of the means of promoting improvement in agriculture, Mr. Pratt highly commends the formation of agri cultural societies, and the interchange of intelligence through the medium of agricultural periodicals. He says—"The formation of this, and other like associations, and the variety, and standard worth of our many periodicals which are devoted to Agriculture and the mechanic arts, show the spirit of our people. The benefit which the country receives on account of the free interchange of thought, and general diffusion of intelligence through these channels, is incalculable. An intelligent and well informed gentleman from the south once asserted that through the influence of the Albany Cultivator alone, the wealth of that part of the country had been increased more than two millions of dollars."

Teacher's Advocate.—This is a new paper devoted to the cause of education. Its publication was commenced on the first of September last. It appears to be conducted with much energy and talent, and we doubt not is destined to be an important organ in the advancement of the grand cause in which it has engaged. It is published weekly at $2 per year, at Syracuse—edited by Edward Cooper, Esq. We recommend it to the attention and support of the public.

The Railroad Journal.—This valuable Journal is published weekly, 16 pages quarto, by D. K. Minor, 23 Chambers-st., New-York, at $3 per year. It contains extensive tables showing the length, cost, income, dividends, &c., of *most* of the *American and English* Railroads and Canals; also the most recent accounts of important improvements in the construction and management of railroads, and railroad machinery. It will be found useful to *Engineers, Directors, and Stockholders* of Railroads, who should all be familiar, as well with what is passing abroad as at home, in relation to this rapidly advancing cause.

FOREIGN.

We have files of foreign papers to Oct. 2. Accounts concur in the statement of a deficiency of bread-stuffs, both in Great Britain and on the continent. Of the causes of this deficiency, we are not fully informed. The occurrence of wet weather while the harvest was going on, it is stated produced in many districts, great damage. But the very general failure of the potatoe crop, throughout a large portion of Europe, has undoubtedly been the means of greatly enhancing the price of grain. Ordinarily, potatoes constitute the chief support of the peasantry in many parts of those countries, and it is natural that the withdrawal of that great source of sustenance should cause a rise in the value of grain, and perhaps create a demand beyond the ability to supply without recourse to foreign markets. Whether, however, the prospect of a market for our bread-stuffs in Europe is such as to justify the advance which has here taken place, we are unable to decide. The rise in the British markets, (the news of which by the Great Britain steamer created so much stir among our flour and grain dealers,) is said to have been partly the result of "home deficiency and the numerous orders received from Holland and Belgium for the purchase of foreign wheat under lock, for immediate shipment to those countries, where, it is affirmed, a most alarming deficiency is apparent in the potato crop."

The Mark Lane Express observes in relation to the loss of the potato crop: "The extent of the damage caused by the potato disease is alarmingly great. Not only is such the case in almost every locality in England, but it has extended itself into parts of Ireland, Scotland, and the Channel Islands. It is impossible to say where it will end; but we most seriously regret this circumstance, which must affect the poorer classes of society, and entail a vast amount of misery among them. Various remedies have been proposed to stop the disease, none of which have, we fear, been found successful."

In Holland, (as before mentioned,) Denmark, and many parts of France and Germany, this potato malady has during the past season greatly prevailed, and much suffering among the poorer classes of the population is feared in consequence. Speculation in regard to the cause, is still rife, though but little has yet been settled. One of our latest English papers says—"our best microscopist cryptogamists are divided in opinion as to whether the cause of the calamity is a fungus or not."

Death of Earl Spencer.—We regret to learn by our late English papers, the death of this devoted friend of agriculture. We believe his death was quite sudden, but we have not the particulars in regard to the cause.

☞ The English *Farmer's Herald* is copying from this paper, the communications of our Scottish correspondent on the Rotation of Crops in the Lothians. The editor introduces the first of the series as follows:—"We are indebted to the *Cultivator*, an American paper, for the following letter, the first of a series upon this most interesting and important subject. Mr. Girdwood, the writer, is evidently well qualified for the task he has undertaken, and we shall have pleasure in making our readers further acquainted with him. To every farmer in Britain or Ireland the excellence of the culture in the Lothians of Scotland has long been familiar as his household gods, at least by reputation. The present series of letters from Mr. Girdwood will show the world how that excellence has been obtained." The same paper, copies Mr. Horsford's 5th Letter on German Farming; and the London *Gardener's Chronicle* of Sept. 27, copies the remarks of Mr. Bacon, on the Potato Rot, from our June number.

SHOW OF THE AMERICAN INSTITUTE.

We attended the exhibition of stock, &c., of this institution, which took place at New-York, on the 14th and 15th of last month. In point of numbers and quality, we think the present exhibition was much superior to any former one. The horses were the first which met our attention, of which there was a numerous collection. Among them we particularly noticed *Sir Painter*, owned by Epenetus Howe, of North Salem, Westchester county, N. Y. He is a beautiful thorough bred animal, evidently possessing great power and courage. We also noticed several other fine horses, particularly *Florizel*, owned by Mr. Crosby, of Watervliet, and others, whose owners' names we did not learn.

There were several pairs of very large, strong mules, shown. We noticed several which we thought were over 15 hands high. There was also a pair which were perfectly white, a very unusual color for this animal.

Of cattle, there were several fine Durham bulls, and a few good cows. The principal competitors were Messrs. Bell & Morris, Woolsey and Dr. Poole, of New-Jersey. The letter gentleman also exhibited some very pretty full blood Alderney cows. There were several very fine Devons, belonging to Mr. Colt, of New-Jersey. Mr. Blakesly, and we think some others, from Connecticut, also showed some good Devon bulls.

In the sheep department the show was very good—in the long wooled breeds it was indeed quite superior, both in numbers and quality. Among the competitors in this class we noticed Messrs. Hallock, McIntyre, and Bathgate, all having excellent stock. The South Downs were not numerous, though we noticed a few good ones.

Excellent Merinos were exhibited by Messrs. Jewett, of Vt., and Blakesly of Ct., and some, a cross of Saxon and Merino, by Mr. Smith, of Ct., which attracted much attention.

There was a considerable assortment of poultry, the most curious of which were a pair of *snow-white* Guinea fowls, offered by S. F. Jones, of New Brighton. They were perfect *albinos*, having been bred from the ordinary grey-spotted species. The same person showed also, some immense Java fowls, and capons from the Bucks county breed.

The mechanical, horticultural, and floral department of the exhibition, we had not time to examine with the attention requisite to obtain a just idea of it. It was however acknowledged to be superior to any previous show, and may be pronounced a splendid affair. We glanced for a few moments at the implements, &c., a patent brick moulder, by A. Hall, Coxackie, N. Y.; a horse-power by Mr. Burrall, of Geneva; a superior cooking closet, by J. Grimes, New-York; a shower bath, (very convenient,) by John Locke, New-York, and an excellent water filter.

DOWNING'S FRUIT AND FRUIT TREES OF AMERICA.

We have already given our opinion on the high merits of this work, and have made a few extracts as specimens of what it contains, to which we here add a few; our readers will however remember that such small portions can afford at best but a very inadequate knowledge of a well arranged and copiously enriched whole; and the book itself must be had by all who would receive the benefit of the inexhaustible fund of information it contains.

Much interest has been excited relative to the efficacy of *salt* as a preventive of the *curculio*. The author's experience is given in the following statements:

"Insects, the larvæ or grubs of which harbor in the ground during a certain season, as the curculio or plum weevil, are all more or less affected by the application of common salt as a top dressing. On a larger scale—in farm crops—the ravages of the cut-worm are frequently prevented by sowing three bushels of salt to the acre, and we have seen it applied to all kinds of fruit grounds with equal success. Salt seems to be strongly disagreeable to nearly all this class of insects, and the grubs perish even where a small quantity has for two or three seasons been applied to the soil. In a neighborhood where the peach worm usually destroys half the peach trees, and where whole crops of the plum are equally a victim to the plum weevil, we have seen the former preserved in the healthiest condition, by an annual application of a small handful of coarse salt about the collar of the tree at the surface of the ground; and the latter made to hold abundant crops, by a top dressing applied every spring, of packing salt at the rate of a quart to the surface occupied by the roots of every full grown tree." p. 53. "Common salt we have found one of the best fertilizers of the plum tree. It not only greatly promotes its health and luxuriance, but from the dislike which most insects have to this substance, it drives away or destroys most of those to which the plum is liable. The most successful plum grower in our neighborhood, applies, with the best results, half a peck of coarse salt to the surface of the ground under each bearing tree, annually, about the first of April." (p. 266.) Those who have tried salt the present season, in the western part of the state, speak of its effects as very decidedly beneficial in saving the plum crop.

On the subject of *repelling insects by odors*, the following remarks will doubtless be very useful to many:

"In the winged state, most small insects may be either driven away by powerful odors, or killed by strong decoctions of tobacco, or a wash of diluted whale oil or other strong soap. Attention has but recently been called to the repugnance of all insects, to strong odors, and there is but little doubt that before a long time, it will lead to the discovery of the means of preventing the attacks of most insects by means of strong-smelling liquids or odorous substances. The moths that attack furs, as every one knows, are driven away by pepper-corns or tobacco, and should future experiments prove that at certain seasons, when our trees are most likely to be attacked by insects, we may expel them by hanging bottles or rags filled with strong-smelling liquids in our trees, it will certainly be a very simple and easy way of ridding ourselves of them. The brown scale, a troublesome enemy of the orange tree, it is stated in the *Gardener's Chronicle*, has been destroyed by hanging plants of the common chamomile among its branches. The odor of the coal tar of gas works is exceedingly offensive to some insects injurious to fruits, and it has been found to drive away the wire worm, and other grubs that attack the roots of plants. The vapor of oil of turpentine is fatal to wasps, and that of tobacco smoke to the green fly." (p. 54.)

"*Moths and other insects which fly at night*, are destroyed in large numbers by the following mode, first discovered by Victor Adouin, of France. A flat saucer or or vessel is placed on the ground, in which is placed a light, partially covered with a common bell glass besmeared with oil. All the small moths are directly attracted by the light, fly towards it, and in their attempts to get at the light, are either caught by the glutinous sides of the bell glass, or fall into the basin of oil beneath, and in either case soon perish. M. Adouin applied this to the destruction of the *pyralis*, a moth that is very troublesome in the French vineyards; with two hundred of these lights in a vineyard of four acres, and in a single night, 30,000 moths were killed, and found dead on and about the vessels. By continuing this process through the season, it was estimated that he had destroyed female moths sufficient to have produced progeny of over a million of caterpillars." (p. 55.) After recommending bonfires of shavings, and flambeaux of tow dipped in tar, as very efficient modes of destroying the apple-worm moth, and melon-bug, the author remarks, "A simple and most effectual mode of ridding the fruit garden of insects of every description, which we recommend as a general extirpator, is the following. Take a number of common bottles, the wider-mouthed the better, and fill them about half full of a mixture of water, molasses, and vinegar. Suspend these among the branches of trees, and in various parts of the garden. In a fortnight they will be found full of dead insects, of every description not too large to enter the bottles—wasps, flies, beetles, slugs, grubs, and a great variety of others. The bottles must now be emptied, and the liquid renewed. A zealous amateur of our acquaintance caught last season in this way, *more than three bushels* of insects of various kinds; and what is more satisfactory, preserved his garden almost entirely against their attacks in any shape."

Some interesting and striking instances are occasionally given of the productiveness of single trees, and of the profits of fruit culture:—

"Although the apple generally forms a tree of medium growth, there are many specimens in this country of enormous size. Among others we recollect two in the grounds of Mr. Hall, of Raynham, Rhode Island, which, ten years ago, were 130 years old; the trunk of one of these trees then measured, at one foot from the ground, thirteen feet two inches, [in circumference,] and the other twelve feet two inches. The trees bore that season about thirty or forty bushels, but in the year 1780 they together bore one hundred and one bushels of apples. In Duxbury, Plymouth county, Mass., is a tree which in its girth measures twelve feet five inches, and which has yielded in a single season, 121½ bushels." (p. 57.)

"There are [pear] trees on record abroad, of great size and age for fruit trees. M. Bosc mentions several which are known to be near 400 years old. There is a very extraordinary tree in Home Lacy, Herefordshire, England—a perry pear—from which were made more than once, 15 hogsheads of perry in a single year. In 1805 it covered more than half an acre of land, the branches bending down and taking root, and in turn producing others in the same way. Loudon, in his recent work on trees, says it is still in fine health, though reduced in size.

"One of the most remarkable pear trees in this country, is growing in Illinois, about ten miles north of Vincennes. It is not believed to be more than forty years old, having been planted by Mrs. Ochletree. The girth of its trunk, one foot above the ground, is *ten feet*, and at nine feet from the ground, *six and a half feet*; and its branches extend over an area sixty-nine feet in diameter. In 1834, it yielded 184 bushels of pears; in 1840, it yielded 140 bushels. Another famous specimen, perhaps the oldest in the country, is the *Stuyvesant pear* tree, originally planted by the old governor of the Dutch Colony of New-York, more than two hundred years ago, and still standing in fine vigor, on what was once his farm, but is now the upper part of the city, quite thickly covered with houses."*

The great profits sometimes derived from the sale of fruit of well selected varieties, are evident from a single fact in relation to the *Frost Gage*, a fine late plum, which commands from two to five dollars a bushel in market:—

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* This old tree standing at the corner of 3d Avenue, and 13th street, is evidently on the decline, as it now appears less vigorous than it did a few years ago, hard pavements evidently being less favorable than cultivated soil. A few rods from this tree, is a *cherry* tree, also planted by old governor Stuyvesant, now in the garden of Robert I. Murray, of 14th-street, which annually yields heavy crops.—*Ed.*

"Eighteen hundred dollars have been received by a single farmer in this vicinity, for a single season's crop of this plum." (p. 300.)

The frauds of dishonest nurserymen are occasionally mentioned; an instance of which is given by the notice of the "Tobacco-leaved cherry," sold under the imposing name of "*Four to the pound*," which would make the cherries about twice the size of common hen's eggs. The leaves of this variety are very large and coarse, and thus well calculated to facilitate the fraud, but the fruit is very small; hard-fleshed, with a large stone, and of inferior flavor.

Under the description of the Monarch pear, considered by T. A. Knight with whom it originated, as superior to all others, are the following remarks:—

"By some unlucky error, Mr. Knight transmitted to this country, and disseminated partially in England, several years ago, grafts of a worthless sort, for this fine pear, which in no way resembled it. The false sort was pretty largely propagated and distributed before the error was discovered." * * * "Mr. Knight was deeply mortified at this accidental error, and is said to have remarked, that he would gladly have sacrificed £10,000 rather than it should have occurred. Would that some nurserymen were as conscientious!" And hence the importance of propagating for sale or general distribution such fruits only as have been well proved from bearing trees, without depending merely on the authority of others.

In another place the author truly remarks, "Some nurserymen here, we regret to say, do not scruple to fill large catalogues with the names of varieties which have no corresponding existence in their grounds."

Those who have largely disseminated the numerous foreign pears lately introduced in our country, before a thorough trial of their qualities and fitness for the climate, should receive a caution from the following fact:

"The most successful cultivator of pears in this country, whose collection comprises hundreds of varieties, lately assured us that if he were asked to name all the sorts that he considered of *unvarying and unquestionable excellence* in all respects, he could not count more than *twenty!*" The author very justly adds, however, "It may then be asked, why do all cultivate so large a variety. We answer, because the quality of many is yet not fully decided; again, there is a great difference in taste, as to the merits of a given sort; there are also some sorts so productive or handsome, &c., that they are highly esteemed, though only second rate. In a work like the present, we are also obliged to describe many sorts of second quality, in order to assist in identifying them, as they are already in general cultivation."

In ripening winter pears, some care and skill are required. A want of this has induced some cultivators to reject as worthless some truly fine varieties. The following directions are given:—

"Winter dessert pears should be allowed to hang on the tree as long as possible, until the nights become frosty. They should then be wrapped separately in paper, packed in *kegs, barrels, or small boxes,* and placed in a cool, dry room, free from frost. Some varieties, as the D'Aremberg, will ripen freely with no other care than placing them in barrels in the cellar, like apples. But most kinds of the finer winter dessert pears should be brought into a warm apartment for a couple of weeks before the usual season of maturity. They should be kept covered, to prevent shrivelling. Many sorts that are comparatively tough if ripened in a cold apartment, become very melting, buttery, and juicy, when allowed to mature in a room, kept at the temperature of 60 or 70 degrees."

BONE MANURE.—R. M. Bailey says in the American Agriculturist, that some of the most extensive farmers of Long Island, use annually from 500 to 1000 bushels of ground bones on their lands, applying it at the rate of 35 to 56 bushels per acre; and that some of the poorest farms have thus been made fertile and productive, within the last fifteen years.

FARM OF J. F. SHEAFE.

IN August last we had the pleasure of making a call at this fine farm, which is called High Cliff, and is situated in the town of Poughkeepsie. It appears that it has received the first premium from the Dutchess county Agricultural Society as the best cultivated farm in the county. We are not surprised at this, for though our examination of it was necessarily hasty, we could not fail to observe the evidences of good management which are so conspicuous. The following extract from the report of the committee which awarded the premium referred to, will give a more just view of the farm than we are able to furnish from our hasty visit. We would call particular attention to the *exactness* with which all the operations on Mr. Sheafe's farm are recorded—a plan which we wish might be generally adopted.

The committee through their chairman, cannot let the opportunity pass of expressing their pleasure and approbation of the high state of cultivation, and many improvements they witnessed on this farm. It consists of 230 acres, divided into 13 lots by substantial stone walls, with lanes leading to each lot, and gates hung in the most substantial manner; all the hedgerows, elders, &c., along the fences, carefully extirpated, and no weeds to be seen; all the loose stones carefully picked up and laid in walls; the land appeared to be in a high state of cultivation, and well seeded and manured. Lime has been used with good effect as a manure, also horn shavings, muck, barn-yard manure, &c.

"The farm buildings were in excellent order, and could not but excite the admiration of the committee. The cow stables, are excellently arranged, the name of each cow being placed over her separate stall, where she can enjoy her food without being annoyed by her neighbors, and she being sheltered from the storms of winter, and being carefully bedded with straw, the manure is saved from being leeched by rains. The committee would recommend the stabling of cattle to all farmers, (the stables can be made less expensive than these) as a great saving of fodder, manure, &c., adds to the comfort of the cattle, and they believe in a very short time would repay the farmer for the expense of a shed.

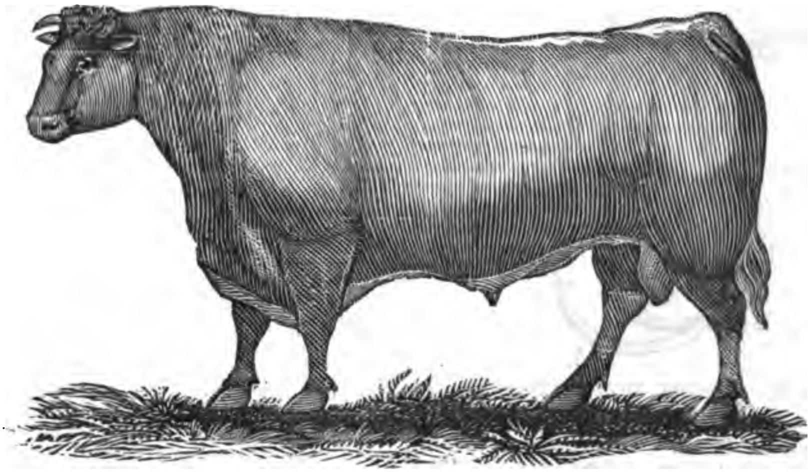
"The barns and sheds appear to be very conveniently arranged, being placed on the side of a knoll, and the hay, &c., pitched in the windows of the sheds.

"Mr. Sheafe has been erecting a superior hay press which appeared to be made in the most substantial manner. He has also an office erected near his farm buildings, where his farmer keeps a set of books, being a journal of every day's work, the expense of every field and crop; the age, pedigree, &c., of all the stock. In the office is a platform scale to weigh every thing necessary; also a map of the farm, containing the quantity of land in each field, each lot being numbered and surveyed. Indeed the old adage, "a place for everything, and every thing in its place," appeared to be verified here. The piggery also appeared well adapted to its purpose, well filled with old and young porkers. The farm house and dairy cellar appeared excellent and well arranged.

"The Committee were shown some beautiful farming implements, among them a subsoil plow to break up the hard pan in heavy land, following the common plow, also other plows. All of them appeared well adapted for the work to be done—a plaster sower; straw and root cutter, &c.

"This farm is used principally for grazing. The Committee were shown a beautiful herd of improved short horns, well adapted either for the dairy or the shambles; also a flock of Southdown sheep. It would take too much time to mention everything worthy of note. This farm has been under the management of Mr. JAMES H. LAWSON, for a number of years, and too much credit cannot be awarded him for the skill and judgment shown in everything appertaining to the farm."

BIRDS *vs.* INSECTS.—The north of France is distinguished by a deficiency of trees and hedge-rows and affords consequently but little shelter for birds. The effect is as obvious as it is injurious, and destructive insects, unchecked by their natural enemies, commit extensive ravages.



FORTUNATUS, *alias* HOLDERNESS—(Fig. 96.)
A Short-Horn bull imported by GORHAM PARSONS, ESQ., *of Massachusetts, in* 1818.

LIVE STOCK IN CONNECTICUT.—(*Continued.*)

EAST-WINDSOR, as we have mentioned, was noted at an early period for the excellence of its cattle. The first time we were ever in Boston, we recollect having seen at the Columbian Museum, the stuffed skin of "The Great Connecticut Ox." This ox, as we are informed by Henry Watson, Esq., was bred by Mr. Elizur Wolcott, of East Windsor, and sold about the year 1809. His weight, when slaughtered, was 2,133 pounds. Mr. Watson thinks this ox was descended from a bull introduced here by Mr. Samuel Wolcott, previous to 1790. Many other animals quite as remarkable as this ox, were bred in this town more than thirty years ago.

In 1827, Mr. John Watson purchased of Col. Jaques, of Massachusetts, a short-horned bull called *Holderness.* Mr. W. had kept him one year previous to the purchase. This animal, under the name of *Fortunatus,* was imported by the late Gorham Parsons, Esq. of Massachusetts, in November, 1818. He was a bull of considerable celebrity in Massachusetts and Connecticut for several years. In 1819 he received from the Massachusetts Society for Promoting Agriculture, the premium of *one hundred dollars* as the best imported bull at the society's show at Brighton that year. From a letter we received from Mr. Parsons several years ago, we learn that Holderness was bred at North Allerton, Yorkshire, (Eng.,) by George Faulkner, Esq., of whom he was purchased by Mr. P.'s agent, who was directed to obtain the best stock to be had. In a hand-bill issued in 1820, he is described as follows:—"His color is bright chestnut, skin yellow, horns uncommonly light and finely curved." There is no doubt that he belonged to the best variety of what were called in that day, the "Teeswater" cattle. His progeny were generally hardy, thrifty, and excellent milkers, often carrying prizes at the Massachusetts state and county shows as well as the shows in Connecticut. The quality of his flesh was not probably as good as that of some animals, though his progeny from common cows were not generally complained of in this respect.

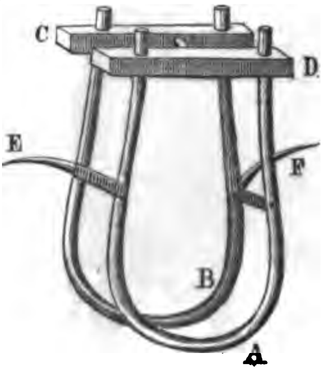
The figure at the head of this article was copied from one taken of Holderness in 1828. With the exception of the neck, which is represented with somewhat less dewlap than belonged to the animal, it is said by those who remember him, to give a very good outline of his leading characteristics.

The Short-Horns of the district of Holderness, Yorkshire, had long since the reputation of great milkers, and it was probably this circumstance that induced Mr. Parsons to substitute for this bull the name of Holderness for that of Fortunatus. The result, however, was doubtless injurious to the reputation of the bull and his progeny. Among those acquainted with the history and characteristics of the old Holderness breed, the idea was at once received that the animal was of this race, which Lawrence describes as one "of the worst shaped and least profitable. * * * Slow feeders, never fat, and the flesh excessively coarse." These characteristics would be by no means generally applicable to Mr. Parsons' bull and his stock.

Mr. Samuel Bartlett, (lately deceased,) of East-Windsor, bred and fatted a pair of oxen got by Holderness, which he sold on the foot, in Wilbraham, Mass., on the 17th of November, 1833, they being then seven years and eight months old. Their live weight at this time, as certified by a sworn surveyor, was individually 3,740, and 3,709—total 7,449. Mr Bartlett informed us that the dressed weight of these cattle was rising 5,200 lbs. Mr. Bartlett showed us on his fine farm, (a pattern of good management,) several superior milch cows which have more or less of the blood of Holderness. We likewise saw several of the same blood in the neighborhood, one of which, a half-blood Holderness, had the appearance of an extraordinary milker, and was said to have made fourteen pounds of butter per week, fed on grass only. A son of Mr. Bartlett has some full blood Durhams. We saw a cow and a pair of steers which look well. Mr. John Bissell showed us several good cows, a pair of very large, strong oxen, and some thrifty steers.

Henry Watson, Esq., has quite a herd of full blood Durhams. He has been in possession of this stock almost from the introduction of the breed into the country. He first purchased some full bloods of Stephen Williams, Esq., of Northborough, Mass., (the owner of Young Denton,) which were afterwards crossed with Wye Comet, purchased by Mr. Watson of Col. Powell, of Philadelphia. Since then he purchased some cows of the late Hon. Stephen Van Rensselaer, of this city. He has likewise several of the progeny and descendants of the fine Durham stock imported in 1830 by Enoch Silsby, Esq., of Massachusetts. He has used high bred bulls of various families. Several of his cows show fine points, and have the appearance of being capital milkers. His Young Agatha, a calf of Mr. Silsby's imported Agatha, is a cow of great substance, good symmetry, and Mr. Watson assures us, is the best milker he ever owned. Taking her in all respects, she is a superior cow, even among the *famed ones* of the celebrated breed to which she belongs.

At the farm of Orren Thompson, Esq., principal of the Thompsonville Manufacturing company, we saw the bull *Sir Dick,* and two cows, imported by Mr. T. a year or two since. The cows were very large, and were said to have been selected in England on account of their great milking qualities. They were, however, very thin in flesh when we saw them, being evidently too large for the thin soil and short pasture of that section.



REMEDY FOR COWS SUCKING THEMSELVES.—(Fig. 97.

A subscriber inquires for a plan to prevent cows from sucking themselves. We give the above cut and the following description, as the best plan we have met with. It was furnished for the Cultivator by R. North, Jr., of Berlin, Conn., in 1842.

Description.—A and B, in the cut, represent two ox-bows, of a size suitable for the animal for which it is intended. The bow marked B, should be a little the largest, corresponding with he size of the neck at the shoulders. C and D, represent the yoke or neck piece. It is formed of two pieces of wood of a size say 1¼ by 2¼ inches and framed together by means of a cross piece, which gives it the appearance of the letter H. In this yoke are bored four holes of the size of the bows, and at such distance apart as would best receive them. Across the bows, midway from the bottom to the neck piece, are riveted two pieces of iron marked E. and F. These pieces have a spiral termination. They should be bent out somewhat, lest they unnecessarily pierce the sides of the animal.

FATTENING ANIMALS.

It should be made a primary object to fatten animals intended for slaughter as rapidly as possible, if we wish to obtain the greatest quantity of meat in proportion to the food consumed. The reason is this: It takes a certain amount of food, daily, to support life, or to supply the natural waste of the body. For instance, suppose fifteen bushels of meal and five hundred pounds of hay will bring an animal to a certain degree of fatness in forty days; that is, allowing a peck and a half of meal and twelve and a half pounds of hay to be consumed daily. Now suppose it takes a fourth part of this daily allowance to sustain life and supply the waste of the body; then, if instead of feeding out our whole quantity of food in *forty* days, we prolong the time to an *hundred and sixty* days, the food would be wasted, and the trouble and labor of feeding expended for nothing; as the animal might be in worse condition at the expiration of that time than when we began feeding.

This is a matter which has been too little regarded, and as a consequence, there has been a useless expenditure of food and labor. In the animal economy, the accumulation of fat and extra flesh, is only a deposit of superfluous nutriment, which not being required by the system at one time, is laid by for future emergencies; and it must be obvious that the larger the quantity of food which a fattening animal can be made to consume daily, with a good appetite, or to digest thoroughly, the greater will be the amount of flesh and fat gained in proportion to the whole quantity of food consumed.

Another essential point in fattening animals, is to keep them in a quiet and comfortable condition. We do not propose to engage at present in a consideration of the relative action of the different organs of the animal body. Every farmer has, however, more or less noticed the connection which the nervous system has with the digestive and secretive organs. An animal may consume a large amount of food, but if it is so situated that it is restless and discontented, the accumulation of fat will be only at a slow and unprofitable rate. We have seen hogs and cattle intended for slaughter, rendered so entirely uncomfortable from the coldness and filthiness of their situation, that they scarcely throve at all, though they consumed and wasted much more food than they would have required if properly cared for. Hence the saying, that "an animal will fret off flesh faster than it can be gained."

Animals should not be confined to wet and muddy places—above all things they should not be obliged to take their food in such places. Cattle and sheep that are fed with grain and vegetables, should be provided with clean mangers. Fatting hogs should be fed in clean troughs, or on clean dry floors, and their sleeping places should be dry and sufficiently warm. They should not be expected to perform much labor in the compost-yard; that service should be rendered while they are in working trim, and not after they are full fed and are becoming overloaded with fat. All exertion is attended with a waste of muscular tissue, and the more laborious the exertion, the greater is the expenditure. Hence the increase in weight will be most rapid by allowing the animal to remain as much at rest as is consistent with the preservation of its health.

Substances in which the nutriment is much concentrated, should be fed with care. There is danger, especially when the animal is first put to feed, that more may be eaten at once than the digestive organs can manage. Meal of Indian corn is highly nutritive, and when properly fed causes animals to fatten faster than almost any other food. They will not, however, bear to be exclusively kept on this article for a great length of time. Meal made from the heaviest varieties of corn, especially that from the hard flinty kinds grown in the northern and eastern states, is quite too strong food for cattle, sheep, or horses, to be full-fed upon. Hence one of the advantages of having the cob ground with the corn, by which the nutriment is diffused through a greater bulk, lays lighter in the stomach, and is more thoroughly digested. The effect of pure corn meal on animals, we suppose to be similar to that sometimes produced on our own species by the use of fine wheaten flour—the subject becomes *dyspeptic*, and is forced to use bread which has the bran mixed with the flour. The mixture of the cob with the meal, answers the purpose of the bran—the health of the animal is preserved and the process of digestion goes on uninterruptedly. In fact the advantages of grinding the cob and corn together for feeding cattle may be said to be well established. For hogs, the benefit of the cob, is not, we think, so evident; those animals appearing to be better adapted for taking their nourishment in a concentrated form, than those which ruminate, or chew the cud. Yet food sufficiently bulky to effect the distention of the bowels is necessary for hogs.

Hay or straw, cut into lengths so short as to be readily mixed with meal, answers a good purpose in rendering the meal easy of digestion, and in enabling the animal to extract from it all the nutriment.

Much has been said on *cooking* food for stock, and it seems to have been pretty well settled that for hogs, it is attended with considerable advantages, but as regards cattle, we are yet without any reliable experiments made in this country. The Highland Society of Scotland, instituted a series of experiments a few years ago, with a view of ascertaining the advantage, if any, of cooking different kinds of food for different species of animals. The conclusion arrived at from the result of these experiments, was, that the superiority of cooked over uncooked food for *cattle* is but trifling, and not sufficient to balance the cost; but for hogs, the extra cost of preparation was repaid. The articles tried were turneps, potatoes, barley, and oatmeal, oil-cake and flax seed. We do not advert to these experiments as altogether conclusive, though as before said, we could not advise the outlay of much expense for cooking food for cattle, till some additional light shall indicate its advantages.

The appetite and health of animals are promoted by giving a variety of food. This fact has led to the preparation of compounds for fattening stock. An article called "Warnes' Compound," (see last vol. Cultivator p. 373, 374,) is much esteemed by British farmers, for fattening cattle. For fattening hogs, we have used with advantage the following mixtures. 1. Two parts potatoes and two parts pumpkins; boil together till they can be easily mashed fine—then add one part meal, stirring and mixing intimately together. The heat of the potatoes and pumpkins will scald or cook the meal, and when cold the mixture will be a stiff pudding. 2. Two parts potatoes, and two of ripe, palatable apples, (either sweet or sour;) boil till they can be mashed fine—then add one part meal, (either that from corn, barley, or oats and peas, allowing the same weights,) and mix together while the potatoes and apples are hot.

Hogs seem more fond of this food when it has slightly fermented, (not become pungently sour,) and they appear to fatten faster if it is fed in this state. We have never seen hogs thrive faster than when fed on these mixtures, with occasionally a little dairy-slop, and we have always found the pork solid and of good quality.

In regard to the relative value, compared with grain, of different kinds of vegetables for feeding stock, there is, perhaps, more diversity of opinion than on almost any other branch of husbandry. Some, for instance, believe that four bushels of potatoes are equivalent to one bushel of corn meal; others think potatoes should be reckoned higher; others again hold them less valuable, while some declare that stock will scarcely fatten at all on potatoes, and that for milch cows, if they increase the quantity, they injure the quality of the milk. It is not easy to understand fully the cause of such contrary opinions; but there is no doubt that it may be considered partly attributable to the different degrees of nutriment which the same kinds of vegetables possess when grown on different soils, and under different circumstances, and partly to the different systems observed in feeding. According to some chemical analyses, turneps and other vegetables contain considerably more nutriment when grown on some soils, or by the aid of some manures, than when produced on other soils. Potatoes produced in soils deficient in carbonaceous matter, are acknowledged to be less nutritive than others.

But probably the principal cause of vegetables having been undervalued for animals, is their having been used in an improper manner. Boussingault and his associates restricted the food of certain animals to potatoes, turneps, mangel wurtzel, and carrots, and from the result of this experiment, inferred that these vegetables would not fatten swine or cattle—that they reduced the flesh of milch cows, and made the milk poorer—and that all the butyraceous particles the milk contained came from the fat previously deposited in the system.

Without attempting to discuss this matter in detail, we would remark that to a *practical* man, accustomed to feeding animals with vegetables, these results, though at variance with others, would not appear strange. It is well known that graminiverous animals require food of a fibrous nature, and that an essential function of some species, rumination, cannot be carried on without it. It is also known that the articles alluded to have, when fed by themselves, a laxative or cathartic action; and thus for various reasons, we see the necessity of feeding straw or hay with vegetables, in order to enable the animal to derive full benefit from them. In the experiment of Boussingault, the animals, it should be remembered, were confined to the vegetables, without any fibrous or absorbing substances to check the tendency to purgation, and keep the food in the intestines in such a state, and for such a length of time, that the nutritive particles could be assimilated. If the animals had been fed wholly on corn meal or wheat flour instead of potatoes and turneps, the effects would not, probably, have been precisely similar, but no practical farmer would expect stock to thrive or continue healthy for any considerable length of time on either of these substances. And yet we do not see why it might not with as much propriety be argued from a failure to fatten stock on meal and flour, that it was owing to a deficiency of nutriment in these articles, as that the failure in the former case was attributable to this cause.

Preparations should be made for winter as soon as possible.

DISEASE IN THE POTATO.

WITH the exception of the state of Maine and the British Provinces of New Brunswick and Nova Scotia, we think the potato crop has not this year been as much injured in this country by what is called *rot*, as it was in either of the two years last preceding the present. In Europe, however, the ravages of the disease have been more extensive than ever before. The foreign journals teem with accounts from all quarters of the injury suffered, and with various conjectures and theories as to to the nature of the cause and remedy.

The Edinburgh Quarterly Journal publishes a letter from Professor JOHNSTON in which he makes the following remarks:—

"This disease in the potatoe has already called forth many hasty opinions, almost all partially true, because founded on one or two facts, but nearly all unsound as general expressions of the truth, since they are contradicted by the experience of other practical men in other districts of the country. We are clearly unable as yet, to assign either any general cause for the disease or any universal remedy. Something may possibly be suggested by the analysis of sound and diseased potatoes, for which the Highland Society has offered a premium, though, in the present state of our knowledge upon the subject, even this is doubtful. The most that chemistry has yet done for this question is in the shape of suggestions for experiment."

The Buffalo *Pilot* furnishes a translation of a paper originally prepared by Prof. CHAS. MORREN, of the University of Liege. He conjectures that the disease proceeds from a description of mold or fungus. It may be said that this theory has the appearance of plausibility, as the blight or blast in grain, has been pretty clearly traced to a fungus; the spread and increase of which is however, greatly dependent on the weather, heat and moisture, or a damp sultry atmosphere, favoring its propagation. But until something more shall have been actually proved by experiment or practice in regard to the prevention of the difficulty complained of, we do not think it necessary to occupy much space in giving theories in reference to the cause of the disease or its remedy. We give place notwithstanding to the following extract from Prof. Morren's paper, which we are sure will at least be read with interest:

"For some time I have been in the daily habit of observing from stage to stage, the progress of the disease in various fields of potatoes. It commences, unquestionably, with the leaves and superior parts of the plants. I have even observed the flowers and balls first attacked. A part of the tissue becomes unhealthy, loses its color, and changes rapidly to yellow; the spots then become gray, and within a day or two subsequently, the under side of the leaf and fruit will show a sort of white down or mold. The microscope shows that this down proceeds from a sort of fungus, that fructifies upon the pile, or beard, that thickly covers the under side of the leaf of the potato plant.

"This fungus is of an extreme tenuity; but reproduces in an incredible measure. Its trunk is composed of several erect, jointed fibres, bearing at their summits one or more branches, always double, and at the ends of which appear the reproductive bodies, in the form of an egg, but which do not really exceed in diameter the one hundredth part of a millimetre, or the 393,700 part of an inch. Perhaps it will be said that this is a small affair to make such ravages, but I would ask is the itch a disease less to be feared, because the animals producing it exist only in a microscopic state?

"Immediately following the formation of the yellow spot, and the developments of the *botrydis* upon the potato leaf, the stem begins to feel the deleterious influence. Here and there the epidermis begins to turn brown, and finally black; and when the phases of the disease are carefully watched, through the microscope, it will be readily perceived that it is in the bark the fatal germ exists. The morbid agent communicates its action from the bark to the inner epidermis, and although this latter does not always show the fungus itself, yet it is not the less fatally affected. To those who have any idea of vegetable physiology, these effects are easily enough explained. The sap, modified into living juices, into vegetable blood, is formed in the leaf, and descends to the stem and roots, through the bark. Here this sap, or blood, if we please, becomes diseased, and carries the poison of the leaf through the fibres of the whole plant, and the stalk perishes. In fine, so soon as the black spots appear upon the stalks, the leaves dry up and wither, the plant droops, dies and falls to the earth, to disseminate a million fold, the poisonous canker."

ORIGIN OF THE MORGAN HORSE.

Mr. WEISSINGER, one of the editors of the Louisville (Ky.,) Journal, has lately made a tour through the northern and eastern states, and while in Vermont took pains to examine the best horses, and to learn all particulars relative to the breed and mode of management. In relation to the origin of the celebrated Morgan horses he has, however, given a statement, said to have been furnished by Mr. Cotterel, of Montpelier, which we cannot but think is at variance with well established facts. To give a full understanding of the case, we herewith copy the statement of Mr. Cotterel, as given in Mr. Weissinger's letter published in the Journal, and then offer counter testimony:

"Mr. Cotterel, of this place, [Montpelier,] who is as well acquainted with horses as any man in Vermont, says there is not the slightest doubt that the original Morgan was got by a Canada horse. He says the most probable account of his origin is this. A man by the name of Smith, at Plainfield, N. H., had a fine imported mare. He rode this mare to Canada on a courting expedition, and while there his mare got in foal. Smith regretted the accident, and laying no value upon the colt, he sold it to Morgan, a singing master, who, when the colt was grown, rode him about on his singing circuit. When the colts from Morgan's horse grew up they proved fine, and this gave him celebrity. He was a fleet runner at short distances, and this originally induced the people to try him."

In the ninth volume of the Cultivator, we published some letters from Justin Morgan and John Morgan, which in our opinion furnish the most authentic history of the origin of this race of horses that has yet appeared. Indeed, so far as it goes, we have the fullest confidence in its correctness. We republish the following extracts from those letters. Justin Morgan, it will be remembered, is a *son* of the Justin Morgan who owned the original Morgan horse. Of course he speaks of many things according to his personal knowledge, leaving little chance for any mistake.

The following is an extract from a letter of Justin Morgan's, originally furnished for the Cultivator, (Vol. IX. p. 99,) dated Stockbridge, Vt., March 1, 1842. After stating that his father owned the horse from which the race of Morgan horses sprung, he says:—

"I will now relate the facts relative to said Morgan horse, as I reccollect them. My father, Justin Morgan, brought said horse, or rather said colt, into Randolph, Vt., in the summer or autumn of 1795. Said colt was only two years old when my father brought him to Randolph, and had never been handled in any way, not even to be led by a halter. My father went to Springfield, Mass., the place of his nativity, and the place from which he removed to Randolph, in the spring or summer of 1795, after money that was due to him at that place, as he said; and instead of getting money as he expected, he got two colts, one a three years old gelding colt, which he led, the other, a two years old stallion colt, which followed all the way from Springfield to Randolph; having been, as my father said, always kept with, and much attached to the colt he led. Said two years old colt was the same that has since been known all over New-England, by the name of the Morgan horse. My father broke said colt himself; and as I have before remarked, owned and kept him to the time of his decease, which took place in March, 1798, and said horse was five years old the spring my father died; and as before stated, soon after my father's decease, he passed from my father's estate into the possession of Wm. Rice, of Woodstock, Vt. I cannot state positively that my father purchased said colt in Springfield, Mass., but I am very confident that he purchased him in that town or in the immediate vicinity, on Connecticut river."

We next offer an extract from a letter of John Morgan, (see Cultivator, vol. IX., p. 110,) in which it will be seen that the material points set forth by Justin Morgan are confirmed, and some further light given in regard to the blood of the first Morgan horse. John Morgan resides at Lima, in this state, and is, we believe, a relative of Justin Morgan, sen., and was a near neighbor of the latter previous to his removal from Springfield to Vermont. In reference to the colt above described by Justin Morgan, (2d,) John Morgan says—"he was sired by a horse owned by Sealy Norton, of East Hartford, Conn., called the 'True Briton, or Beautiful Bay.' He was kept at Springfield one season by the said Justin Morgan, [sen.,] and two years after I kept him two seasons. This horse was said to have been raised by General Delancy, commander of the refugee troops on Long Island, and rode by him in the Revolution. It was said that one Smith stole the horse from the general at King's Bridge, while the general was in the tavern; ran him across the bridge and took him to the American army, near White Plains, and sold him to Joseph Ward, of Hartford, Conn, for $300. It was also said at that time that he was sired by the imported horse called 'Traveler,' said to have been kept in New-Jersey. Ward was a merchant and kept the horse three or four years for a saddle and carriage horse, and then traded him off to Norton, and Norton kept him for mares while he lived. The description of the Morgan breed given by Mr. G. Barnard, [Cultivator, vol. IX., p. 33,] answers well to the stock of 'True Briton.' I have always understood that Morgan kept the colt for a stallion at Randolph, and was very celebrated for his stock."

The above statements of Justin and John Morgan, comprise, as we believe, the true history, so far as it is known, of the origin of the far-famed Morgan horses. From the position of the Messrs. Morgan, they have had the best possible facilities for obtaining correct information on this subject, and we are not aware of any thing which should hinder their statement from receiving full credence.

Mr. Weissinger, in his letter to which we have above alluded, speaks of Mr. Hill's horse Black Hawk as follows: "I saw the celebrated Sherman Morgan, Black Hawk, at Bridport, and I think he deserves all the praise that has been bestowed upon him. He is the finest stallion I ever saw. His legs are flat and broad, shoulders well set back, loin and backbone very strong, length of hip beyond anything I ever saw; as quick in breaking as the bullet from the rifle; head and neck faultless; in motion, mouth open, crest sublime, legs carried finely under him, square and even, and fore-legs bending beautifully."

In relation to the characteristics and reputation of the Morgan horses, Mr. Weissinger observes:—"I have conversed with some of the best judges of horses and some of the most experienced breeders and horse dealers in the state. There is no doubt whatever of this—that the breed of the Morgan horse was, and is now, in the few instances where it can be found, far the best breed of horses for general service that ever was in the United States—probably the best in the world; and it is remarkable that this breed was and is now known by many striking peculiarities, common to nearly every individual. They have a full, heavy, wavy mane and tail, good head and neck, small well-shaped ears, are broad between the eyes, legs broad and short with large tendons, bodies rather thick set; but their most striking peculiarity is in their carriage; legs well under, trot quick, short, and springy, the fore-legs bending remarkably, the very reverse of the slow, slouchy movement of the race-horse in a trot. They are likewise exceedingly hardy and well tempered."

The following paragraph from Mr. Weissinger's letter contains facts worthy of preservation. Will some of our Vermont friends give us the *whereabouts* of the "Chelsea Morgan," with his owner's name?

"Of the old Morgan's progeny three became famou as stallions, viz: the Sherman Morgan, the Woodbury, or Burbank, and the Chelsea. Of these the Sherman Morgan was greatly the most distinguished. I have ascertained to a certainty that he died in the winter of 1835. Black Hawk was sired by him. The Chelsea Morgan is the only one of the three yet alive. He is said to be yet full of vigor."

ELECTRICITY ON VEGETATION.

The Syracuse Daily Journal, in noticing some experiments detailed in our September number, has arrived at an erroneous conclusion in one particular. He says we stated wrongly in saying that the electric fluid passes *through* the lightning rod, and adds that "it passes along the surface of the rod, and not *through* the body of the metal." Hence he infers that poor conductors, brought into contact with the surface of the rod, may be influenced and become electrified. Perhaps the subject would be better understood, if it were stated that the fluid passes THROUGH *the* SURFACE. We all know that it cannot pass through a solid non-conducting substance (without *breaking* a way for its passage,) yet if a conducting rod be solidly encased in glass or any other non-conductor, the latter offers not the slightest obstruction to its progress, which could not be the case, if it passed *on* the surface, as the Daily Journal seems to understand. That it is confined to the *surface* of *conductors* is demonstrated by many experiments, not necessary to state here.

When we said that a man might clasp a lightning rod in a thunderstorm, (in ordinary cases,) without injury, we spoke from experience. We have many times held a metal rod in contact with the hand, while a discharge from the electric battery passed through the rod unfelt, sufficient to have knocked the senses out of any man. But previous care had been taken that the communication through this rod was perfect. We have also examined a lightning rod, the point of which was melted into a bullet, by a discharge from the clouds so loud that a cannon would be a mere pop-gun to it, yet the wooden supports of the rod, which it passed through in contact, were not visibly affected in the slightest degree. It is only when the conductor is too small for the discharge, shown in this case by the melting of the point, and in others by the rod becoming red hot, that surrounding bodies receive a portion of the fluid. But in none of the experiments mentioned, to show the influence of electricity on plants, was this the case.

Green trees are conductors of electricity, yet we do not find that plants grow more rapidly at the foot of tall oaks and hemlocks, than elsewhere.

The Journal mentions the case of a grape growing more rapidly and maturing its fruit earlier at the foot of a lightning rod. We knew a similar case; but the superiority was then owing to the large bed of loose earth made in digging the hole for the reception of the rod six feet into the earth. In the present case some other cause may have operated, with which we are unacquainted.

ELECTRO CULTURE.—We have heretofore cautioned our readers against a sanguine belief in promoting vegetation by means of electrical apparatus. We have heard no well authenticated case, among the many experiments which have been made this season, where vegetation has derived the least benefit from wires or stakes designed to govern or direct the electric principle. A like failure has, so far as we have heard, attended the trials in England and Scotland. The London Agricultural Gazette, states that—"all the experiments which have been heard from, show that no influence is exerted on the growth of plants by an electro-conducting connexion between elevated and buried wires, or according to other plans which have been tried. The word *electro-culture*, in fact, must for the present be considered a misnomer."

In relation to the failure of attempts at electro-culture, the writer of the article from which we have quoted the above, asks—"Has all this labor then been lost? That depends," he continues, "on the object of those who undertook it. Doubtless, some, believing in the evidence which before existed, have speculated in electro-culture as a means of profit—*their* labor certainly has been useless, and they must now blame either their own carelessness in not having previously sufficiently examined that evidence, or their own credulity in reference to what we must consider the imperfect observations of others. But wherever the subject has been tested by any one anxious merely to determine for himself the accuracy of a theory, the expense and labor which have been incurred cannot be considered lost, for the object of their outlay has been attained. An intelligently planned and carefully executed experiment, if its results be ascertained and recorded, cannot fail; it is simply a question asked of nature, and what the experimenter wants is—an answer; and thus the success of an experiment depends not upon the *character*, but upon the *obviousness* of its results. Now the results of the experiments we allude to have been most unequivocal, and accordingly those who performed them ought to be perfectly satisfied."

CURING HAMS.

MR. EDITOR—In the last Dec. No. of the Cultivator, page 374, were published certain directions for curing meat, which I consider worth double the subscription price to any person who wishes to cure and preserve meat for family use. The directions there given for curing hams, I have followed out to the very letter, (with the single exception of suspending them with their shanks downwards while smoking,) and the result is, that more delicious ham than I now have I never tasted. I had followed a course of my own, which was almost invariably the same till last year, but the mode recommended by you is so much superior to it, that no slight cause will ever again induce me to be indifferent in regard to the method of curing my hams. I cheerfully bear this testimony to the value of your receipt, knowing that those of your readers who choose to follow it will be amply repaid for the slight sacrifice of time and trouble, consequent upon so doing. A SUBSCRIBER.

Hoosick Falls, N. Y., 1845.

At the request of several correspondents, we here republish the receipt for curing hams above alluded to. We have practiced according to this mode for several years and have found it superior to any other with which we have been acquainted.

For every one hundred pounds of meat, take five pints of good molasses, (or five pounds brown sugar,) five ounces saltpetre, and eight pounds rock salt—add three gallons of water, and boil the ingredients over a gentle fire, skimming off the froth or scum as it rises. Continue the boiling till the salt, &c., is dissolved. Have the hams nicely cut and trimmed, packed in casks with the shank end down, as the pickle will thus strike in better. When the pickle prepared as above is sufficiently cool, pour it over the hams. They may lie in pickle from two to six weeks, according to the size of the pieces, or the state of the weather—more time being required in cold than in warm weather. Beef or mutton hams, or tongues intended for smoking and drying, may be cured according to this mode, and will be found excellent.

There are other modes of pickling hams which are much esteemed in various countries. In that excellent and agreeable work entitled "Farming for Ladies," we find the following directions for preparing the celebrated "Hambro' Pickle," which is said to be equally applicable to beef, pork, tongues, &c.—"To each gallon of water, put one pound and a half of common salt, a quarter of a pound of coarse brown sugar, and one ounce of saltpetre; boiled, and to be carefully scummed. After standing in a proper vessel until quite cold, the meat may be immersed, and will be fit for use in ten days, and improve for months; but it must be carefully kept pressed down by means of a cover, and a clean heavy stone. The pickle must be watched, and when any scum begins to rise, the meat must be taken out and the liquor reboiled, and scummed and cooled as before; at the same time half a pound more salt must be added; but no raw salt is to be applied at any time. The meat is to be returned when the pickle is quite cold, say after ten or twelve hours. Tongues will require a month, a month at least, and are improved by the addition of an ounce of bay-salt added to the above. One clove of garlic, half an ounce of allspice, and as much whole pepper, boiled with the ingredients, much improves it."

HEDGES FOR AMERICA.

A great difference of opinion exists in relation to hedges for this country. There have been some very successful attempts, and there have also been many failures. An examination into the *causes* of this difference of success, in actual experiments, will doubtless be of use, and enable us to judge whether hedges possess advantages over other kinds of fence in any case. We lately examined several specimens of successful hedge making. A part of them were made by John Robinson of Palmyra, N. Y., a vigorous and enterprising English farmer, whose experiments are of several years continuance. He has over a hundred rods of hedge in different stages of growth, the management or treatment of which appears to be particularly worthy of attention.

The young thorns are set out in the hedge row at two years of age, after which they are cut off at the surface of the ground the first year, to cause a thick growth of sprouts; they are again cut off the second year, from four to six inches from the ground according to their height and vigor, which causes a second crop of thick sprouts at that height; the third year they are cut off six or eight inches higher, and so on, rising about at that rate, until the hedge is five or six feet high. This mode of treatment, which is well known and often practiced in England, obviates the necessity of *plashing*, if it is successfully performed; the successive crops of thick sprouts thus occasioned, densly interlace each other, and the hedge becomes a thick mass of entangled shoots and branches, which cannot be separated. It is in fact precisely similar to the process of *felting*, but on a larger scale; and when the best specimens thus grown, are forcibly shaken at any point, whole rods on either side, are shaken with it as in one mass. This felting property thus becomes of more value by far, to the impregnability of the hedge, than the thorns.

One hedge had received three different modes of treatment. A part had been imperfectly cultivated; another portion had been well cultivated for a distance of two feet on each side; and a third stood on ground which was trenched two feet deep before planting. The growth of the second was twice as great as the first, and of the trenched portion still greater. Indeed, one may as well think of raising corn by planting a row in a thick meadow, as to raise a good hedge without keeping the soil constantly mellow about the young trees. A space two feet wide on either side of the hedge is the distance usually kept cultivated.

From six to eight years are needed to make a good substantial hedge, proof against cattle.

These hedges were set on a bank about eighteen inches above the surface, with a ditch two feet deep serving to carry off surface water on one side. The plants are set six inches apart. If closer they do not grow so well.

The greatest difficulty, which J. Robinson finds, is protecting the young hedge for several years, until it is proof against cattle. For although it may be placed along the side of a fence, next to crops, or meadow, yet in the course of rotation, it is thrown into pasture, and is thus endangered. A longer course of alternating crops, would be the remedy in usual cases.

Hedges for *plashing*, are not subjected to the successive shortening down which has been just described; but the young stems are suffered to grow until several feet high, and an inch or more in diameter when they are cut partly off near the ground, and bent over to an angle of forty-five degrees in the direction of the line of the hedge. A thick growth of branches is not needed before this operation. All the *large* branches should be cut off at the time, but not closely. Young shoots afterwards ascend, and growing upright, form cross-bars with the main stems which have been bent over, and interlocking with them produce a sort of lattice work possessing ultimately great strength. A small portion of the trees are not bent, but remain upright, to stiffen the rest, and slender poles are run along the top, alternating with them, to keep them to their place, until the whole is firmly established. These poles, being green and of perishable wood, cost little, and rot out when they are no longer needed.

The selection of suitable trees for forming hedges, is of the very first importance. One great reason, without any doubt, why so many have failed in their experiments, is bad selection, or a want of adaptation of certain species, to the climate where they were used. The English hawthorn has been found entirely unsuited to most parts of the United States. At Newburgh, according to A. J. Downing, "its foilage becomes quite brown and unsightly after the first of August." He also remarks that it is there extremely liable to the attacks of the borer. Further south, where the summers are longer and dryer, and consequently more dissimilar to those of England, it is of no value whatever. But in the cooler summers of western New-York, and where perhaps the soil may exert also a favorable influence, it has continued to flourish in *well-managed* hedges for many years. All the hedges of John Robinson, already described, are of this species; a very vigorous hedge, on the grounds of John Baker of Macedon, N. Y., is of the same. We had supposed that moist, rich land would be better suited to this thorn than dry upland; but in the experiments of these intelligent farmers it has been found that good fertile upland is incomparably better.

The sudden failures, however, of this thorn, in some places further south, should induce its cautious use on a large scale, especially while American species have been found in most parts of the country so much superior. The Washington thorn, (*Cratægus cordata,*) is preferred by some, and possesses the advantage of the seeds vegetating freely the first year. But in Pennsylvania and Delaware, where both this and the Newcastle thorn (*C. crus-galli*) have been extensively used for many years, the latter has in all cases been found so decidedly superior in hardiness, vigor and freshness of growth, to the former, as to give it eminently the preference. Indeed, the Newcastle thorn, appears to be the only American species extensively tried, which has, *in all cases whatever*, proved to be entirely free from all disease or defect. It is not improbable, however, that the Washington thorn may succeed finely so far north as northern or western New-York, where the English species is itself so much more successful than elsewhere. Its easy growth from seed, besides, renders it worthy of trial. There are other trees, doubtless, of value for this purpose. The Buckthorn has been found perfectly hardy and successful around Boston; and the poisonous character of its bark secures it from attacks of the mice. Its thorns are only the pointed ends of the branches, which are hardly sufficient to repel all kinds of intruders. Of its treatment by successive heading down, its *felting* quality, and its capability of plashing, we are not informed, as in nearly if not quite all the specimens we have seen, these operations were omitted.

The expense of a *well made* hedge, until it is cattle proof, is about fifty cents per rod. Caleb Kirk, of Delaware, who was thorough and successful in his experiments, gave the following, as the cost of an excellent hedge thirteen years old:

1000 quicks, cost from nursery,..........	$5.00	
Planting, man and boy, each two days, ...	2.50	
Dressing, first year, with plow and hoe, ..	1.00	
Expenses first year,..................		$8.50
Dressing for five successive years, plow and hoe,...........................		5.00
7th year, trenching with plow, and throwing up ditch, three days, ...	$3.75	
500 stakes (for uprights,) cutting, and timber,............................	3.50	
Poles, (horizontal,) and cutting them,....	2.00	
One hand 3 days, at plashing,............	3.00	
		12.25
8th to 13th year inclusive, one day each year trimming and cleaning,...........		4.50
Expense 13 years, sixty rods,..........		$30.2

It may be questioned whether hedges will ever be extensively used where timber or stones are plenty. But as many places are destitute, or likely to become so, experiments to determine their practicability must become very desirable. The disposition to neglect is so prevalent with most farmers, that *the great care and attention, and constant culture*, so necessary, will not be given, and success cannot take place in such cases. But with skilful management and enterprise they will doubtless be found highly profitable; that if good they will prove a great rural embellishment, we all know; and that those who have fruit gardens to protect from rogues, will find them the greatest security, is equally self-evident.

HANGING GATES.

The convenience of a *self-shutting gate*, is such as to need no argument to prove its utility. Various expedients are resorted to, and we see all over the country, chains and ropes with suspended weights to cause gates to shut of their own accord. But all this tackle and rigging is avoided, if the gate is hung to its post with a proper inclination.

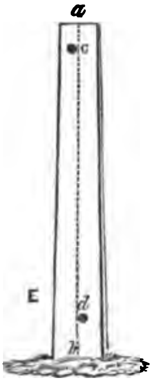


Fig. 98.

The mode of hanging a gate so as to shut by its own weight, is represented in the annexed figures. Fig. 98 shows the post set perpendicularly in the ground. On the face of this post the plumb line *a b* is to be drawn. Then bore the hole for the upper hinge at *c*, one inch to the left of this line, and for the lower hinge one inch to the right. When the gate therefore is hung, the turning point of the upper hinge will be two inches more to the left than the turning point of the lower. This will cause the gate to fall to the left or towards E; but if it is opened wider than a quarter of a circle, it will then begin and fall the other way or wider open. To obviate this, let the upper hook in the post project two inches more than the lower, and the lower eye on the gate project two inches more than the upper eye, as shown in fig. 99; the gate then will fall shut, if not opened more than three quarters of the semi-circle, which is about as wide as is generally needed. The distance between the gate and the post in the figure is represented as greater than in fact, to exhibit the principle more plainly. Reversing the position of the holes, placing the upper one to the right and the lower to the left of the plumb, will of course make the gate fall to the right as circumstances may require.

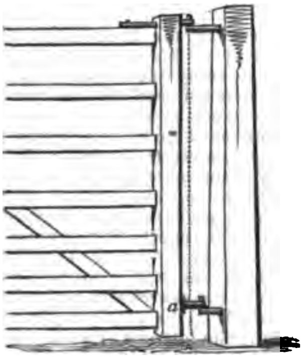


Fig. 99.

Although always desirable that the gate should shut itself, it is often convenient when opened nearly to its extreme limit, that it fall the other way, in order to remain open without fastening. If this limit is little more than a quarter of a circle, it may be hung merely as indicated in fig. 98. If more than three-quarters of the semi-circle, let it be hung as shown by the two figures combined. But, to be applicable to all circumstances, the principle should be known; which is this—suppose the gate is hung so as to swing freely through the whole circle—if the two turning points are in the same perpendicular line, it will of course remain at rest wherever it is placed, and not turn of itself. But if the perpendicular line from the upper falls to a point a short distance from the lower, then a line connecting this point with the lower turning point, will show the direction the gate will remain at rest. A figure, (fig. 100,) will make this plainer; let *a* be the lower turning point, and *b* the upper; then the gate will remain at rest in the direction of the line *d b*, and the highest point of elevation, from which it will fall both ways, will be *e*. But if *c* be the upper turning point, the gate will remain on the line *f*, *c*, and the highest point of elevation will be *g*.

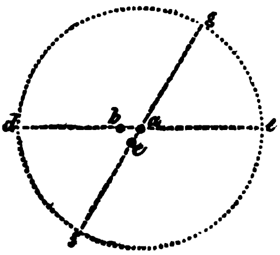


Fig. 100.

The *force* with which the gate will fall shut will be as the distance of the lower turning point from the plumb line; where this distance is small, it will shut slowly; where it is great, it will fall rapidly against the post. By cutting a screw on the part of the lower hinge which enters the gate, the distance from the post may be changed by the nut *a*, fig. 99, and the gate thus raised or lowered at pleasure to avoid the inconvenience of the sinking of the post, or of obstruction from snow.

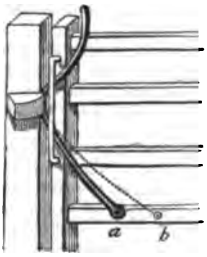


Fig. 101.

Figure 101 represents an excellent and cheap gate latch, made by bending a half-inch rod of iron in the shape indicated, and fastening it by an iron pin on which it moves at *a*. Its weight causes it to fall against the post. If bent in the direction of the dotted line and and moving on a pin at *b*, it will fall more quickly.

If any one should think too much space is occupied by these apparently trifling matters, let him calculate the labor of dragging a single gate over the ground for one year, and fastening it by tying a cord or leather strap round it every time. If passed ten times a day—many are passed five times the number—it would be more than three thousand times a year. To drag open and shut and fasten such a gate, that number of times without stopping, would be hard indeed; and the labor would pay for many gates, hinges, fastenings and all.

AGRICULTURAL EXHIBITIONS.

The spirit which has this year been evinced in regard to the exhibitions of agricultural societies, is highly gratifying. From all parts of the country we are receiving accounts of these exhibitions, and all agree that the interest and zeal manifested, is beyond any former precedent. We regard this as a positive indication of the advance of agricultural improvement—it shows that the people are awaked to its importance, and that a determined action is aroused, the beneficial results of which cannot fail to be experienced.

From this state, we have already received accounts from fifteen county societies, the exhibitions of which were held as follows:—Cayuga co. at Auburn, Oct. 8th and 9th—Herkimer co. at Herkimer, Sept. 25th and 26th—Oswego co. at Oswego, Oct. 00—Chautauque co. at Forestville, Sept. 24th and 25th—Westchester co. at White Plains, Oct. 8th—Erie co. at Buffalo, Oct. 8th—Montgomery co. at Canajoharie, Oct. 8th—Columbia co. at Hudson, Oct. 7th—Onondaga co. at Syracuse, Oct. 8th—Ulster co. at Rosendale, Oct. 7th and 8th—Madison co. at Hamilton, Oct. 1st—Wyoming co. at Perry, Oct. 1st and 2d—Wayne co. at Palmyra, Oct. 1st and 2d—Rensselaer co. at Troy, Oct. 8th and 9th—Greene co. at Cairo, Oct. 00

From Vermont, also, we have accounts from several societies. The Addison county society held its exhibition at Middlebury, Oct. 2—Chittenden co. at Burlington, Sept. 24 and 25—Windsor co. at Newfane, Oct. 1. From Connecticut and Massachusetts we have likewise accounts, which, as well as those from other states, we shall notice as we find room.

We have room in this number for no more than a brief notice of these shows—indeed some of the reports received furnish no more than a mere statement of the awards, without comment or remark.

The show at Syracuse, is spoken of as quite superior to former years—in *sheep* of various kinds, it was deemed not far behind that of the State Society. Premiums were awarded for the best cultivated farms, of which, however, we shall not here speak particularly, as it is our intention to make a personal examination of those farms and others of that fine section, before our next no. goes to press.

The show at Auburn is said to have been better than any previous one. A rule has been adopted that hereafter, cattle, sheep, and hogs, shall only be considered in competition with those of the same breed.

At Hamilton the show was particularly good in dairy products and cattle. From 200 to 300 animals of all kinds were on the ground—all generally superior. The sheep were thought to have been unsurpassed at the State Show. Premiums were awarded for the best cultivated farms—Alanson Annas, of Cazenovia, taking the first, and Rufus S. Ransom, of Fenner, the second. Daniel Gates, of Sullivan, was deemed to have the best cultivated farm in the county, but he has before taken the first premium.

At Poughkeepsie the show was good in all respects. Premiums were here awarded for the best cultivated farm. Mr. Sheafe taking the first—in relation to which an extract from the report of the committee will be found in another part of this paper.

At Buffalo the weather was rainy and uncomfortable, which operated against the exhibition. The show of "blood and grade stock was not so good as the two previous years." Of sheep, the show was superior to former years—there were good specimens of long wooled breeds and others. Excellent cheese was shown from Hamburgh and other parts of the county.

The exhibition of Chautauque county at Forestville, is said to have been on all hands superior to former years. There was a fine display of horses, fine-wooled and long-wooled sheep, butter and cheese, and a long list of miscellaneous and manufactured articles. Altogether, it is said, the show evinced that the farmers of that county are advancing rapidly in improvement.

We notice that several societies, among which we would name that of Barbour county society at Eufaula, Alabama, and Ontario and Saratoga in this state, have awarded volumes of the Cultivator as premiums. The number of volumes which have been thus distributed, is greater this, than in any previous year, and we wish to tender our most respectful acknowledgments, for the confidence which has been in this manner expressed in the usefulness of our work.

EXHIBITION OF THE RENSSELAER COUNTY AGRICULTURAL SOCIETY.—This exhibition took place at Troy, on the 24th and 25th of September. The weather happened unfavorable the first day—it being rainy in the forenoon, leaving the ground in a damp, unpleasant condition. This probably prevented the show being as full in some departments as it otherwise would have been. Still the show may be said to have been on the whole better than that of last year. The show of fabrics and mechanical productions was good and highly creditable to the manufacturers and citizens of Troy and vicinity. Among the implements we noticed a tool calculated for various purposes—such as cultivating various crops, digging potatoes, &c., &c., which we thought valuable, offered by J. D. Dale, Lansingburgh. A very curious bee-hive, with the bees in it, was offered by E. L. Roberts, Brunswick. It consisted of several apartments which could be opened like a book-case, showing the bees at their work, throughout the whole colony. A model bee-house, with boxes of fine honey, offered by Nathan Howard, Stephentown. We should think the house an admirable one for the safety of the bees, convenience of managing them, &c. Townley's bee-hive, with speciment of honey from it, was also shown. The Horticultural department presented a good display of apples, grapes, and some fine pears and peaches, from the gardens of Messrs. Vail, Van Rensselaer, Kelly, and Buswell. Among the fabrics, we noticed some excellent samples of ginghams, one piece of which was in the loom only two hours before it was exhibited at the show. These were offered by Benjamin Marshall, of the Troy Mills, who also presented a most superior piece of fine shirtings, with the "linen finish,"—much admired by all.

The cattle, with the exception of four or five fine animals from Mr. Vail's herd, were mostly of the common and mixed breeds, and among them were several good milch cows. The working cattle were many of them good in appearance. The display of horses was very good, and there were many very fine ones for the carriage and the road. Of swine we noticed some fine pigs, a cross of the Berkshire, offered by Isaac Tallmadge, Scaghticoke, and some fine Leicester pigs by Elijah Pearl, Troy. Of sheep, we noticed several lots of mixed blood, South Down, Leicester, Cotswold, and common, which appeared to be very good for mutton. Also some good fine wooled sheep. Five wethers, Saxon and Merino, crossed, offered by Isaac Tallmadge, were the fattest sheep of that blood we ever saw, and we were told they had only been fattened on grass. A beautiful yearling Merino buck offered by B. H. Streeter, Berlin, purchased at Poughkeepsie last year of J. N. Blakesly. A fine show of geese and ducks was made by Edward Lyons, Troy, embracing Wild and Chinese geese, cross-breed do., and some very handsome Muscovy ducks.

The address, which we regret not being able to hear, was delivered by J. B. NOTT, Esq., Guilderland.

ONEIDA COUNTY.—This exhibition took place at Rome, on the 9th and 10th of September. From a letter of a correspondent we make the following extracts:—

"It is but justice to the ladies of Oneida to say that their department was admirably represented, and the premiums were distributed so as to afford, we believe, general satisfaction. The exhibition of fruits was very good, and of vegetables, notwithstanding the dryness of the season, more were exhibited than formerly. Our show of horses was decidedly good and quite extensive.

"Of cattle we had seven entries less than last year. This was owing partly to the near approach of the State show, but perhaps more to the poor condition in which many cattle are this fall. We have had very little feed since midsummer, and consequently cattle are not in high order.

"The address was delivered by the President of the Society, [E. Comstock, Esq.,] at 3 o'clock, P. M., of Tuesday. On Wednesday morning the plowing match was held. Most of the farmers believed that the ground was too hard to admit of plowing at all, and none but the most resolute and experienced plowmen ventured to enter. There were, however, seven teams in the field, (which number would have been more than doubled had the ground been in good condition,) every one of which did admirable work. Indeed, we have never seen better work done any where. The reports of the committees were announced at 2 o'clock, P. M., on Thursday, during the reading of which the deepest interest was manifested by all present, and the exercises closed without a single occurrence calculated to create unpleasant feelings, or affect injuriously the interests of the society. The receipts were fully sufficient to pay all premiums and expenses. About six hundred dollars were received by the Treasurer, including the amount received from the state."

MONROE COUNTY.—Our "Farmers' Jubilee," or annual Fair, was held in the city of Rochester, on the 7th. The day was fine, and the display, as a whole, more spirited, and the attendance more general, than on any occasion of the kind in this county, for several years. There was a superior display of fruits and vegetables—more and finer varieties of apples, in particular, than I recollect ever having seen at any of our Fairs—the State Fairs not excepted. The show of horses was somewhat large, but not very select—there were a few very fine ones, however. Of cattle the display was, perhaps, an improvement upon the show of last year, especially in the improved breeds, though far below what it ought to have been. Our friend GARBUT, of Wheatland, had a lot of his beautiful Devons on the ground, some of which took premiums, and your friend HYATT, the "printer-farmer," was there with his little herd of Herefords and Durhams, seven in number, *all of which took premiums*. Don Quixotte, the Hereford, (2 years old in August,) took the first prize as the best bull over two years old in his class, which embraced Durhams, Herefords, Devons and Ayrshires,; and Emma, Hereford, took the first prize as the best two year old heifer, in the same class. ["Don" and "Emma," you will recollect, both took the first premiums as the best two year olds in their class, at the recent State Fair at Utica.] Albino, another of the seven, received the first prize as the best yearling bull in the same class with the Herefords; he took the first prize last year, at the Poughkeepsie State Fair. There were several very fair Durham bulls, of various ages, present; also a tolerable lot of grade and native cattle; there were also several noble pairs of working oxen, that would not suffer by a comparison with any that were at the recent State Show. Of hogs, there were but a few that might be ranked as good. Of sheep, there were a goodly number, of fine and long wooled, of the Merino, Paular, South Down, Cotswold, &c. Gen. Harman's Paulars were very fine. There was a tolerable display of farming utensils, domestic fabrics, &c. There were several beautiful varieties of dahlias and other flowers, presented by Messrs. Ellwanger & Barry, Mr. King, Mr. James Whitney, &c. The address was delivered by L. B. LANGWORTHY, Esq., Col. Randall, of Cortland, who had been invited, and was expected to perform that duty, having been prevented by sickness in his family. Upon the whole, the Fair went off as well as had been anticipated—and the farmers of Monroe have reason to be encouraged in their labors by seeing the evidences which were there exhibited of the onward progress of agricultural improvement. *Elmwood Cottage, Oct.* 9, 1845.

T. H. H.

LIVINGSTON CO.—Extract of a letter from C. H. BRYAN, Esq., Geneseo, Oct. 10:—"Our cattle show and fair was decidedly more interesting and more numerously attended than any previous one. There could not have been less than 3,000 persons present."

SARATOGA.—The cattle-show was held at Ballston Spa on the 15th ult. and a letter from a getleman present, informs us that it was "decidedly the best one ever held in the county."

HARTFORD COUNTY (Ct.) AGRICULTURAL SOCIETY.—The exhibition of this society took place at Hartford on the 3d of Oct. From one of the officers, we have received the following sketch:—"We had fine weather, and a splendid show of fine cattle—more good animals, I think, than we ever had before. We had an excellent address, and a *good dinner*, &c. The exhibition of *fruit* was perhaps equal to any show of the kind in the country. Vegetables were likewise superior—domestic manufactures, arts, and *fine* arts also good. Mr. Ellsworth had a gold medal awarded him for his self-acting pump."

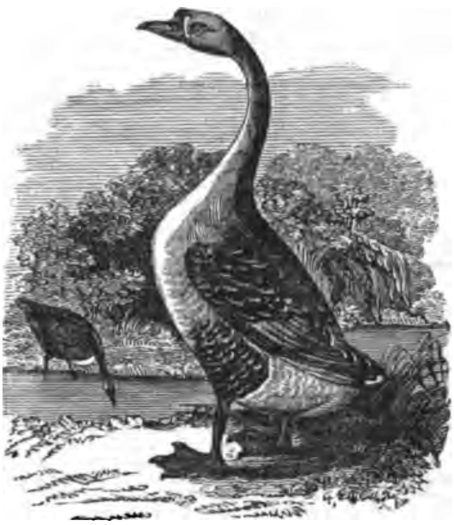
R. I. HORTICULTURAL SOCIETY.—The first exhibition this Society, was held at Providence, on the 1st of Oct., and "exceeded in variety, quality and excellence, all expectations," the number of samples of fruit alone amounting to 530.

IMPORTATION OF CATTLE INTO MASSACHUSETTS.

THE Massachusetts Society for Promoting Agriculture, instead of having a public show this season, appropriated a portion of its funds for the importation of cattle. An agent, Mr. A. Beckett, of Lowell, was sent to England and Scotland for the purpose of procuring the best samples of the Devon and Ayrshire breeds to be found. Mr. Beckett returned to Boston about the first of October, bringing with him, as we learn from the N. E. Farmer, four cows and a bull of the Ayrshire breed, four North Devon cows and a bull, and a calf dropped by one of the Devon cows on the passage. They are spoken of as being very fine, each lot exhibiting the peculiar points and marks which are most prized in their breed. Their cost, original purchase and expenses added, is stated to be about $3000—or $300 each. The Devon cows were purchased of Lord Leicester, of Holkham, Norfolk, and the Devon bull of Mr. Bloomfield, whose stock is well known, and is considered equal to any in England. It was from his herd and Lord Leicester's that Mr. Patterson, of Baltimore, obtained his much admired Devons.

The Ayrshires are spoken of as "perfect in their kind." They were selected from several of the best herds in Scotland.

We have no doubt this stock will be of great value to Massachusetts, and even to other states.



CHINESE GOOSE.—(Fig. 102.)

There are probably several varieties of geese in the "Celestial Empire." We have seen two or three kinds which have been brought to this country. One kind were uniformly of a dusky white color, though in other respects resembling the grey variety, for one of which the above cut was taken. This grey kind are very prolific, hardy, and profitable. We know of none equal to them in these respects. They will rear two broods in a season, and though the last ones do not come out till autumn, and the nights are frosty, they get along and grow through the winter without any trouble—laying and rearing a brood for themselves the next season.

At the Fair at Poughkeepsie in 1844, Messrs. A. & H. Mesier, of Fishkill, exhibited some of these geese, which attracted much attention. We had the pleasure of making a visit to Messrs. Mesiers' farm in August last, and there saw altogether the finest flock of these geese we ever met with. There were three or four broods of goslings which were hatched in May, grown up—apparently as large as the old ones—and the geese which hatched these were all then sitting for a second brood, which were expected out the first of September.

The form of these geese is very handsome—their necks are long, with a graceful curve—their bodies round, and thickly covered with fine feathers. The upper part of the bill rises in a knob—a characteristic of all the Asiatic goose-tribe, so far as we know—and both the bill and legs are black. Their general color is almost as uniform as that of our American wild geese. Their flesh is considered superior.

These geese should not be confounded with the large African variety, called by Cuvier *swan geese*, which are of enormous size, but rather unprolific.

The above cut was taken for a Chinese goose belonging to Mr. C. N. Bement, to whom we are indebted for a loan of the cut.

Dig out peat and muck, and let the frost and rains act on it through the winter.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, October 23, 1845.

COTTON.—The variation from the prices given last month, may be said to be a decline, experienced since the arrival of the steamer of the 19th, of ⅛ to ¼ cent per lb.

BUTTER.—Western, 11a14—Goshen, 18a25.

CHEESE—5½a7.

FLOUR—The advance occasioned by the news per the steamer Great Britain, is stated at 75 cents per bbl. on common qualities, and 50 cents on extra. Michigan and Ohio, $5.31a$5.35—Genesee, $5·44—City Mills, $5.75.

GRAIN—Wheat, $1.19a$1.20.

HEMP—Dew rotted, American, per ton, $90—Sisal, $130.

HOPS—per lb. 15a16 cents.

HAMS—scarce, 8½a9 cts.

BEEF—Mess, $9.

LARD—8a8½—in demand.

PORK—In demand—Ohio $13.87½.

TOBACCO—Kentucky, per lb. 3 cents—Connecticut seed leaf, 8a10.

WOOL—(Boston prices.) Oct. 22:

Prime or Saxony fleeces, washed per lb.......	$0.37a0.40
American full blood fleeces,..................	35a0.37
" three-fourths blood fleeces,........	33a0.34
" half blood do	31a0.32
" one-fourth blood and common,....	28a0.30

ALBANY, Oct.24.—Sales of flour have been made to-day of Genesee and good western at $5.44a$5·56¼ A load of Genesee wheat was sold at $1·16. Barley sells at 57a59c. for two rowed: a prime lot of two-rowed is in market at 63½c.—no sales four-rowed. Oats, 40a41c. Rye, 72½c. in the streets.

VALUABLE WORKS, BY A. J. DOWNING, Esq.

1. *The Fruits and Fruit Trees of America*, or the Culture, Propagation and Management, in the Garden and Orchard, of Fruit Trees generally; with descriptions of all the finest varieties of Fruit cultivated in this country. 1 thick vol. 12 mo. Fifth edition, with many engravings.—$1·50. Or a superior edition, in large 8 vo., to match the author's other works. $2.50.

"At length we have the gratification of announcing this long expected work, and from a perusal of it, we can say, that nothing compared with it on the subject of Pomology has yet been published in the United States. This work will unquestionably now become the standard pomological work of this country; for the great care bestowed on the different kinds, arranging and connecting numberless synonyms, and giving accurate outlines and descriptions, will make it a safe guide."—*American Agriculturist.*

2. *A Treatise on Landscape Gardening*; adapted to North America, with a view to the improvement of Country Residences. Comprising historical notices, and general principles of the art; directions for laying out grounds, and arranging plantations; description and cultivation of hardy trees; decorative accompaniments to the house and grounds; formation of pieces of artificial water, flower-gardens, etc.; with remarks on Rural Architecture. New edition, with large additions and improvements, and many new and beautiful illustrations. 1 large vol. 8 vo. $3.50.

This volume, the first American Treatise on this subject, will at once take the rank of THE standard work."—*Silliman's Journal.*

"Downing's Landscape Gardening is a masterly work of the kind —more especially considering that the art is yet in its infancy in America"—*Loudon's Gardner's Magazine.*

3. *Designs for Cottage Residences*, adapted to North America, including Elevations and Plans of the Buildings, and Designs for Laying out Grounds. By A. J. Downing, Esq. 1 vol. 8 vo., with very neat illustrations. Second edition, revised. $2.00.

A second edition of "Cottage Residences" is just published as Part 1; and it is announced by the author that Part II., which is in preparation, will contain hints and designs for the *interiors* and furniture of cottages, as well as additional designs for farm buildings.

4. *Gardening for Ladies*; and Companion to the Flower-Garden. Being an alphabetical arrangement of all the ornamental plants usually grown in Gardens and shrubberies; with full directions for their culture. By Mrs. Loudon. First American, from the second London edition. Revised and edited by A. J. Downing, Esq. 1 thick vol. 12 mo., with engravings representing the processes of grafting, budding, layering, &c, &c. $1.25

"This is a full and complete manual of instruction upon the subject of which it treats. Being intended for those who have little or no previous knowledge of gardening, it presents, in a very precise and detailed manner, all that is necessary to be known upon it, and cannot fail to awaken a more general taste for these healthful and pleasant pursuits among the ladies of our country"—*N. Y. Tribune.*

Published and for sale by WILEY & PUTNAM,
Nov. 1—3t. 161 Broadway, N. Y.

ILLINOIS FARMS FOR SALE.

THE subscriber offers for sale a splendid farm of over 1000 acres, in La Salle county, within five miles of Peru, the termination of the Illinois and Michigan canal, oak openings, rich deep soil, beautifully situated on a Plateau, watered by the Little Vermillion and the Tomhawk, excellently adapted for a sheep farm. There are about 2000 sheep at present on the farm, with fences, &c., suitable, and a field sown with cultivated grasses—about 200 acres under cultivation.

Also other farms in the vicinity of Chicago and the canal, one on Rock river, and one in Wisconsin \ BRAND.
Chicago, Oct., 1845.—1t*

COTSWOLD SHEEP FOR SALE.

THE subscriber being desirous of retaining upon his farm only the South Down sheep, offers for sale his flock of Cotswolds, consisting of 6 rams—one 4 years old, one 3 years old, one 2 years old, two yearlings and one lamb; the two former having taken the first prizes at the State Fair and at the Fair of the American Institute. Also twenty ewes—three being lambs—the remainder from one year to four years old. The rams and fifteen of the ewes are all bred from sheep imported by Messrs. Corning and Sotham, and five ewes from the flock of Mr. Thos. Dunn.

Albany, Oct. 22, 1845. J. M'D. M'INTYRE.

GARDENER WANTED.

A YOUNG MAN of good character, who understands his business thoroughly, may hear of a pleasant and permanent situation, on application to the Editor of the Cultivator. Oct. 15—1t*

CENTRE DRAFT PLOWS.

D. PROUTY & Co., Nos. 19, 20, & 22, North Market-st. Boston. manufacture and keep for sale, a large assortment of the most improved Implements of Agriculture, including their celebrated CENTRE DRAFT PLOWS, Cultivators, Harrows, Straw-Cutters, Seed Sowers, Vegetable Cutters, Corn-Mills, Ox-Yokes, &c. &c. For the character of their plows, they have only to refer to those who have used them. The demand for them for a few years past has been great—they having been sold extensively over the country from Maine to Louisiana, and the western States, as well as in the British Provinces; and have not failed to satisfy all purchasers of their great superiority in the qualities of neatness of workmanship, strength, durability, ease of draft, and complete execution of the work.

The above articles are for sale at the ALBANY AGRICULTURAL WAREHOUSE, No. 23 Dean-street, at the Manufacturer's prices.

FARM FOR SALE.

THE subscriber offers for sale the farm upon which he now resides, situate in the village of Auburn, in the county o Cayuga, and containing 100½ acres.

This farm lies upon the south side of the western turnpike, (now Genesee-st., Auburn,) and is well known as having been the residence of Hon. Nathaniel Garrow, deceased, for many years.

The buildings, fences and other erections thereon, are ample and in good repair; the soil will vie with that of any other farm in Western New-York, for fertility, variety and earliness of vegetation. Great attention has been paid ae well by the former as also by the present owner, to the selection and cultivation of choice fruit, and there is now upon the farm, in full bearing, a great abundance of the best varieties of apples, pears, cherries, peaches, grapes, &c. &c. The farm is well watered, durable springs, which give a never failing and ample supply.

The location is believed to be as desirable as that of any other arm in the state, as well for farming purposes as also for the residence of the gentleman or a man of business, being withing a few minutes walk from the Rail Road Depot, and within a few rods of the Female Seminary.

A credit will be given, if desired, for a large portion of the purchase money, for a term of years upon payment of interest annually. Inquiries may be made of the subscriber upon the premises, of LUTHER TUCKER, Esq., Editor Cultivator, Albany, or of DAVID WRIGHT, Esq., Auburn. JOHN REMER.

Auburn, N. Y., July 14, 1845.—3t.

NEW AND IMPROVED POUDRETTE,

MADE by the Lodi Manufacturing Co., may be had by application at the office of the Company, No. 51 Liberty-street, New-York, or by addressing a letter (post paid) with directions how to ship, &c., to "The Lodi Manufacturing Co., New-York." The price for it, delivered anywhere in New-York city, free of cartage, &c., is as follows: For one barrel, $2.00; for two bbls., $3.50; for three barrels, $5.00; four barrels, $6.62; five barrels, $8.00; six barrels, $9.75; and for any quantity over six barrels, $1.50 per barrel. Pamphlets and instructions for its use, may be obtained gratis at our office.

The Lodi Manufacturing Co., defy competition in the art of making a *cheap*, *powerful*, and *lasting* manure, and strenuously invite a fair trial between *an equal cost* of their poudrette, and an equal cost of the best guano in existence.

It is hoped that the successful trial of poudrette upon wheat, on Long Island, the last season, will encourage many others in other parts of the country, to make a trial of its effects this season. Quantity per acre for wheat is 10 barrels, or 40 bushels, sown broadcast with the seed, and harrowed in.

Sept. 1—2t.

RENSSELAER INSTITUTE.

A PRACTICAL, SCIENTIFIC, AND MATHEMATICAL SCHOOL.

THE winter term of this institution will commence on Wednesday, the 5th of November next. The course of studies pursued is still the same with that pursued when under the charge of Prof. Eaton, with the addition of Theoretical Mathematics.

The following is a brief view of the branches pursued in the Institute.

1. Theoretic Mathematics.
2. Practical Mathematics with special application to Surveying, Navigation, and Civil Engineering.
3. Natural Philosophy, including Mechanics, Hydrostatics, Hydraulics, Pneumatics, Optics, Electricity, and Magnetism, with their applications.
4. Chemistry, exerimental and practical. This science will be taught and illustrated with particular reference to Agriculture and the Arts.
5. Natural History, including Botany, Geology, Mineralogy and Zoology.
6. Occasional lectures will be given on subjects pertaining to Taste, Morals, and the Christian Religion.

Besides the courses of lectures by the Faculty, each student is required to give lectures on the branch of science which he is pursuing, illustrating his subjects—in Mathematics and Natural Philosophy by surveys, measurements, observations, or experiments of his own—in Chemistry with experiments performed with his own hands—and in Natural History, as far as possible, by specimens of his own collection; and he thus acquires theoretic and practical knowledge, as he is explaining it to others. In this method of instruction it is hardly possible for a person to pass through the appointed lectures, illustrations and experiments, without attaining an intimate and familiar acquaintance with the studies prescribed. The learner becomes himself the teacher, and he must first learn in order thus to explain his subject to others.

Rev. N. S. S. BEEMAN, D. D., Prest.
WM. P. VAN RENSSELAER, } V. Pres'ts.
Hon. DAVID BUEL, }
GEORGE H. COOK, } Professors.
JOHN WRIGHT, M. D., }

The price for tuition will be $15 per term—two terms in the year—one commencing on the first Wednesday in November, and continuing 20 weeks, and the other commencing on the first Wednesday in May, and continuing 22 weeks. Those who perform a course of experiments with their own hands, are charged $8 extra for chemical substances and apparatus, unavoidably destroyed.

Board can be had from $2 to $2.75 per week.

Oct. 1, 1845—2t.

FRUIT TREES.

THE subscribers are now ready to receive orders for *superior Fruit Trees*, viz: APPLES, PLUMS, PEARS, CHERRIES, PEACHES, Quinces, &c., &c., from *their new and extensive nursery*. Their assortment, which they offer for sale the coming fall, is very large and fine. The trees are handsome, thrifty, and of the most suitable size and age for transplanting, and being propagated by the proprietors themselves with the most scrupulous care, either from bearing trees in their own grounds, or from others of undoubted genuineness, and being in every other respect until they are sent from the nursery, under their *immediate personal supervision*, they can be confidently recommended.

It is expected that all orders coming from persons unknown to the proprietors, will be accompanied by a remittance, or that some responsible reference will be given. Orders are entered on the order book, to be forwarded as soon as practicable in the fall. Orders respectfully solicitied, and will receive prompt attention.

WILSON, THORBURN & TELLER, or
WM. THORBURN, Seedsman, 38 Broadway,

Albany, *Sept.* 1—3t.

☞ A liberal discount made to those who purchase to sell again, or by wholesale.

PRINCE'S LINNÆAN GARDEN AND NURSERIES,

Flushing, L. I., near New-York.

THE GREAT ORIGINAL ESTABLISHMENT.

THESE Nurseries are not only the largest in the Union, covering near 60 acres, but the collection of Fruit and Ornamental Trees, and Plants, is the *most extensive and select* in America, being the result of investigation during a century. The specimen grounds comprising 1700 trees from which the Nurseries are ingrafted, thereby ensuring their accuracy. The collection contains more than 500 *new and rare varieties* of fruits, and above 1000 rare varieties of flowering shrubs, and roses, that are in no other nursery. The new descriptive Catalogues, with reduced prices, and directions for culture, will be sent to every post-paid applicant, and all orders will be executed with that accuracy and dispatch which characterize the establishment. The public are cautioned against a spurious use of our name and title, by an Attorney at Law, named Winter.

Oct. 1—1t. WM. R. PRINCE & Co.

SEEDLING APPLE-TREES FOR SALE,

BY J. J. THOMAS, at his Nursery, Macedon, Wayne Co, N. Y., one year old, and from 5 to 10 inches high, at $3 per thousand. No charge made for packing, for orders of 5000 each; or 50 cts. per 1000 for less. Orders to be post-paid and accompanied with remittances.

Oct 1—1t.

BOOKS FOR SALE.

AMERICAN Farmer's Encyclopedia, price $4—Skinner's Cattle Doctor, price 50 cents, and a variety of other works, for sale at the office of "The Cultivator."

FAN MILL AND CRADLE MANUFACTORY.

THE subscribers continue to manufacture Fan Mills and Grain Cradles of the very best quality. The subscribers have recently improved their Fan Mills, so that wheat and all other kinds of grain and seeds are thoroughly cleaned by being run through the mill once. Said improvement has been secured by letters patent, bearing date the 10th day of July, 1845.

Notwithstanding the labor and expense which we have bestowed upon the improvement of our Fan-Mills, we are enabled to furnish the "Patent Fan-Mills" at the same prices which we have received for mills heretofore manufactured by us.

We manufacture four different sizes of Fan-Mills, seven sieves to each mill. Prices from $21 to $27, according to size.

Orders from abroad promptly filled, and a liberal discount to dealers.

I. T. GRANT,
D. H. VIALL.

Schaghticoke, Junction P. O., Rensselaer Co., N. Y.

We the subscribers certify that we have witnessed the operation of I. T. Grant & Co.'s "Patent Fan-Mill," upon wheat and all kinds of grain and seeds, and have no hesitation in pronouncing it superior to any mill now in use. The operation of cleaning wheat is performed with one-half the time and labor required by other mills, as it chaffs and screens at the same time. All kinds of grain and seeds are thoroughly cleaned by being run through the mill once. We cheerfully recommend, and advise all farmers who wish to purchase a fan-mill, to purchase the "Patent Fan-Mill" manufactured by I. T. Grant & Co.

John M. Mott,
L. D. Eddy,
Cha's J. Wilber,
James H Rice,
Moses Buckley,
P. G Williman,
Calvin Morse,
James H. Jones,
H. K. Duer,
John Case,
Henry P. Stuntz,
Philip H. Stuntz,
Edwin Smith,
James G. Gordon,
George W. Corry,
Francis Crocker,

I know little of the utility of the fan-mill above described except from information. I am, however, personally acquainted with almost every one of the above subscribers, and have no hesitation in saying that the most implicit confidence may be reposed in all they certify. JOB PIERSON.

I am intimately acquainted with the Hon. Job Pierson, who has signed the above certificate. He is a highly respectable man, (formerly member of Congress,) and I have great confidence in him.

W. L. MARCY.

For sale at WARREN'S, in Troy, D. L. CLAWSON'S, No, 192 Water-street, New-York, and at COMSTOCK & Co.'s Agricultural Warehouse, Albany. Sept. 1—3t.

WILLIAM HOVEY'S PATENT STRAW CUTTER.

THE subscriber having made some important improvements in his tools and machinery for building his celebrated Straw Cutter, is now able to offer them at the following reduced prices:—

No. 1,	$10,	former price	$12.
No. 2,	$12,	" "	$15.
No. 3,	$15,	" "	$20.
No. 4,	$20,	" "	$25.
No. 5,	$25,	" "	$30.
No. 6,	$30,	" "	$35.

A liberal discount will be made to dealers. The great advantage that these machines have over all other Cylinder Cutters, consists principally in the ease and facility with which the knives can be adjusted, for which he holds letters patent. Any one knife may be taken off and ground without taking off the whole number; and should any one knife become narrow by grinding, the edge can be set out by set screws, so as to come in equal contact with the hide roller, without the necessity of grinding all the other knives down to the same width. The wings to which the knives are fastened are of vast importance, as they serve to strengthen and support the knives, and prevent them bending while cutting cornstalks or other coarse fodder.

Machines will probably be offered by others in the market, made to resemble these Cutters, but entirely without the above named improvements. The knives are fastened on a cylinder without wings to support them, and are confined by rings on each end. No one knife can be taken off without the whole number—and in case of inequality in the width of knives, the machinery becomes useless unless they are all ground equal, as there are no means of setting out the edges to make them cylindrical, and it will be extremely difficult to grind them so perfect that they will all come witth equal contact on the roller on which they are designed to cut. Should such an imperfect article be wanted on account of cheapness, the subscriber will furnish a better one at a cheaper rate.

CAUTION.—Any person who shall make, use, or sell to others to be used, any of the above improved Cutters, will be held accountable for the infringement of the above named patent.

Worcester, Mass., August, 1845. WILLIAM HOVEY.

N. B. Ruggles, Nourse & Mason, having ceased to act as my agents, a full assortment will be kept for sale at the Farm Implement and Seed Warehouse of D. PROUTY & CO, Nos. 19, 20, and 22 North Market-street, and 19 Clinton-street, Boston. They are also for sale at COMSTOCK & Co.'s Agricultural Warehouse, Albany. Sept. 1—3t.

FINE WOOLED BUCKS FOR SALE.

SEVERAL Bucks, of various ages, and of the best quality, both for fineness and weight of fleece, as well as for shape and constitution, can be had if applied for soon. A part of them are *pure* Merino, and a part a cross of the Merino and Saxon. Address, *post-paid*,

SANFORD HOWARD,
Office of the Cultivator.

Albany, Oct. 1.

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☞ ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.

ONION SEED.—1000 lbs. of Blood Red Onion Seed.
160 " Pure White " "
500 " Yellow " "
all the growth of the present season and raised from selected roots. For sale at the Seed Store of the Hartford Co. Ag. So., by
Hartford, Ct., Oct. 10, 1845.—3t E. W. BULL, Seedsman.

GARDEN SEEDS.

THE subscriber (who has been for years the most extensive practical seedsman in America,) would inform dealers in seeds, that his crops are now nearly all harvested, and that orders can be speedily executed. The application of horse power to threshing and cleaning, (heretofore more expensively performed by hand,) has enabled him to reduce prices below those of former years; and as the seeds sold by the subscriber, are, (with slight exception,) the produce of grounds cultivated under his strict personal inspection, his customers have a guaranty which cannot be given with imported seeds, or such as are casually purchased, and vended in ignorance of their worth, ***neither texture nor complexion being an index of their age or quality.*** D. LANDRETH, Philadelphia.

Nov. 1—1t.

D. LANDRETH & FULTON, Proprietors of the old and widely known Nursery and Gardens of the late D. & C. Landreth, near Philadelphia, offer for sale a select, well grown stock of most articles in their line—embracing Fruit Trees of choice kinds, deciduous and evergreen Ornamental Trees, Flowering Shrubs of rare varieties, and Green House Plants, including two thousand finely formed, and many thousand small plants of the Camellia. To preserve the character of this establishment, as it existed under the old proprietors, has been the aim of their successors, and they trust successfully so.

On hand 50,000 Maclura, or Osage Orange, better adapted for Hedges than the thorn, either native or exotic. It is perfectly hardy, (farther north than at Philadelphia,) grows with rapidity and is free from disease, and the attack of insects. On good land and with proper culture, it will form a hedge impenetrable to man or beast, in five years.

Printed Catalogues, on application.

Nov 1—1t.

ALBANY AGRICULTURAL WAREHOUSE.

No. 23 Dean-street.

THE subscribers have taken the large store, No. 23 Dean-street. Albany, where they have opened an Agricultural Warehouse, for the sale of all such Machines, Implements, Tools, and Seeds, as are required by Farmers and Gardeners. It is their intention to be prepared at an early day to supply every article for which there shall be a demand, and they beg to assure the public that no effort will be spared to procure the best quality of articles, and to manage the business, so far as possible, to the satisfaction of those who may deal with them.

PLOWS.—They have been appointed the Agents of the manufacturers of the celebrated *Centre Draft*, *Worcester*, and *Diamond* Plows, and will keep constantly on hand an assortment of the different sizes of these different kinds, together with the Subsoil Plows of Ruggles, Nourse & Mason, and Prouty & Co. Also Barnaby & Mooer's Side-Hill Plows, and Wiard's Gang Plows.

STRAW CUTTERS.—The different sizes of Hovey's and Stevens', at prices from $10 to $25.

HORSE POWERS AND THRESHING MACHINES.—Having been appointed agents for the sale of Warren's Improved Horse-power and Threshers, orders will be received for them, and the machines shipped from New-York at the manufacturer's prices. They are also agents for Burrall's Power and Thresher, made at Geneva. Arrangements will be made as soon as possible to supply all the best kinds of Horse-powers manufactured in different parts of the country.

They will keep on hand at all times,

Corn Shellers, Fanning Mills,
Shovels, Spades,
Hay and Manure Forks.
Hay Knives, Hoes, Scoop Shovels,
Bull Rings, Tie-up-Chains,
Churns and Cheese Presses,
Root Cutters, Cultivators,
Road scrapers, Wheel barrows,
Cheese Hoops and Tubs,
Measures of all sizes,
Spinning Wheels, Reels,
Pails, Butter Ladles, &c., &c.

FIELD SEEDS.—They will be prepared to supply orders for all kinds of Field Seeds—such as the best varieties of

Spring and Winter Wheat,
Rye, Oats, and Barley,
Peas and Beans,
Clover and Grass Seeds,
Turneps, Ruta Bagas,
Beets and Carrots,
Potatoes of different kinds.

GARDEN SEEDS.—A complete and general assortment from the best growers at home and abroad.

IMPROVED STOCK.—Orders will be received for the different breeds of Improved Cattle, Sheep, Swine, Poultry, &c., and the selections made by a gentleman of extensive practical knowledge in these matters.

The business will be conducted under the firm of E. Comstock & Co., to whom all orders should be addressed.

LUTHER TUCKER.
Albany. Oct. 20, 1845. ELON COMSTOCK.

NURSERY AT MACEDON.

THE subscriber, besides his half of the stock, grounds, &c., of the former nursery of Thomas & Smith, having made large additions, has already, of moderate size, a fine assortment of cherry, peach, apricot, nectarine, and some other trees, for sale at moderate prices.

No trees are ever sold by him, but those propagated from *bearing trees*, whose *excellent qualities* and *fitness for the climate* have been THOROUGHLY PROVED, and in nearly all cases by many years experience.

His collection of bearing trees, in connection with the fine and extensive assortment of David Thomas, of Cayuga county, consists of several hundred varieties in a bearing state, from which the very best only are selected.

Orders promptly supplied, and trees, well packed, sent by canal or railroad. If deficiencies in supplying parts of orders occur, the balance of remittances is returned at once to the purchaser.

Address, J. J. THOMAS.
Nov. 1—1t. Macedon, Wayne Co., N. Y.

CAUTION.

THE undersigned has been duly informed that in consequence of *the principle of the* "Warren Patent Horse Power and Thresher" being now so universally conceded superior to all others, there are persons in various places who are taking or about to take the risk of manufacturing an article to imitate them. Now this is to give notice *that the genuine and latest* "Warren Improved Patent Horse Power and Thresher" *can only be obtained of the subscriber*, or of his agents, E. Comstock & Co., at the *Albany Agricultural Warehouse*, and whosoever else presumes to make and sell them. incurs the liability of legal proceedings.

The undersigned wishes it distinctly understood that the *genuine machines must not be held responsible for the probable failures of the imitation article.* J. PLANT, 5 Burling Slip, N. Y. city.

Successors to L. Bostwick & Co., and exclusive agent for the above machines. Nov. 1.

THRESHERS AND HORSE POWERS.

THE undersigned having been successfully engaged in the particular manufacture and sale of the "Warren Improved Patent Horse Power and Thresher" for the last three years, is now completing arrangements to sell various other kinds of approved Powers and Spike Threshers. Among them may be obtained Trimble's. It is the intention of the subscriber to keep an assortment of the best Horse Powers and Threshers, which can be had at reasonable prices. J. PLANT, 5 Burling Slip.

New-York, Nov. 1.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

VOL. II. ALBANY, DECEMBER, 1845. No. 12.

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Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, EDITOR AND PROPRIETOR.

ONE DOLLAR A YEAR.

SEVEN copies for $5—FIFTEEN copies for $10,00—all payments to be made in advance, and free of postage. ☞ All subscriptions to commence with the volume.

OFFICE IN NEW-YORK CITY, AT
M. H. NEWMAN'S BOOKSTORE, No. 199 BROADWAY,
where single numbers, or complete sets of the back volumes, can always be obtained.

"The Cultivator" is subject to newspaper postage only.

Foreign Correspondence.

MR. NORTON'S LETTERS—No. XVIII.

Prof. Johnston's Lectures on the Introduction of the study of Agriculture into Schools.

Laboratory of Ag. Chem. Association,
Edinburgh, Sept. 10, 1845.

L. TUCKER, ESQ.—A year ago, in a letter dated the 24th of this month, I mentioned that Prof. Johnston had just deliverel two lectures to the parochial schoolmasters of Scotland, at their annual meeting, upon the introduction of Agricultural Chemistry into the Parish schools.

Those lectures, as I then mentioned, were received with much approbation, and their permanent effect has been shown by the adoption of this branch of instruction into about 90 schools. This year, the schoolmasters invited Prof. Johnston again to appear before them and give more fully his ideas, as to the kind, extent, and manner, of instruction necessary. In accordance with this request, he on Thursday the 18th, delivered the first of three Lectures, to about 250 of the teachers.

In the commencement, he asked, why is it important that the schoolmaster should teach this branch of knowledge? Because it has become of acknowledged importance that it should be diffused, and because the only way in which this diffusion can be made lasting and universal, is through the rising generation.

"But," he continued, "let it not be understood that it is *chemistry* we want taught; it is only chemistry so far as it is applied directly to Agriculture. More than this would only overload the mind and injure the cause it was intended to serve. To the same end would tend the endeavors of the great mass of teachers to make themselves analytical chemists. They might get far enough to make imperfect researches, and therefore draw incorrect conclusions, but more they could not do without entirely neglecting their other pursuits and duties.

"All that is necessary for the primary schools, is the Catechism. This little work contains the great outlines and divisions of the science, and it imparts a knowledge of those few scientific words and important substances, which the cultivator of the soil must acquaint himself with."

In order to show more fully the plan of this little work, and to exhibit to those unskilled in such matters the methods of performing the experiments therein mentioned, the Professor here took it up, and proceeded through, explaining every point upon which darkness might rest, and performing all of the experiments. These are very simple, but the sight of their performance would enable those who are unaccustomed to chemical manipulation, to perform them much more easily and satisfactorily.

This exposition of the Catechism, occupied three days, and was delivered to deeply attentive and interested auditors. At the conclusion, every doubt seemed to have disappeared from the minds of all present, as to the simplicity and beauty of the great outlines of the science, which had been laid before them. Though in themselves the result of years of labor, guided by the highest scientific intellect, they are given in such a form that any boy of ordinary capacity may understand them. I have lately been in several schools where boys of 12 and 14, not only understood, but applied these principles to such farms as fell under their observation.

Many have acknowledged that much benefit might result from this instruction, but at the same time contended, that it would be more than balanced by the injury done to other studies. This objection is, I think, completely answered by the fact that Prof. Johnston, from the results of actual experience, now recommends that only half an hour a week, be devoted to this branch, and even that only during the last year at school. Of course, each teacher may if he chooses, still farther impress the boys by an occasional Saturday afternoon's walk, over some neighboring farm, making such observations as the state of the land and mode of culture suggest.

At the conclusion of the lectures, Mr. Milne, deputy advocate of Scotland, made a most admirable and eloquent speech, upon the progress of agricultural education, a cause in which he is deeply interested, and which he has most powerfully contributed to forward. He expressed his great gratification at the spirit which prevailed, and the movement which was commencing, among the Scottish schoolmasters; and sketched in graphic language, the improved condition of all classes of the community, when the best system of cultivation should be everywhere adopted. Not only an additional population would be maintained by the increased supply of food, but would be maintained in a greater degree of comfort through the increased demand for laborers.

Prof. Pillans, of Edinburgh University, in seconding a vote of thanks to Prof. Johnston, bestowed upon him a tribute of cordial and well merited praise. He avowed that he had come to these lectures prejudiced against the cause they were intended to advance, but confessed himself to have become an entire convert. "So clear had the whole subject been made, so completely had doctrines founded upon the most abstruse principles of science been simplified, that he could not refrain from expressing his delight. The lecturer, with a scientific mind of the highest order, delighting to grapple with the most difficult problems of nature, had not been for one moment tempted from his object of giving simple instruction. He hoped and believed, that the Scottish schoolmasters, urged by every consideration, would lend their energies seriously to this new task, and maintain that high character which they had always borne."

That the effect of these lectures will be lasting I can not doubt; the whole body seemed quite unanimous in expressions of approbation.

We were mentioned by Mr. Milne as rivals in the introduction of this new branch of education, and I trust that we shall prove formidable rivals, that our rising generation will take the field so armed with the true principles of cultivation that in 20 years from this time we shall no longer need to look to Scotland as a model. The Scotch would call this American conceit, but they don't know what we can do when we are in earnest.

Very truly yours, John Pitkin Norton.

ON ARTIFICAL MANURES.

BY PROF. JUSTUS LIEBIG.

[Our friend and correspondent at Giessen, Prof. Horsford, has sent us the following copy of a communication, written by Dr. Justus Liebig for the first No. of the "Agricultural Magazine," a work recently commenced in London, and for which the copy-right was secured in England.]

Sir—Twenty-five years ago, when the manufacture of spa and mineral waters began, they met with violent opposition from the members of the faculty, as being deprived of all the good qualities of the natural ones—as wanting in a certain *conditio sine qua non*—in a *spiritus rector*, or vital power, which alone gave them any medicinal qualities. Those times have passed now—Chemistry has demonstrated to a certainty what the constituents of those various waters are, and under what forms and compounds they are united in them. It has succeeded in combining them exactly in the same proportions, and in rendering them not only equal to the natural ones, but even more effective. Only from that time physicians were induced to connect certain effects on the human body with certain elements in the waters, and were enabled, by the light of science, to add more of this element, or more of that; nay, to apply, instead of the waters themselves, the one active element alone, as is, for instance, the case with Iodine in indurations and struma. It is well known, that at this moment there are extensive manufactures of mineral waters in England, in Berlin, in Dresden, in Vienna, &c.

Now, I believe, sir, that the same principle may be applied, partially, at least, to the use of manufactured manures, which, in England, has just been called into existence. Guano, that powerful manure, the efficacy of which, in a judicious application, has been clearly demonstrated by the testimony of the most intelligent farmers, cannot be supplied for a much longer period to come. The rich stores in Chili and Africa must be shortly exhausted. As it is only in very dry countries that it is found, we cannot expect to discover many more places containing it, and what are we *then* to do? My attention has often been directed to the question, whether, according to our experience, and the present state of science, a manure might not be composed which could replace the genuine Guano in its effects, and whether I could not, by a series of experiments point out a way of preparing one equal to it in all its chemical and physical properties? You are well aware, sir, that we know with certainty all the elements of the guano, as well as of the urine and solid fæces of men and animals. In like manner it seems to have verified the opinion which I have laid down in my work on Agriculture, that the salts manufactured in the laboratory have the same effect on the growth of the plants, if they are embodied to the fields, in the same forms in which the animals furnish them in their excrements. This must be evident to every one who knows, that to produce these compounds in the laboratory, the same agencies and means are made use of which are employed by nature. The fabrication of a manure, equal in its composition and effects to the solid and fluid excrements of animals and men, seems to me one of the most essential demands of our time—more especially for a country like England in which from various circumstances, a rational agriculture without a supply of manure in some shape or other, *from without*, seems nearly impossible. Our reasoning will appear the more correct, if we remember how different are the results which have been obtained by the numerous analyses of the different sorts of guano—how little the farmer can depend upon producing from a given *quantity* a certain *effect*, as the latter naturally varies according to the composition of the former. There are scarcely any two samples in the market with the same composition—nay, not even similar. The following may be regarded as the essential constituents of a powerful manure applicable to all sorts of soils:—

Earthy Phosphates.—The most important of these is *Phosphate of Lime*, which occurs in nature as a mineral called *apatite*. It is the principal element in the bones, which, it may be observed, have been found most efficacious if calcined, consequently deprived of their animal matter. The rapidity of the effects of phoshate of lime on the growth of plants depends upon its greater or lesser solubility. Its amount of glue (gelatine) diminishes this solubility if the soil is rich in vegetable matters, which furnish carbonic acid by their decomposition, and which acid is required for rendering the phosphate of lime soluble in water and introducing it into the organism of the plants. In the calcined state the bones act sufficiently quickly; but in those soils in which this cause of solubility is wanting, their action is slower. In my work I had recommended the addition of a certain quantity of sulphuric acid, both in order to render the bones more soluble and to change the neutral phosphate of the bones into gypsum, and into a phosphate which contains more acid (superphosphate of lime.) I have been informed that this advice has been most extensively adopted, that the superphosphate of lime has been found to be a most efficacious manure, and that it forms already a most important article of commerce. A second earthy phosphate, not less important, is the *Phosphate of Magnesia*, which it is well known enters in a still larger proportion than the *phosphate of lime* into the composition of the grain.

The *Alkaline Phosphates*, although not originally found in nature, are important elements of the seeds of grain, of peas, beans, &c. A rational farmer must provide them in sufficient quantities to those plants which require them for their development, from knowing that human excrements increase the produce in grain in a far greater proportion because they *contain* alkaline phosphates, than the animal excrements, in which they *do not exist*.

The *Alkalies* (potash and soda) must be constituents of every rationally composed manure, because by them the original fertile condition of the fields is preserved. A soil which contains the *alkalies* in too small a quantity, is perhaps, fertile for grain; but is not *necessarily* so for turneps or potatoes, which require a great quantity of alkali. By supplying an alkaline manure, fallows, or the cultivation of those plants which are grown during the time of fallowing, becomes less necessary.

Sulphate of Potash is a constituent of all plants, although in small quantity, as well as *common salt* and *chloride of Potassium* which are found in milk in rather a large proportion. The *salts of lime*, especially *gypsum*, are important nourishment for the leguminous plants. *Silica* is never wanting in all sorts of soils—it is a constituent of all rocks, by the decomposition of which all productive soils are formed, and the cerealia find it every where in sufficient quantity, and in a form capable of being taken up by the plants, *if the alkalies are provided* wherever they are present in too small quantity.

Salts of Ammonia.—It can be regarded as certain, that the azote of the plants is derived, either from the ammonia of the atmosphere, or from the manure which is provided in the shape of animal fluid and solid excrements, and that azotic compounds exercise an effect on the growth of plants, only in so far as they give up their azote in the form of ammonia during their decomposition and decay. We may, therefore, profitably replace all the azotic substances with compounds of ammonia.

Decaying vegetable matters, which contain carbon, are useful to the fields in so far as they provide a source of carbonic acid; but they are not quite indispensable in manure, if the latter be rationally combined, as the atmospheric air is an inexhaustible source of carbonic acid from which the plants draw their carbon, if in the manure, the mineral substances are provided which are necessary for the assimilation of the carbonic acid. These are the substances which *together* give fertility to the soil; but although each of them may, under certain circumstances, (*viz.*, where the soil is defective in it, or where it is not indifferent to the plant to take up one instead of the other, as, for instance, may be the case with soda instead of potash,) increase the fertility, no *one* of them can be regarded as manure, according to the common meaning of the word, for the simple reason, that only *all of them in certain proportions*, will fulfil the purpose for which the common manure is applied. This purpose is the restoration, or an increase of the original fertility, and by manure we must replace all the elements of the plants which have been taken away in harvest, or which are contained in the plants which we are desirous to cultivate.

What, then, are the constituent elements of the soil which we remove by the straw, seeds, tuberculous roots, stalks, &c., of our plants of culture? It is obvious that we must know these first, in order to *restore* them in sufficient quantities. To this we answer, by giving the analysis of the ashes of plants and their seeds. Hundred weights of the ashes of the following plants contain

	Straw of				Ashes of
	Beans.	Peas.	Potatoes.	Clover.	Hay.
Alkaline Carbonates, ……	29.38	12.43	4.34	31.63	3.0
Carbonate of Lime, ……	39.50	47.81	43.68	41.61	6.9
Phosphate of Lime, ……	6.43	5.15	5.73	11.80	40.8
Phosphate of Magnesia, ….	6.66	4.37	7.82	0.91	——
Sulphate of Potash or Soda.	12.40	10.15	——	2.23	8.84
Magnesia, ……	——	——	——	——	21.8
Chloride of Sodium or Potassium, ……	0.28	4.63	2.8	2.27	3.06
Phosphate of Iron, …… Phosphate of Alumina, &c.	——	——	——	——	12.7

In these analyses Silica has not been taken into account, as it is found in all soils, and need not be supplied. One hundred weight of the ashes of potatoes, and the seeds of the following plants, contains

	Potatoes.	Wheat.	Beans (Vicia faba.)
Alkaline Phosphates, ……	15.75	52.98	68.59
Phos. of Lime and Magnesia,	9.00	38.02	28.46
Phosphate of Iron, ……	——	0.67	——
Sulphate of Potash, ……	15 07	——	1.84
Carbonate of Potash and Soda.	51.70	——	——

What is wanting in the 100 of the above analyses is sand, coal, or loss. From these researches it appears, that for stalks and leaves we require other elements than for seeds. The former contain no alkaline phosphates, but they require for their development and growth a rich supply of alkaline carbonates and sulphates. On the other hand the carbonates are entirely wanting in the seeds, but the latter are very rich in phosphates. It is sufficiently obvious that a rational farmer must supply *both*, as well as all the others. If he supplies only phosphates, and does not restore the alkaline carbonates, his soil will become gradually barren—it will be exhausted in those necessary elements for the development of stalks and seeds, without which no formation of seed can be expected. If he supplies the alkalies, lime, and sulphates alone, in a given time he will get no more grain. All constituent elements of the manure, if they are supplied *alone*, have that great defect, that by them the soil is impoverished in other equally important elements. No *one* of itself can maintain the fertility. Keeping this in view, we may easily judge of the comparative value of artificial and natural manures, and all the various *arcana* which have been praised as *panaceas* for exhausted soils.

It is not less easy to understand why the farmers have such different opinions on the relative value of the constituents of manures—why one whose farm is rich in phosphates, produces an uncommon fertility by the application of nitrate of soda, or the supply of alkalies, while another does not see any favorable effect at all—why bones (phosphates of lime) produce in many fields wonders, and are not of the slightest benefit to others, which are deficient in alkalies or alkaline salts. From the composition of animal manures, it results with certainty, that by applying the latter, (solid and fluid excrements of men and animals) we supply to the soil not one but all the elements which have been taken away in the harvest. Fertility is perfectly restored to the field by a corresponding supply of this manure, and it may be increased by it to a certain limit. This will be the more intelligible, if we compare the mineral elements of the urine of horses and cattle with the mineral elements of herbs, straw, roots, &c., of our cultivated plants. It will be found that in their quality they are perfectly identical.

	Urine of a Horse.	Of Another.	Of Oxen.
Carbonate of Lime, ……	12.50	31.00	1.07
" of Magnesia, ……	9.46	13.07	6.93
" of Potash, ……	46.09	40·33	77.28
" of Soda, ……	10.33		
Sulphate of Potash, ……	13.04	9.02	13.30
Chloride of Sodium, ……	0.55	——	0.30

These salts in the urine of horses amount to nearly 4 per cent.; in that of oxen to 2½ per cent. of their weights. If we compare the composition of these different sorts of urine with the composition of the straw of peas, beans, and potatoes, of clover and hay, it will at once be obvious, that in stable dung we replace by the urine, the alkaline carbonates which we have removed in harvest. What in this urine, is wanting in phosphates and carbonate of lime and phosphate of magnesia, forms the principal constituent elements of the solid excrements of animals; *both together* (solid excrements and urine) restore the field to its original composition, and thus a new generation of cultivated plants meet with the mineral ingredients necessary for their development. If we farther compare the guano and the fæces of men with the composition of the animal urine, the analysis shows (rf. my book on agriculture) that both are entirely defective in *alkaline carbonates*—they contain phosphates and sulphates as well as chloride of sodium, but no free alkali—they contain phosphate of lime and phosphate of magnesia, in short their elements are in *quality* identical with the important mineral elements of the seeds of wheat, peas, beans, (rf. the analysis.) The urine of swine is in its composition intermediate between the urine of man and horses.

Analysis of the urine of swine.

Carbonate of Potash, ……	12.1	The solid excrements of Swine contain principally phosphate of lime.
Phosphate of Soda, ……	19.0	
Sulphate of Soda, ……	7.0	
Chloride of Sodium, …… " of Potassium, ….	53.1	
Phosphate of Lime, …… " of Magnesia, …	8.8	
Traces of Iron, ……		

What the practical results of a knowledge of the composition of these manures are, is clear. If it were possible to provide our fields with the dung of swine in sufficient quantity, we would replace by it, in a soil which contains *silica* and *lime*, all the remaining elements of the plants—the field might be made fertile for all kinds of plants—we have in it not only alkaline phosphates, the principal elements of the seeds, but also alkaline carbonates, which are required by the leaves, stalks, and roots. This purpose cannot be attained, however, by manuring with guano or human excrements alone, but perfectly so by stable manure, from its containing alkaline carbonates. If I have said that stable manure contains the mineral elements of the nurture of the plants, exactly in a state and condition in which they are furnished by nature—that a field manured by it resembles the primitive state of America and Hungary, this assertion will not be found exaggerated. It is certain that stable dung contains no alkaline phosphates, but nature does not furnish to the plants these elements even in the most fertile soil, although we find them in large quantity in all the seeds of wild plants. It is obvious, notwithstanding their absence from the soil, that the phosphates are formed in the organism of the plants, and that they originate from the phosphate of lime and magnesia and the supplied alkalies, by an exchange of the elements of both. The alkalies are necessary for forming *alkaline phosphates*, which cannot originate in the phosphate of lime alone. Both together are present in stable dung. In human excrements, and in guano, the alkaline carbonates are entirely wanting. The practice of the farmer, in some places, of supplying to the field not pure guano, but a mixture of it with gypsum, shows clearly that the phosphates of alkaline bases are really formed in the organism of the plants from the phosphate of lime and magnesia, because this mixture (guano and gypsum) contains less phosphate of potash or soda than the guano itself; or, in certain proportions of gypsum, no alkaline phosphates at all; the soluble phosphates in the guano decomposing the gypsum into phosphate of lime and magnesia, and into sulphate of potash. I am far from asserting that we should not provide the fields with alkaline phosphates; the excellent effect of the guano, and of the human excrements, is too well known to question it, and we perceive, from this fact, that plants are in this respect like domestic animals which with a normal food, are healthy and strong, but do not fatten. On the contrary, we know that if we prepare the food of these animals artificially, so as to render it more easily digested and assimilated, they are enabled to consume, in a given time, a greater quantity of it by which all their parts increase in weight. The same happens with plants if we give them their nourishment in a state most appropriated for assimilation; their capability to attract the other elements from the atmosphere increases and their development is accelerated. If we recollect that the favorable effect of guano upon our fields depends on its amount of *ammoniacal salts*, of *alkaline phosphates*, and the *other mineral constituents* of the seeds, but that it is defective in *alkalies*, the principal elements of the *herbs*, *straw*, and *roots*, it is easily understood why the opinions of farmers, on the value of guano as a manure are so very different. On a soil, which is defective in alkalies, its effect is small; on a soil rich in them, it increases the produce in a remarkable degree; but, as I have already observed, the continued application of guano must gradually diminish the fertility of our fields for a number of plants, because the elements of those organs, of the leaves, stalks, roots, &c., without which the plants cannot be developed and cannot produce seeds, are taken off in the harvest without any restoration of them. I think it, therefore, certain, that the stable dung can replace the guano to a certain degree, but not *vice versa*. A rational agriculturist, in using guano, cannot dispense with stable dung.

During my excursions in England, I have repeatedly directed the attention of the agriculturists, as Messrs. Pusey and Miles will, perhaps, recollect, to the necessity of supplying the alkalies, and not merely the phosphates and other salts; by a partial supply the equilibrium of fertility is not restored, and if we supply guano alone, we do not act wisely, because we consume our capital by rich interests, and leave to our children an exhausted soil.

And now, sir, the principles above-mentioned must guide us in the manufacture of an artificial manure. If they are neglected,—if the artificial manure is defective in one or two of the necessary elements,—the farmer in making use of it, will, in a very short time, discover the fact, by the injury he will have sustained from it.

In the manufacture of an artificial manure, it must be kept in view, that the application of stable dung, of human excrements, and of guano, is attended with a great loss, in consequence of the too great solubilty of their most efficacious elements, and this must be prevented by artificial means. This is evident, if we remember those countries from which guano is derived. It is known that the collection and preservation of the excrements on the African islands, and the coasts of Peru and Chili, depend upon the scarcity of rain in those countries. The best sorts of guano contain in fact, more than one half of their weight of soluble salts, which, if exposed to the rain, are in exactly the same condition, as under similar conditions, a heap of *salt*. They dissolve in water, and are removed. Some months of rain would deprive those countries of all their riches. The remainder would have lost the greater part of its fertilizing power. Such effects, however, take place upon the guano with which our fields are manured. Only a small portion of its efficacious elements produce the beneficial effect they are capable of doing, the greater part being carried off by the rain. The stable dung is, in this respect, in the same condition as guano; indeed, its principal elements are already in a dissolved state, and, therefore, are carried off more easily than those of guano.

A covering for those places in which stable dung is preserved, in order to shelter it from the effects of the rain, has been regarded in Germany as essential for preserving its manuring power. In consequence of the experience, that the soluble elements of stable dung are the most efficacious, it has in some cases, been drawn out with water, and it has been found advantageous to carry *only this fluid* to the fields. I need only refer to the foregoing analyses of the urine of animals in order to see upon *which elements* of it this effect depends.

The reason why, in certain years, the influence of the best and most plentiful manuring is scarcely perceptible, is, that during the moist and rainy springs and summers, the *phosphates* and *other salts with alkaline bases*, as also the *soluble ammoniacal salts* are entirely or partly removed. A great amount of rain and moisture removes in the greatest quantity, the very substances which are most indispensable to the plants at the time that they begin to form and mature seeds. The system of draining, which, of late has been so extensively followed in England, brings the land into the state of a great filter, through which the soluble alkalies are *drawn off*, in consequence of the percolation of rain; and it must, therefore, become more deficient in its *soluble* efficacious elements.

Attentive farmers must have observed that after a certain time the quality of the grain on land laid dry according to this principle, deteriorates; that the produce of grain bears no due proportion to the produce of straw.

What is more evident, sir, after these remarks, than that intelligent farmers must strive to give to the soil the manuring substances in such a state, as to render possible their acting favorably on the plants during the whole time of their growth. Art must find out the means of reducing the solubility of the manuring substances to a certain limit, in a word of bringing them into the same state, in which they exist in a most fertile virgin soil, and in which they can be best assimilated by the plants.

The whole attention of chemists should be directed to the attainment of this end. I am myself occupied with a series of experiments which lead me to hope that this problem can and will be solved. If it succeed, as I have no doubt it will, in combining the efficacious elements of manure in such a way as that they will not be washed away—their efficacy will be doubled; if in this manner the injurious consequences of the present system of draining be removed, agriculture will be based upon as certain principles as well aranged manufactories. Manufactories of manure will be established, in which the farmer can obtain the most efficacious manure for all varieties of soils and plants. *Then* no artificial manure will be sold, whose exact amount of efficacious elements is not known, and this amount will be the scale for determining its value. In the application of such rationally compounded manures, the good will of the farmers must help bring them to perfection. If, then, by the united efforts of the manufacturer and the farmer the best proportions are ascertained, a new era will arrive in practical farming. Instead of the uncertainty of mere empiricism, all the operations of agriculture will be carried on with certainty, and instead of waiting the results of our labors with anxiety and doubt, our minds will be filled with patience and confidence.

I am, sir, your obedient servant,

Giessen, 1845. * Dr. Justus Liebig.

Frosts.—Prof. Kirtland, speaking of the softening influence of bodies of water on frosty air, and particularly of Lake Erie, and of the Ohio river, says, "For several years in succession, I have found from observation, that the Dahlias were killed in the same night at Cleveland, and at Cincinnati, though they had been destroyed a month earlier in most of the counties intervening.

Salt for plum trees.—Several persons speak of the efficacy of salt in causing fruitfulness in the plum tree, by repelling or destroying the curculio, as the result of actual experiment.

Domestic Correspondence.

NOTES OF TRAVEL IN THE SOUTHWEST—No. IV.

BY SOLON ROBINSON.

Mississippi—Visit to Mr. North, Ed. S. W. Farmer—and Mr. Gibson.

"There is no rest for the wicked"—and so, as Dr. P. and myself both belong to that family, we are off upon the morning after you and I, my dear reader, last parted company, and our first object is to visit friend NORTH, of the South Western Farmer, at Raymond. We found him in his office sticking type, for to that was he bred. Would you know what manner of man is this southern editor? He is perhaps forty years old—six feet high—slim built—has a very intellectual face and keen eye—and withal, has the organ of benevolence so large that he would gladly see all mankind as happy as himself. To say that he was pleased to see me, conveys but a faint idea of the real enjoyment that my visit afforded him, as I fully believe. Mr. North feels the greatest anxiety to improve the agriculture of the south, and as a natural consequence to elevate the moral condition of the cultivators of the soil. 'Tis for this holy purpose that he has labored several years in publishing the South Western Farmer with a list of subscribers amounting *almost to* 400, and this the only paper devoted to agriculture in the state of Mississippi, or for the states of Louisiana, Arkansas, and Alabama. It seems a hopeless task to attempt to enlighten such a population; but Mr. North is full of hope, and intends as soon as the present volume is closed, to enlarge and improve the next, and being assisted by the able and ever ready pen of Dr. Phillips, hopes and believes that the farmers of the south will come up to his aid and sustain the paper. I hope so, but I must own that my hope is not strong.

Raymond is the county seat of Hinds, 16 miles west of Jackson, the seat of government, which is in the same county. It has a court-house and very expensively built jail, and several very humble looking churches. The town does not wear a very flourishing look, and the surrounding land, to my eye, looks decidedly poor; the soil, sandy and white clay, and timber, pine and oak. The surface of this county is, in comparison with the others I have visited, pretty level. It has, upon Chittaloosa on the west, and Pearl river on the east, some very rich bottom land, but subject to inundation, and is yet covered with timber.

After spending two days of most pleasant sociability, the Doctor and I started for Natchez, about one hundred miles southwest. The day previous had been for a great rarity a very rainy one, and during this day we had some very fine sprinkles; so that I began to discover that if they don't have any of our frozen weather, they are not far behind in the mud line.

After leaving Raymond, the land becomes quite hilly in the course of the day, and a great portion of it still bearing its native growth of pine, oak, and some hickory, and upon the creeks, a good deal of sweet gum—the only value of which is, and that ought to be universally known, that a strong tea made of the bark will cure any kind of bowel complaint. The splendid "magnolia grandiflora," in places here is so abundant that it gives the woods a cheerful aspect with its beautiful evergreen leaves. The evergreen holly too, is abundant.

This is the 2d day of March. The oat fields are looking green, and corn begins to show its rows. As is the fashion, we stopped at night with a planter in Claiborne county, by the name of Gadi Gibson. It was dark and showery, and as is also fashionable, we found the number of visitors "just what might be expected in Mississippi," and thereupon we proposed to withdraw, and not add what seems to us at the north would be a burden. But we were too late. We had told who we were, and we were known by name, and to such a Mississippian's house is never full, and Mr. Gibson is a true one, born upon the soil, now near fifty years old, and as stout and robust as one of the Green Mountain boys of Vermont. Mrs. Gibson is also one of the finest specimens of a healthy woman that I ever saw. To them at least the climate is salubrious. By the bye, I saw at Raymond, a hale and hearty old man of 72, who was born in what is now Mississippi, though then under a foreign government. This man told me he had lived upon the same soil under three governments, English, Spanish, and American. I have no doubt but what it is more the fault of the people than the climate that they suffer with sickness.

Mr. Gibson lives upon a very good plantation, and has, the Lord knows, how many negroes around him, but, as is the fashion, lives in a log cabin, and what appeared a little unfashionable, the owner *takes the papers.* But, as is also the fashion, our lodging room was in "a separate establishment," across the yard from the main centre of the small village that it takes to make up a dwelling place "in these diggings." Another fashion we find here, as is often found hereabouts, and that is the capacity of a Mississippi stable, which is known as "*the lot,*" and is surrounded with a fence sixteen rails high, with a gate of corresponding height, into which said lot are turned all manner of horse flesh, to eat corn out of a capacious trough in the centre, and do their own fighting on their own hook for a position. Corn is the only grain, and corn blades, called "fodder," the only other kind of feed ever given, for which the same trough answers.

Now this is certainly a very primitive kind of stable, and possesses this advantage that it can be enlarged very easily to accommodate the increase of stock. It is also said to be healthy on account of its airyness.

Mr. Gibson keeps his sweet potatoes different from most others. He has a cave cellar, the door being made open work to serve as a ventilator, in which they keep well. The common way is to put them up in "pumps"—a term that I am sure will be as difficult for my northern readers to understand as is the word "chores" here. But the one means a pile of potatoes covered over with dirt, having a hollow log or box bored full of holes, set upon the ground and running out at the top through the centre of the pile, to give ventilation; for without it, sweet potatoes will not keep. At the north, I believe a good way to keep them would be to put them in small parcels with Irish potatoes in a cellar not too warm, but very dry. Or if you can contrive to keep sweet potatoes always dry and warm, they will always keep. The same thing of dahlia roots.

For the accommodation of my southern readers, let me explain that the word *chores* means all the little jobs of work about the house, necessary to be done of a night and morning. Dr. Phillips is so well pleased with its expressiveness, that he has adopted it in his family.

Being naturally an admirer of beauty under whatever form it shows itself, I was attracted to notice a very beautiful lace cap of Mrs. Gibson's, upon which she showed me several others "as fine as silk," and all the work of her own hands—beautiful domestic manufactures.

March 3d—being a little showery, afforded our host an excellent excuse for detaining us another day, and he would have done the same the next—for this is southern fashion, among those who take the newspapers—this being a better criterion to mark civilization "than the use of soap."

Negroes upon large plantations are always under the charge of an overseer. Their wages vary from $250 to $800 a year. A common negro man when hired out, gets from $10 to $15 a month. A woman cook or good house servant, the same. A negro carpenter or blacksmith, from $25 to $45 a month. Corn is now worth from 60 cts. to $1 a bushel, in the interior of the state. Cow peas $1 to $1.50. Sweet potatoes, 50 cts. Irish do., 50 cts. to 75 cts. Oats, 50 cts. Millet, $1, to $1.50. Cotton seed for planting, 50 cts. to $5 a bushel. While at the same time cotton is not worth on the plantations over an average price of 4 cts. a pound.

While off the go ahead track, I will make a memorandum of the weather here in Mississippi since last noticed—this is for comparison with any other place you please.

Feb. 19. Warm, sunny, dry—roads fine, streams low.

Feb. 20. Cloudy—little rain in morning—then clear and cool.
" 21. Mild—somewhat cloudy, and rain at night.
" 22. Cloudy and some rain—mild.
" 23. Mild—flying clouds.
" 24, 25. Sunny and warm—"coats off."
" 26. Quite warm and dry—roads dusty—"jackets off."
" 27, 28.—Clear and mild—fire needed morning and evening.
March 1, 2, 3, I have noticed.

March 4th, which many an office seeker at Washington will be able to remember, and compare with what is past, present, and future, as he hopes it will be—if not warm, at least mild, certainly not stormy—certainly was stormy in Mississippi, in the morning, after which we started again southward over a hilly region composed of argillaceous alluvium, badly cultivated and full of gullies—the streams broad, and gravelly bottoms, deep sunk between high sandy banks that are rapidly working away to help extend our territory farther and farther into the gulf of Mexico. Passed through the town of Port Gibson, which is the best town I have seen in the state. It is situated on a stream called Bayou Peire, a few miles from the Mississippi, from which steamers come in high water to carry out the cotton from the surrounding rich country. Many of the owners of neighboring plantations have their residences here, which give the place an air of wealth and grandeur.

We passed to-day a few miles north of this town, the "old Indian boundary," where the traveller from New-Orleans entered the wilderness that extended almost to Nashville, Tennessee. This was less than forty years ago. Port Gibson is now about 40 years old, and we stopped all night near Cole's creek, with a man who has lived 40 years upon the same spot—long enough to have learned to live better, and have more of the comforts and conveniences of life around him—*but he did'nt take the papers*—and so there is neither fruit, nor flowers, nor shrubbery, nor garden nor good cultivation, nor has the land upon this "first choice in the country," improved under the constant wearing that it has been subjected to. Happily for the owner, his plantation is nearly level, or after forty years subjection to his constant control, he would now be at work upon the second soil, the top one would have departed. This man is not much in favor of improvement. His place used to be a noted "stand" upon the "trail" from Natchez to Nashville, before the *improvement* in steamboats turned the tide, and stopped the influx of cash into his pocket.

After leaving his house we passed a remarkable stream called "Cole's creek," which we were unable to cross the evening before. When the country was first settled, as our late host told us, "he had often fallen a tree from bank to bank," which are now an hundred rods apart and continually widening, as the soil is so loose that as soon as the roots decay there is nothing to hold it together. And the bed of the stream is so full of quicksands, that crossing after a freshet is both difficult and dangerous, and life and property have both been lost in the attempt. If you ask why don't they bridge it, I beg you to read in your bible that "a certain man built his foundation upon the sands, and the floods came," &c., and so would they come here, and neither bridge or mill dam would stand any more chance to stand, than a cotton planter stands to grow rich at the present price of the staple.

In the course of the morning, we passed several other branches of this stream of the same character and began to find the country more hilly, the soil of alluvium, and having the same kind of beds of marly loam as noticed in Warren county, and nearly the whole of great fertility and extreme bad cultivation; full of awful gullies, and showing thousands of acres in sight of the road so past the power of a negro to raise cotton upon it, that it is thrown out to the common as utterly worthless. And yet much of this waste land is covered with Bermuda grass, of which I shall speak hereafter—and that in a southern clime affords the finest pasture in the world, and would sustain great numbers of sheep. Cotton—cotton—cotton—till the land is cottoned to death, because cotton is the "great staple," which in the opinion of a cotton planter, only needs to be sustained, and that will sustain all the links of the great chain of commerce—forgetting that the support of that staple, into which it was driven pretty hard a few years ago, was nothing but a "quick sand Bank," and the floods came and the staple drew out, and down went the chain, dragging prosperity and improvement with it. And these cogitations bring us to a gang of 160 negroes working the road, "because it is so wet they can't work on the plantation." And what will such a host do? Not half as much good, though perhaps more labor, as one-tenth the number of yankees with a yankee team, plow and scraper would do.

Some curious features are seen upon this road—upon some of the hills it is worn down in a ditch like a deep cut in a railroad, 20 or 30 feet deep; while the apex is left so sharp that the forward wheels begin to descend before the hind ones have done ascending.

SMOKY CHIMNEYS.

"Does smoking offend you?" said the landlord to his newly arrived boarder. "Not at all, sir." "I'm very glad to hear it, as you will find your chimney fire is constantly given to the practice." Most, however, have little fancy for smoke even if largely diluted with air; those who spend half an hour every morning with watery eyes over a perverse fire-place, and whose room is filled with smoke at every gust of wind, regard it as a decidedly positive evil.

Hence there have been a thousand and one contrivances to prevent it. Having had my own share of the evils of smoke, and in expedients to get rid of it, I propose to give my experience for the benefit of others. The chimney which gave me the most trouble was one far below the others, rising from a roof much lower than that of the rest of the dwelling. When a strong wind swept over the house and down on the top of the chimney, the flame spouted out of the door of the kitchen cook-stove, and the room was immediately filled to suffocation. I first adopted a cover similar to that recommended in Loudon's Suburban Gardener as infallible, represented in fig. 103, consisting of a cap of sheet iron in the shape of a low pyramid, supported a little above the top of the brick chimney on points at the corners, the smoke passing out just under the eaves of the cover. I found it to answer the purpose whenever the wind swept *down* upon it uninterruptedly, from over the house. But when the wind blew from an opposite course or *towards* the house, and was thus thrown into a confusion of eddies, first upwards, then downwards, this moment to the right and the next to the left, and then apparently all ways at once, it totally failed of answering the desired end; and when I saw in number 9, vol. 10 of *the Cultivator*, Mott's figure of a chimney cap, which would always draw the current upwards, I resolved to try it. I went to the tinker's and had one made as represented in fig. 104, consisting of an upright piece of stove pipe, nine inches in diameter, made square at the lower end to fit the brick chimney, and connected at the upper end with a piece of horizontal stove-pipe, the same size, but considerably enlarged at its two open ends. *The chimney now never smokes an atom.* The tinker charged me about two dollars and a half for his work, which was about one dollar more than he ought to have done; but to come home and find smiling female faces, and a clear air within doors, as is now the case—in the place of eyes filled with smoky grief, and lungs with choking breath, as formerly—any decent man would of course consider himself repaid many times the amount of that little sum.

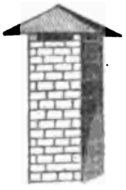


Fig. 103.

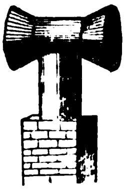


Fig. 104.

I dont understand the *rationale* of it; but one thing I know, that whenever there is wind, let it be from above or beneath, or from whatever quarter, the current through the chimney is *upwards*. This is the case when there is no fire at all, if there is only wind. On a still morning, there may be a little smoke in kindling a fire before a current of hot air is formed, but at no other time.

Mott does not say that he has patented this invention; if he is a man of sense he has not; for defending patents is only another name for "vexation of spirit." But if he has patented it, I hope he will allow me to use my cap for this "*recommend*" I have given it. And to those who cannot afford to subscribe for the Cultivator, I can say that this one fact learned from it, is worth many year's subscription. J. T.

SELECT AMERICAN GRAPES

In the Brinkleyville (N. C.) Vineyards.

Our successful experiment of grape culture and wine making, is mainly attributable to the system being *American* throughout. And, as to kinds of grapes, not only, after trial, rejecting foreign, but also such natives as are not profitable in most respects. On canopies supported by posts ten feet each way apart, and all clear beneath, for passage of wind, persons, or teams, might be seen, a month since, a complete spread or sheet of grapes, so thick in many places, as to yield at rates of a thousand and more gallons of wine per acre. And now, after having made our barrel of wine a day for some weeks past, and entertaining visitors, sometimes more than twenty a day, the vineyards are very full still, and a stranger might conclude that few grapes had been abstracted, and that only from some vines. But designing a mere list of most select vines, with a passing remark or two, we proceed at once to enumerate—

1st. Such grapes as are good and profitable in every respect, and from most of which, we make not only gallons but barrels of wine annually, of late years.

1. The White Scuppernong, the noble native of our own state. But north of latitude 37½ degrees of no peculiar excellence.

2. Weller's Halifax—a native of this county, but calculated, so far as we have learned, for any part of our country. Out of a large number of vines from the seed of this grape, one we call the Halifax seedling, promises according to best judges, to be inferior to none in every respect. Its culture is yet limited. Fruit like the Catawba, but sweeter.

3. Vine Arbor—so called from its very large leaf, as well as extended growth, and consequent peculiar fitness for arbors.

4. Somerville.

5. North Carolina. This is late in ripening, and its peculiar excellence is for wine, not table use.

6. York Madeira.

7. Fragrant. This delightfully perfumes the air around when ripe.

The above kinds have all large berries, and average the Isabella and Catawba in size, and consequently are not subject to depredations from birds. We have several other fine sorts of like sized grapes. But we proceed to those of intermediate size, (or that say, of buckshot,) in our first class, viz:—

8. Norton's Virginia Seedling, called after the late Dr. Norton, of Richmond, Va. This we find one of the finest in all respects; as for table use, wine making, productiveness, (capable of 2,000 gallons per acre,) and free from rot.

9. Cunningham. This is also a grape from Virginia. most excellent for eating, and with one difficulty only as to wine qualities, viz: on every raceme, some small green grapes are interspersed among the ripe ones. But to obviate this we omit picking out the green berries, and make the wine in the way the late Mr. Herbemont made his best Madeira, or a white wine from his colored grape; that is by putting the grapes unmashed under the press, and after pressing, the ripe grapes only are found mashed by pressing.

10. Woodson—also from Virginia; much later ripening than the Cunningham; and not so good for the table.

11. Lenoir—a grape of a grade smaller berry. Among the first of peculiar excellence in ripening here.

In the fine vineyard of Mr. John Carter, near Richmond, Va., he showed me, some years since, the Clarence of France, imported by him as *identical* with the Lenoir. If Mr. Carter is not mistaken, this is a foreign grape, only not subject to rotting in our country. The juice is very strong, and as the late Mr. Herbemont observes, capable of making a good keeping wine without the addition of either spirits or sugar.

But omitting further enumeration of excellent grapes of intermediate size, we proceed to the second general class, viz:—Of some kinds excellent in many respects, but exceptionable on account of propensity to rot, (at least at the south,) smallness of berry, &c., and therefore no dependence on them for a wine crop; though a few of each are retained in the vineyards as a variety of fruit, and in contrast, and for visitors. Among a considerable number of kinds in class second, the following are here noticed.

1. The Catawba, the favorite grape of Mr. Adlum, Georgetown, D. C., and now I see from Agricultural periodicals, mostly cultivated in the northern and middle states. But its proneness to rot on the vines renders it a very uncertain fruit in the south; and the older the vines the worse, so that some, as I learn, in this state and Virginia have given up vineyard culture in despair of profit, whose principal vines were the Catawba; and

2. The Isabella. And no effectual remedy we have found for this tantalizing casualty, but that of cutting down, in the fall season, most of the vines of these sorts, and grafting on their stocks, some of the first general class, as good at least in every respect, and far better as to certainty of a well matured crop. Three years since we procured a kind of Catawba said not to rot. The young vines of what we call Eaton's Catawba, so far, have matured their fruit.

3. Colesvine.

4. Alexander.

5. Constantia or Vevay. This last is that chiefly cultivated by the Swiss settlers in Indiana. But however succeeding with them, when the vines are young, at least it proves here one of the rotting kinds; although it, as well as all just named, produce fine, large fruit when happening to mature.

This second class now continued with grapes of intermediate size, as

6. Herbemont's Madeira. This as seen in the columns of the "American Farmer" was called the Warren, or Warrenden, ere it received the above name from the late excellent Mr. N. Herbemont, of Columbia, S. C., who gave it notoriety. It appears to be of foreign extraction, from the shortness of the vine joints, and especially its proneness to rot. Mr. Herbemont himself calls it a tantalizing grape; because, as he states, just when giving promise of an abundant yield (once he made at rates of more than 2000 gals. per acre from it,) its frequent habit is to begin rotting without any assignable cause of too wet or too dry, or the like.

7. Longworth's Ohio. The distinguished agriculturist, Mr. N. Longworth, near Cincinnati, sent me a few years since, some cuttings of this by mail, in a newspaper, and by grafting I have cultivated it to some extent. But here it is of no peculiar excellence, and I find, prone to rot, though Mr. L. informed me it had proved a most excellent variety in his locality.

We have procured from nearer and more distant parts of our country, a considerable number of other kinds of intermediate sized berry, and exceptionable in some respects; among which I name

8. Baltimore Seedling.

9. Bland's Madeira or Red English.

10. White English.

11. Enfield.

12. Hunterville, &c.

And also several varieties of small berry and small yield, though otherwise fine. Three only of these we add to our list of the 2d class, viz:—13. Wilcox. 14. Guinard's Native. 15. The Elsingburg.

We have under trial a large number of seedlings, and of those procured from every where we could hear of a good native; and may give the result in due time.

SIDNEY WELLER.

Brinkleyville, Halifax county, N. C., Sept. 15, 1845.

INFLUENCE OF THE STOCK IN GRAFTING OR BUDDING.

MR. EDITOR—There are few subjects which have occasioned more discussion among Horticulturists, or occasioned more diversity of sentiment, than the one named at the head of this paper. By some, it has been supposed that the quality of the fruit produced on grafts was much influenced by the character of the stock upon which the graft was set, a change attributed to the difference in quality of the juices of the two parts. This opinion was perhaps more common formerly than at present, and was based on the supposition that the juices of the stock taken up by the roots was immediately available in the production and growth of the fruit. Others have concluded that although the stock exercised some influence on the graft, it was only in consequence of the means which it offered for the more free circulation, or retardation of the sap. This opinion is the prevailing one, and is founded on a better knowledge of the physiology of plants, which teaches that whatever elaboration or change the sap undergoes, is performed in the leaves of the plant or tree, and therefore must possess the same qualities of the graft, and not of the stock.

One of the earliest writers, to give a decided opinion on this subject, was Lord Bacon, who says, "that the scion overruleth the graft quite, the stock being passive only." Lindley, one of the ablest of writers on Horticulture, says,—"Those who fancy that the quince communicates some portion of its austerity to the pear, can scarcely have considered the question physiologically, or they would have seen that the whole of the food communicated from the alburnum of the quince to that of the pear, is in nearly the same state as when it entered the roots of the former. Whatever elaboration it undergoes, must necessarily take place in the foliage of the pear; where far from the influence of the quince, secretions natural to the variety go on with no more interruption, than if the quince formed no part of the individual." Miller, in his work on Gardening, says, "crab stocks cause apples to be firmer, to keep longer, and to have a sharper flavor." Mr. Knight, speaking of the change produced in fruit by placing scions on different stocks, says, "the effects produced by grafting are similar to those which occur when the descent of the sap is impeded by a ligature, or by the destruction of a circle of bark;" that is, it dwarfs the tree, and causes a more rapid maturity, when scions are placed on slower growing stocks, as the apple on the crab, the pear on the quince, &c.

It is also evident that grafts do not affect the stock; that is, the scion does not impart any of its distinctive qualities to the part of the tree below the point of insertion. Still the annual layers of wood formed on the stock must have been elaborated in the foliage of the scion, as asserted by Professor Lindley, and should, unless changed in its nature in passing from the scion to the stock, possess the same qualities. That it does not, is certain from the fact, that sprouts forming in the latest layers of wood, always retain the character of the stock, instead of the scion that has formed the wood from which they sprung, and that furnished the elaborated juice for their nutrition. It appears clear therefore that during the life of the individual, the point of junction formed by the meeting of the stock and the scion, constitutes a line of demarcation, across which the influence of either cannot pass. In some kinds of trees this impassibility is rendered very perceptible. For instance when the pear is grafted on the apple, the ring formed at the point of insertion, and the more rapid growth of the pear shows that the peculiar qualities of the pear wood are unable to force themselves below the scion, and give to the layers of the stock the same growth which belongs to the scion, and which would result, were not the qualities of the elaborated sap changed at that point.

Some have supposed that the influence of the stock is so great, that trees raised from the seed of grafted or budded fruit, will, in their fruit, resemble the stock, rather than the scion. This notion has been brought to my recollection by the third no. of that beautiful work, the "Orchardist's Companion." In that number, among the other figured fruits, is a fine specimen of the apricot, presented to the proprietor by C. Morris, of Philadelphia, who, in a note accompanying it, remarks as follows:—"The tree which produced the fruit is a graft upon a *plum stock;* my next door neighbor has a tree growing from a stone of my apricot, which produces an ordinary blue plum, ripening late in the season; the trees are very different in appearance, both in leaf and growth; my apricot ripens the earliest of any tree of the kind—say early in July." I find from the Farmer's Cabinet, which has noticed the occurrence, that many seem to consider the production of a plum from the seed of an apricot grafted on a plum stock, as a species of transmutation, akin to that of wheat into chess, a notion which has too long abused the public mind. The truth seems to be that the apricot is rather a plum than a peach, with which it is usually classed, and its tendency to return to its original type appears more manifest when the favorable circumstance of a union with a plum stock is present. This view of the subject will appear the more reasonable, when it is remembered that in England, the peach and nectarine, as well as the apricot, are usually propagated by grafting on plum stocks; but it is believed no one has ever heard of the plum stock having such an influence on the peach or nectarine, as to cause the seeds of these to produce plum trees. The observation of Mr. McIntosh on the culture of these fruits, would seem to be decisive on the subject of change.

It seems probable then, that the stock exercises no other influence on the scion, than what is owing to the *quantity* of sap furnished, and that the kind or *quality* makes no difference whatever; since the formation of wood, flowers, and fruit depend on the juices elaborated in the scion. It is on the principle that the retardation, or lessening the supply of sap, increases the quantity of the fruit, that ringing or the removal of a narrow strip of bark, and twisting a wire around a branch is sometimes resorted to by orchardists and gardeners. It is for a similar reason that grafting apples on crab stocks, pears on the quince, &c., is practiced; the supply of sap is reduced, the tree produced is dwarfed; and the certainty of fruit is proportionably increased. It is certain that scions taken from the same tree, and grafted into trees indicating by their vigor or habits of growth, a difference in the supply of sap, will when they come into bearing, produce fruit materially differing in size, and also in some slight degree in appearance, color, and taste. This is sufficiently accounted for on the principle laid down above; and there appears no necessity for resorting to any other method of the stock's acting on the scion, to explain these variations. It is a subject, however, of some consequence to the horticulturist, and I for one should be pleased to have some of your correspondents who have experience in such matters, give us their opinion in relation to it. FRUITGROWER.

ANNUAL FESTIVAL OF THE MASS. HORT. SOCIETY.

MR. TUCKER—Having been a delegate to the Massachusetts Horticultural Society, at their recent exhibition, I will make a few comments thereon, which may not prove uninteresting. The collection of pears exhibited was very numerous, and comprised a large number of the newer varieties, and very many also of the old varieties that succeed well on walls and in sheltered gardens when budded on the quince, but are useless for open orchard culture. Leon le Clerc, of Van Mons, Clion, Columbia, (native,) Flemish Beauty, Beurré Diel, and Duchesse d'Angoulême, were the most attractive for their size and good quality united. The collection of pears from the garden of Col. Wilder, the liberal and distinguished President of the Society, was the most récherché in its assortment. The collection from Mr. Manning was more numerous, but less select. Other collections from B. V. French, Josiah Lovett, J. S. Cabot, Samuel Walker, O. Johnson, Rev. A. B. Muzzy, Jacob Deane, J. M. Ives, and C. Newhall, Esqrs., were highly respectable both in numbers and excellence.

The exhibition of apples was secondary in extent to that of pears, and the assortment of peaches and plums was in no wise extraordinary, being very limited in variety, and deficient in a number of estimable kinds which mature at that season, but whose culture appears not to have been attended to. The Floral decorations of the Horticultural Hall were on a very enlarged scale, and extremely magnificent. The premiums for these ran as high as $30, but it must have cost twice that sum to construct either the "Chinese Temple," the "Floral Temple," or the "Gothic Pyramid," which were exhibited on that occasion. On the third day of the exhibition, (Sept. 19th,) the Society and its guests assembled in Faneuil Hall at one of the most imposing feasts, and perhaps the most so, of any our country has ever witnessed. The floral decorations of the tables, and those environing the rows of columns, seemed to impart an air of enchantment to the scene, and there was a hallowed gratification in thus assembling in that old cradle of Liberty, enhanced by the scintillations of intelligence and beauty, emanating from above 500 ladies, most brilliantly attired, who honored that banquet by their presence. Sir, it was a glorious scene; and when the distinguished speakers were called forth one by one, by appropriate complimentary sentiments, it was most gratifying to the soul of an American to hear each one render homage to the consecrated spot on which we were assembled, and to the glorious emblems, the eagle, stars and stripes of our country, which overhung that noble hall. The repast consisted of the choicest fruits of all kinds, with which were richly intermingled, the beauties of sentiment, of rhetoric, and of poesy. Truly this magnificent festival may be justly characterized as the highest "feast of reason and flow of soul." Yours, most respectfully, Wm. R. Prince.

Prince's Lin. Garden and Nurseries, Flushing, Oct. 25.

INTELLECTUAL IMPROVEMENT AMONG FARMERS.

We have received from "H. T. C." a well written essay, for which the above would be a not inappropriate head. We doubt not our readers would be gratified by a perusal of the paper entire, but the most we are able to do under the press of various other communications, is to present the following extracts:

"The *advantages* of intellectual improvement among farmers, are (some of them at least) as follow:—

1st. The sounder the root, the more vigorous is the tree; the firmer the foundation, the more steady the building; the purer the fountain, the clearer the stream. The improvement of the agricultural mind strengthens this root, consolidates this foundation, purifies this fountain. Hence the whole nation is benefited.

2d. The improvement of taste in the fine arts, developed in landscape gardening, architecture, &c., will beautify the country, draw closer the cords of patriotism around every heart, and exalt and purify the feelings connected with our native land.

3d. It will greatly increase the respect with which the American character is regarded abroad.

4th. It will have a moderating effect on political contentions, when the public mind is less liable to imposition; more determined on having men of integrity and worth to represent it in our national assemblies; and better capable to judge of that worth.

5th. Prejudice, that mighty opponent of all reason, improvement and truth, will be in a great measure abated.

6th. Sound literature will be circulated and read to a greater degree than has yet been attained, instead of the poisoning trash now so widely disseminated.

7th. We shall have a national literature.

I now proceed to show the *perfect possibility* of carrying out this improvement of the agricultural mind; and what I have to say will be applicable to every farmer in the land, and involves the highest and most precious interests of our beloved country.

The soul of all success in any business is METHOD. What would become of the merchant if his day-book and ledger were not kept with the most methodical accuracy? What would befal the banker, the tradesman, or the scholar, if all their operations were not conducted by the same regular processes? And what hint is so powerfully suggested to the farmer as this very method, by her with whom he holds constant communion—dame Nature herself? The seasons, spring and summer, autumn and winter, roll round in an eternally regular succession. The seed germinates, the blade appears, the ear, the blossom, and the grain—each in its turn, succeed the other by the same unvarying method. Animals are brought forth, nourished and matured by the same unchanging law. The rain and sunshine, the frost and the dew, the storm and the calm, are always punctual in their season. Why therefore should the farmer, in the midst of all this regularity, be the only thoughtless, irregular, confused being existent? Why, on the contrary, may not *all* his operations be conducted by a fixed plan from year to year; his farm be laid out in a regular number of fields, in which a regular rotation of crops may follow one another in a regular order; his time and that of his laborers disposed of according to a regular system; his family and household operations conducted by the same regular method from day to day? All this planning may be done with an *immense* saving of time and thought, compared with the usual rambling, shambling way of doing business; and when once it is settled there is no more thought about it. All is as regular as clock-work."

HOGS WILL NOT LIVE ON AIR.

If it be a fact, as contended by some, that the introduction of the Berkshire breed of hogs has been of no benefit to the country, it cannot be denied but that it has been the means of drawing the attention of farmers to the subject of improvement in that branch of rural economy. Whether this improvement has been effected by crossing or selection, is of no consequence, so long as the improvement progresses.

This improvement is apparent in all sections of the country which I have visited, and more particularly in the immense droves, which pass through this city, (Albany,) from the central and western counties of this state on their way east. In looking over a drove of 300 or 400, you would hardly find one which would appear to have any affinity to the "Land-Pike" or "Alligator" breed, which formerly occupied the places of the full, plump, round-bodied, small boned grunter of the present day. They cannot, to be sure, travel quite as many miles in the day, as the long-legged racer of former years; but what they loose in travel they make up in thrift.

It is a common remark of strangers that although hogs are suffered "by authority," to run at large in the streets of our city, they award us the credit of having very decent looking ones at least; and it is a fact that a mean looking hog is a rare sight hereabouts. Although there are but very few of the pure Berkshire breed to be found in this section, traces of them may be seen in most of those we meet.

It has always been my creed to stick to one breed of animals until I could find a better. That there is a great difference in the amount of food required or consumed by one breed over another, must be admitted by every person who has paid any attention to the subject. Show me a hog with a plump, round, body, small head, short nose, small, upright ears, of a quiet, lazy disposition, and I will warrant him an easy keeper.

It is said by some farmers, and I have no doubt but they believe it, "that the superiority of a breed may be found in the feeding trough." But a little attention to this subject, I think will convince them of their error. I have no idea that there is any breed that will live on air; but the manner in which some of my breeding sows lived and improved in flesh last summer, staggered my credulity. After taking the pigs from the sows, rings were put in their noses, and they were turned into a small pasture to feed on grass, with an ear of corn each per day; the drouth soon dried up the grass, but the hogs continued to improve, and did not seem to care much for the corn, which was soon discontinued. They continued to improve, and we almost persuaded ourself that we had found the grand desideratum, long sought for, viz: a breed that would live on air; but lo and behold! what was my astonishment on going into the field not long after, when I discovered the great secret. In the spring and early part of the summer, my man that comes to the city every Tuesday and Friday, with vegetables for the hotel, and takes the offal of the kitchen, with which I feed my pigs, also took the refuse of the fish market, amounting to one and two barrels each time. This was deposited in the lot where the hogs run, and covered with soil, a layer of fish and a layer of soil alternately, intended for manure. The keen scent of the hogs had led them to the heap, into which they soon made their way, and feasted sumptuously every day, which accounts for their great improvement in condition, and turning up their nose at the corn.

Nov., 1845. C. N. Bement.

ON THE CURING OF PROVISIONS

FOR THE BRITISH MARKET

L. Tucker, Esq.—The curing of meat is a business we are daily engaged in; an art attained by precepts and founded on principles, the knowledge of which is of immense importance not only to the health, but to the comforts and economy of man; yet strange to say, it is a science about which, not one word has ever been written; and that we look in vain through the printed masses of the new and the old world, for a single treatise upon the subject. When you reflect upon this fact, you and your readers will, I trust, be lenient in your criticisms on this, *my* first attempt at a *first* essay on the subject; more particularly when I tell you, I am prompted by no other motive than to increase the value and interest of your invaluable publication; to instruct your readers, and to open the eyes of the many persons engaged in the business to the minutiæ that must be observed, and the difficulties that must be overcome, in order to pursue the trade successfully.

Ude, in his celebrated book on Cookery, in giving instructions how to make Hare soup, significantly says, "first catch the hare." It is not of more importance to catch the hare to make the soup, than it is in putting up beef for the British market, to first get the beef of the right size and quality. The quality is found amongst the the fattest and best fed cattle you can obtain; and the size must range between 600 and 800 lbs., being that which invariably cuts up to the best advantage; having more prime pieces, both in weight and number, compared with the whole weight of the carcass, than any other size we can select. Having obtained the cattle, our next care must be to have them properly killed; and here it is of great importance to your success in curing, that not only the blood of each animal should be well and thoroughly drawn, but that every animal should be allowed sufficient time to rest off its journey, say from 24 to 48 hours, according to circumstances, so as to allow the fever consequent on driving any distance, to subside, before you kill it.

The business of packing is divided into two parts; the first is to cure the meat; the second, is to preserve it when cured. In the packing house, the first preparation that should be made for business, is the making of the brine in which the beef is to be cured. By way of parenthesis, it may as well be here noted, that neither Kanawa, Zanesville, or Goose Creek salt should be allowed to touch your meat, either directly, by mixture with other salt, or indirectly through the medium of brine, for so sure as any of these salts are used, so sure will your meat become slimy like fish, and be imperfectly cured. The best salt I know of, for curing, is the Liverpool coarse sack salt, as it is called. The brine should be made for at least 10 or 14 days before it is required; it should be made in large vats or hogsheads, with a sufficient quantity of finely powdered saltpetre added, to give the beef that red color, which so pleases the eye from long habit; it should be allowed to settle down and refine, and when drawn off into the tubs where the beef is to be cured, it should be clear, and entirely free from any sediment or impurity. The strength should also be tested, which, in the absence of a regular brine tester, may be done accurately enough by placing the half of a hog's head, weighing from 7 to 8 lbs. in the brine, which must float *perpendicularly*, the snout two inches above the surface, before the brine can be pronounced strong enough.

The next operation in the packing house, is the cut-cutting up of the beef into 8 lb. pieces, about which it is impossible to give any specific directions, as the number of pieces must entirely depend on the size, weight, and thickness of the animal. This department of the business must be guided by the hand and eye of the practical tradesman, and directed solely by his good judgment. One thing may here be remarked, that it is always well to leave two prime pieces of every carcass, say off the standing ribs, whole and uncut, to weigh from 32 to 38 lbs., and cured in that way, for two reasons; first, when cut up to the proper size after they are cured, it leaves a freshness and bloom on those pieces for the heading, which gives to the purchaser, on opening the tierce for inspection, a certain guarantee that the meat was handled by a tradesman; and secondly, it will facilitate the scaling of the meat much, as should 37 pieces be in the scale, wanting one piece more to weigh 8 or 10 lbs., more or less, that piece can be cut off this larger one to a great nicety, and avoid the delay and trouble of *tossing* a pile of meat over to hunt up one piece from the many, of the exact weight wanted. In scaling your meat it is not necessary to put more than the exact weight 304 lbs. in, as beef when cured, and put into tierces, will regain fully 5 per cent. of the 10 per cent. it will have lost in the process of curing.

As your beef is cut, the coarse pieces of the fore quarter, such as the clods, stickings, and shoulder pieces, should be selected and well rubbed with dry salt, and put into pickling tubs by themselves; the round, rump, and jump pieces of the hind quarters should in like manner be selected, well rubbed with dry salt, and put into pickling tubs by themselves, and then your prime parts, such as ribs, sirloins, plate and brisket pieces, should be selected, and put into the pickling tubs by themselves, and *without being rubbed*. Those pieces being the most tender, and least veiny parts of the beef, will cure more easily and quicker than the coarser parts, but after remaining a week in the brine they should be drawn, and if the brine has not sufficiently stricken, then and not till then, should those pieces be rubbed with dry salt. The coarser pieces should be drawn and examined every fifth day at least, and if the salt should not have sufficiently stricken, and the impurities be not well extracted, then they should be *gently rubbed* a second time, and the air allowed to act for an hour or two at least, on the meat and salt, before they are returned into the brine; the whole of the meat in the curing tubs must be well covered with brine, and the air entirely excluded from it. Under a good state of the atmosphere, and with proper handling of the meat, it will be cured and ready to put into the tierces in from 14 to 16 days, but of this the practiced eye and hand of the tradesman can alone be the judge, for I know of no words to explain the feel and look of meat when cured, or when not sufficiently cured; practice and comparison alone, aided by close observation, is the only certain way of arriving at that judgment.

The propriety of sorting the meat of the three qualities as pointed out, and having each quality cured separately, I shall endeavor to explain, so as to be understood and appreciated by every person possessed of any common sense and experience. First, the finer or middle pieces of every animal, it is well known, are much more easily cured than the coarser pieces of the extremities of either the fore or hind quarter, hence the propriety of keeping them separate, as nine times out of ten it is wholly unnecessary to do more to them (the finer pieces,) than simply to place them in the brine, where they will cure without any rubbing, while it is necessary to rub the other pieces once at least, and sometimes oftener with dry salt, in order to extract thoroughly those impurities which the *lean* of every animal contains in a very much larger proportion, than the fatter part of the same animal does; and it is for the same reason, right and necessary, to separate the pieces cut off the extremity of the fore quarter from those cut off the extremity of the hind quarter, because the meat of the fore quarter contains more of those impurities, which must be extracted before it is cured, than does the meat of the hind quarter, and consequently the meat of the fore quarters requires more care and handling in order to cure it, than does the meat on any other part of the carcass of the animal; hence this classification will enable the curer to give to each sort of meat the required handling necessary for its preservation, without interfering with the other parts, which, if treated in the same way, (I now speak of the finer pieces,) would have their natural juices extracted, become hard, and what is commonly but erroneously called over-cured. There is also another reason why this classification should be made; it is this: That it saves much time and labor, when the meat is selecting for the scale, by having each quality in separate bulk; the selector has but to go to either, in order to lay his hand at once upon the particular piece he wants, without losing time or wasting labor in tossing over a pile of meat promiscuously cured.

When your meat is cured, the next process is the packing it away for preservation into the tierces, about which I deem it unnecessary to say anything; because when the meat is selected and scaled, the packing it is a mere mechanical process, in which a man can alone become a proficient by practice and experience. It may be well though to remark, that when your meat is taken out of the curing tubs, it should be washed, and ridded of the impurities extracted by the salt, and generally in a greater or less degree deposited on the surface, and which can be best and most easily done, with the aid of water and a good hickory broom; the packer should always have by him a knife, and whenever he observes an incrustation of those impurities on the meat, which the washing had not taken off, he should use his knife to scrape it off, and if scraping did not effect it, he should cut it off.

When your tierces are packed, they must then be headed and thoroughly driven down in their *wooden hoops*, rolled by, and each tierce have its bung hole bored, and then brined with pure, clean brine, made and tested in the way before described, except that *no saltpetre* should be put in it. It is of the utmost importance that this brine should be made several days before, in order that not only the impurities of the salt, but those of the water also, should have time to settle down into a sediment, and this sediment should not be disturbed when the brine is drawn off. The want of this precaution, has been the cause of much complaint, and injury to the meat when exposed for sale, from the fact that when the brine was put on without first being allowed to clear itself, the impurities of both the salt and the water settled upon the meat, and made it both slimy and dirty. The tierces should remain at least 14 days in this state with the bungs open, and whatever the casks may have absorbed of the brine, should be replenished once, if not twice every day, and this continued until the casks will absorb no more, and that the brine remains as stationary and undiminished, when filled, as though it stood in a glass bottle. The necessity for this precaution is obvious; first, if your staves are not in this way allowed to become saturated with brine, and the brine replenished, before the casks are finally coopered and shipped, you can have no guarantee for your casks not leaking on the voyage; and secondly, should this absorption be allowed to take place, on the voyage, your tierces in a short time will become half empty of brine, and wherever your meat then comes in contact with the stave, it will extract from the wood its coloring matter,—will become stained and discolored, and for the want of brine, the meat will become hard and rancid, and perhaps mouldy too. Your tierces after standing at least 14 days will take no more brine. They are then ready for the bungs, which should be put in with a coarse cloth around them, and tightly driven; over each bung a piece of tin should be nailed on, but great care must be observed that the tacks with which it is fastened are so short as not to go through the stave; as, if they do, a leakage will take place that may do much harm.

Then comes the finishing stroke to the whole, namely, the putting on of your iron hoops, and the final coopering of your tierce. As few coopers are in the habit of doing such work in the United States, I shall explain the process, so that all may understand, and perform it, if they will. In the first place, care should be taken to clear your house of all salt and brine, in order that the hoop iron may be kept as free from it as possible, to prevent its rust and corroding. The tierce up-ended, the cooper takes off the three first wooden chime hoops, he then takes his hoop iron and bends it round the place of the *first* hoop, and takes its accurate measure; there he then cuts it to the length, and rivets it, which can only be well done on the face of a small anvil, or on the side of a metal half-hundred weight; he then puts this hoop on, (having eased it, by a few blows on the inside of one edge, to the shape of the cask,) and drives it to the berth of the *second* wooden hoop, leaving room for a wooden guard-hoop on the outer edge of the chime; he then strips that end of the tierce of all the remainder of its wooden hoops, and takes his hoop-iron and measures around the berth of the *third* wooden bulge hoop, cuts, rivets, and shapes it, and then puts it on and drives it down, to the place of the *second* bulge hoop; this done, he then puts on his wooden guard bulge hoop, which passes over the iron one, and drives it to its place, and then drives on the remainder of his wooden hoops, finishing with a guard chime hoop outside the iron one, and so proceeds on until the whole is coopered. It is necessary here to remark, that no iron driver, used perpendicularly, as coopers use their wooden drivers on wooden hoops, will ever drive an iron hoop to its place. There is a proper driver without which the hoops cannot be driven; it is this:

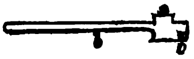


Fig. 106.

B, the handle; *a*, the head on which the blow is given, and *c*, the bite which catches the edge of the hoop; this used with a 7 lb. hammer to strike with, will drive any iron hoop to its place, but without it, the hoop cannot be stretched and driven, and consequently must remain imperfect.

The curing and packing of pork differs somewhat from that of beef, but the length to which this article already extends, prevents me from going into that subject at present, nor is it so necessary to be known to the community, for from my knowledge of the trade, of the quality of the Irish pork, and of the manner and cheapness with which it is produced, I deem it impossible for us in the United States to compete in any market with the Irish pork, with the hope of realizing a profit for some years to come under the present tariff; nor can we count with certainty, even under the very best possible management, upon any profit being realized by putting beef up for the British market this year, at the prices now paying for fat cattle in this, the great beef producing country of the United States.

At some future period I may again address you on this subject, which is of such interest and importance to the whole of our community here.

I remain sir, with respect, yours, &c.,
AN APPRENTICED PACKER.

Louisville, Ky, 4th Nov. 1845.

CRITICAL NOTICES.

EDITOR OF CULTIVATOR—I do not pretend that the mantle of "Commentator" has fallen upon my shoulders, yet I wish to make one or two remarks after his manner, on matters treated of in the Cultivator.

On page 292 of the current vol., you say, "We think common experience does not agree with Mr. Robey's remarks about the product of small potatoes, and cutting potatoes very small." It agrees most perfectly with mine. I have made many very carefully conducted experiments, by weight and measure, on various soils and at different seasons, and I have invariably found the product of a single eye equal to that from a large potatoe. You will find this result corroborated in one of your back volumes, by the experiments of D. S. Curtis.

There are some remarks on *garget*, in cows, on p. 284. I have never tried any thing to reduce the hardness and swelling of the bag, so certain in its results, as pigs' feet oil, well rubbed in.

D. C., on p. 309, objects to the decisions made by judges, at agricultural fairs, on the comparative merits of plows, with sole reference to the indications of the dynamometer, without taking into account the goodness of the work. This would indeed be a very erroneous method of judging; but the results of the dynamometer are exceedingly ambiguous on another account; that is, the speed with which the work is performed. The resistance to a solid, moving through a fluid, is proportional to the square of the velocity. Whether the same law holds in relation to the movement of a plow through the furrow, I believe has never been determined; but I know that a plow which marks 350, on the dynamometer, when drawn by a pair of slow cattle, will mark from 400 to 450 when drawn by a pair of smart horses. This fact, which is very seldom taken into account by judges, completely vitiates these experiments and awards.

N. N. D.

Stockport, Nov. 10, 1845.

WANT OF DEFINITENESS IN WRITERS.

L. Tucker, Esq.—Probably you and your readers have often heard of the good old lady's test of the quality of indigo. It being somewhat after this wise:—"Take considerable water—put it into a tolerably sized tub—and into this place a small piece of indigo. If the article was of the proper quality, it would sink—or swim—she had forgotton which."

Without intending disrespect, and, I hope without risking the charge of obtuseness, I must say, of a similar character to the above, is much of the information intended to be conveyed by the thousand receipts and the scores of informants of the present age.

Does the subject relate to matters of domestic economy, we have "a little spice," "a very little salt," "a small lump of butter," "a very little sugar," &c.

Are we to be made wiser in the details of agriculture or horticulture, we are told of "a part of an acre," so and so—"several loads of manure"—"a small quantity of plaster,"—"a few inches in depth,"—"a short distance apart," &c.

This constant use of *indefinite terms,* when communicating what is intended to be *definite information,* is exceedingly annoying to one desirous of instruction, and with the less enlightened, contributes as much as any one thing, to bring "book learning" and "book farming" into disrepute.

When a new or important fact is to be communicated, let it be done distinctly, *definitely,* so as to render it *practically* available.

When a novel or otherwise remarkable experiment is detailed, let the manner be such as will enable another person, in like circumstances, to repeat it in precisely the original manner; or if under different circumstances, to so modify it as to realize, if desirable, the same results.

The above was suggested by a perusal of an experiment with "guano for roses and grape vines," given by your correspondent, A. T., of Brooklyn, in the Nov. no. of the Cultivator.

According to his own account, the result was all that the most extravagant could have desired. I was pleased that his generosity prompted him to make you so *tastingly* sensible of its truth.

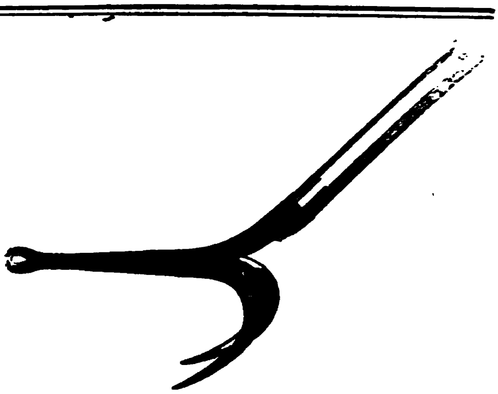
But how was it accomplished? Why, in the case of the rose bush, simply by digging "a portion" of a mixture of one part guano with four parts of earth, in about the roots." What portion of what quantity was thus dug in, or at what season the digging was performed, we are not advised. It might have been "a small portion of a considerable quantity," or the reverse; it might have been rather early in the season—or somewhat farther advanced.

As for the *one* grape vine, we are equally in the dark here too.

I am certainly much obliged to A. T. for his hint, for as it is given, it can hardly be called more than this; but, if he is correct in his impressions, I shall be under still greater obligations to him, if he will favor you with the *precise modus et tempus operandi,* in each particular case.

J. B. C.

Providence, R. I., Nov. 6, 1845.



ROOT CLAW.—(Fig. 107.)

Ed. Cultivator—One of your subscribers has made inquiries of you concerning a "root claw." Above is a drawing of one which I have used on my farm, and though simple, I find it quite an efficient instrument. The shank is about twenty inches long, and the teeth twelve. The socket where the handle enters is two inches in diameter. The handle three and one-half feet long, with a pin. The thickest part of the shank is about two inches square. The thickest part of the teeth 1¼ inches. I have used this claw for alders, willows, and bogs, and find it a valuable farming implement. You are at liberty to use this communication as you see fit.

Yours, respectfully, Daniel Gaylord.

N. B. The claw is a fine instrument to pull negro heads in the meadow.

Gaylord's Bridge, Ct., Nov. 1, 1845.

KENTUCKY—ITS FARMERS AND THEIR HOMES.

L. Tucker, Esq.—My protracted illness has prevented me fulfilling my promise, and writing to you on this most interesting subject ere this.

In order to prepare the reader for my plain pen and ink sketches, it may be well I should tell you an anecdote of the Duke of Wellington, when premier of England: He requested one of his old peninsular generals to take charge of the war department, and was answered by the veteran, that he felt his incompetency to fill the office, *only* from his inability to speak in public, and answer the questions necessarily put to him in Parliament. The Duke met him by saying, you will get along well, sir, if you follow my rule, which is, to speak in plain good English to the point in question, and avoid all attempts at embellishment by quoting Greek, Latin or poetry. Now, my situation is much the same as that of the old war officer; I feel my incompetency to write of the Kentucky farmers and their homes, *only* from the want of the "pencil" of a Willis to do it with; for no one is more sensible of their great worth, nor appreciates it more highly than I do, but I have to mourn over my inability to write of them, in other than *plain English,* unaided and unembellished by either poetry, Greek or Latin.

The old maxim of "green are the hills that are far away," does not hold good as regards Kentucky. Though much I had heard of its fine lands, its extensive and well managed farms, and their hospitable owners, the description fell far short of the reality, when I came to visit them. The lands are of the very first quality, yielding the heaviest crops of corn and hemp, year after year, without the slightest aid from manure. Where those crops are not growing, you find the *whole* of the remainder of the land well set in blue-grass; every inch of woodland throughout the country being cleared of the undergrowth, and set in this grass. Your eye rests on no land that is not producing either fine blue-grass, or some cultivated crop.

The hospitality of the farmers is hardly surpassed by the proverbially and prodigally hospitable Irish. You are greeted at every door by its gentlemanly owner, saying, "Alight, sir, walk in. Tom, or John, take this gen tleman's horse and feed him." If you call in the forenoon, there is no getting away till after dinner; if you call in the afternoon, you must certainly stay all night. Nor is this all. If the gentleman should be absent, the lady of the house makes her appearance, and without questioning you on your business, tells you at once, you must come in, be seated, and take some refreshments; that her husband will soon be home, and that you cannot leave until he comes. There is no resisting these appeals, they are made with such unaffected sincerity. You are entertained too as your taste may lead you, either in conversation, reading, (for they all have libraries to some extent,) or with music. In point of comforts, of luxuries, and even elegancies, the Kentucky farmer compares well with the English, Irish, or Scotch gentleman-farmer, *in every respect*. Their houses, generally speaking, have been built within the last 30 years; are of brick; well and tastefully planned; large and roomy; and if fault is to be found at all, they are too magnificently furnished for a "farmer's" residence. They all stand some distance from the road, and are approached by a wide avenue, shaded on either side with large forest trees, and the ground immediately surrounding the dwelling, is invariably tastefully laid out in shrubbery, ever greens, and flowers. Every farmer has his elegant family carriage, and his one horse buggy for himself, with horses and saddles innumerable, for the younger branches to use when their inclination leads them to gallop uncontrolled from one neighbor's house to the other. Were the young ladies of our cities to see the ease, the elegance, and the independence with which the Kentucky farmer's daughter mounts and rides her horse, I am persuaded that many city belles would soon be converted into a farmer's wife or daughter, and I will add, that the change would not only be a happy, but a most useful one.

"John Bull," in inquiring about any place, speaks first of the eating and drinking—though it is last in my catalogue, yet it is not the least in importance, nor the less interesting to your readers to know something about. Let me describe to you a Kentucky farm-house breakfast. Reader, I give you the catalogue just as I found it, nine times out of ten, on every table without any addition whatever:

The tea service of neat but elegant China, not unfrequently silver forks, and invariably a silver goblet laid by the side of every plate. Tea and coffee, the richest cream and butter in abundance, with a large pitcher of rich sweet milk on one side, and a like pitcher of fresh butter-milk on the other, covered with snow white napkins. *Hot* corn bread of two or three different kinds, *hot* biscuits, *hot* light bread, and *hot* cakes of two or three other kinds, made from I know not what or how, but they all taste admirably well; a dish of white maiden honey in the centre, surrounded by fried ham, fried chicken, and a beef-steak or mutton chops, supported in general with a dish of fine Irish potatoes, baked, and flanked by a bowl of fresh eggs, either poached or boiled. This for breakfast! Only think what you might expect for dinner or supper. No wonder, you will say, that the Kentuckians should be such a tall strapping race, when they live in this way; and so say I myself.

Having now spoken in general terms, I will descend to particulars, and endeavour to describe to you some of the finest farms, that are under the best management, in the state, and they are many. In doing so, I shall take them in the rotation that I visited them, and not make selections on account of the *name* or *public character* of the owners, but speak of them *all* as *farmers*, and as I really found them at their homes.

In my next letter I shall make this commencement; and will devote the few remaining lines of this sheet to a short notice of the husbandry of Mr. JOHN DAVIS, which is different to that of any other man in the state, so far as I have seen or been able to learn. He is a native of Switzerland, many years in this country, and was formerly a resident of Indiana, where, not many miles from Jeffersonville, he planted two tolerably extensive vineyards of the Catawba grape, and made a most superior wine, for which he got ready sale at $2 per gallon. Mr. JOHN L. MARTIN, of Jefferson co., induced him to sell out his vineyards in Indiana, and he has him now residing on his princely farm near Louisville, planting and cultivating an extensive vineyard there, of the Catawba grape, of some 20 acres or more, a large portion of which will bear this next year. The arrangement is very complete, and must be successful under such guidance. The vines are planted in rows, at distances of 8 feet and 10 feet apart between the rows; well cultivated and free from grass or weeds; the vines are being trained on a light standing frame, or trellis, and give the whole the appearance of a beautifully cultivated garden. The wine made from this grape, is of a fine, full, rich, and sweet flavor, and possesses a peculiar and invaluable qualification, namely, that it can be kept 4 years at least on tap (for Mr. Davis has tested it that long,) without injuring the wine in fullness of flavor, or risking its becoming sour in the least degree—a quality that I never knew or heard of any of the wines of Europe to possess.

A company has been formed amongst the most wealthy and influential farmers of Bourbon co., to import several Alpaca immediately, into this state. The shares are all taken and *the money paid in;* a man has been chosen, and an agreement made with him to start before Christmas to South America for them, so that within the next year you may count with certainty upon seeing this most interesting and important experiment tested in Kentucky, by Kentucky farmers, to an extent, and in a manner that must insure success, if our climate is at all suited to the constitution of this most valuable animal. Before I write to you again, I hope to see some of the company, and to be able in my next to give you a more detailed and particular account of this important movement.

Wishing you a Kentucty breakfast to feast on during the coming cold winter, I remain truly and respectfully yours, GRAZIER.

Social Hall, near Lexington, Ky., Nov. 1, 1845.

SHEEP HUSBANDRY.

L. TUCKER, Esq.—I have noticed many articles in your paper, headed "Heavy Fleeces—Fine Sheep." As I have been a wool-grower for the last thirty years, and have seldom, if ever, in that time, wintered less than 300, it seems not improper for me also, for once, to speak on this subject. I commenced early with half-blood merinos: and in 1822, I selected 20 ewes from a lot of full-blooded merinos in Watertown, Conn. About 1814, our late Chief Justice, R. Skinner, purchased a lot of full-blooded merinos, from his native county, Litchfield, Conn., then called the Humphrey sheep. In 1825, he purchased a Saxony buck. The scab got into his flock, and in his absence to the southern states, by neglect of good care, a large number of his flock of 500 died, and fortunately, some would say, his Saxony buck among the number. On his return, in 1827, I purchased his entire flock of ewes, about 150. I have bred from the full blooded merino since then, and mostly from bucks from Consul Jarvis' flock. I have had three bucks and a few ewes from the Shaker flock, Enfield, N. H.

My manner of improving my flock has been the following: No observing wool-grower can have failed to notice, that as great differences exist among sheep, as to the length, thickness, and fineness of wool, as of the hair of the cow. The first care of a good dairyman is to select his cows best for milk, quantity and quality. Build is a second object. By proper crossing of these selections, our best breeds of cattle are produced. I have had ewes apparently from the same original stock, one at three years old, producing but three pounds of wool, and a miserable lamb; another of the same age, and in the same order, shearing $5\frac{1}{2}$ lbs., and raising a good lamb. The fleece of the first will be short, thin, and of a rotten deadly appearance. The other, long, thick, and of fine, silky, lively appearance. This last I breed from as long as good keeping will enable me to. I have now a ewe 18 years old, with a likely lamb by her side, and another, 14 years old, that has raised a lamb this year with as much grain as both would eat, which at seven months old weighed 109 pounds. From a flock of 320, I select annually 100 for breeding, in the spring before shearing, two years old, and upwards. From this selection I mark 20 or 30 of those which have thick, long, fine wool, free from gum or jar, or any appearance of coarse wool or hair on the flank or tail. The female part of the increase of this selection are preserved; without this attention to marking the best ewes before shearing, the best of the flock will be disposed of after shearing. I give my 100 ewes six quarts of corn per day. My lambs seldom have any grain. The remainder of the flock have no grain. All are housed in the winter, and have access to good water and salt at all times. I have many ewes which from old age shear light fleeces. Yet my whole flock of over 300, yield 4 lbs. 4 ounces per head. I have no 10 to 13 lb. fleeces. My heaviest buck fleece, weighed 8⅛ lbs.

There is but little known as to the weight of wool from the weight of the fleece. I tried the experiment once upon two bucks. One weighed over 8 lbs., and the other 6¼ lbs., both in the same order and washed alike. The largest fleece weighed after being cleansed, 3¼ lbs., and the other 4 lbs. I do not believe a fine wooled sheep can be produced in Vermont, that will in one year yield 6 lbs. well cleansed wool. I hope your correspondents will send you the amount of the fleece well cleansed, and the price their wool brings this year. I sold my last year's clip the 8th of last March, and this year's clip last month. The average price of both clips is 39⅛ cents. During the last seven years it is as follows: My clip of 1842 and 1843 sold in 1843, at 34, 36, 43, 45, 46, and 70 cents.

If the wool-grower will look back to the prices of those years, he will find the tariff has had but little effect upon the prices. This jumping out and into ship at every session of Congress, is what ruins the wool-grower. He must expect ups and downs in prices; that is the lot of all. I fear not the west. The increase of sheep (fine sheep,) does not keep pace with the increase of population. Fine sheep never can survive the cold rains of the western prairies. Fine wool yields a better profit to the farmer even at this time than any other agricultural business. This is the first time I have spoken. Therefore please excuse my long yarn.

JOHN S. PETTIBONE.

Manchester, Vermont, Oct. 28th, 1845.

IMPORTANCE OF WOOL DEPOTS.

MR. EDITOR—I have been surprised to learn that the plan of a Wool Depot as established at Kinderhook, does not meet the approbation of many of the manufacturers. Why, I can hardly conceive.

Great injustice is done for the want of descrimination between fine and inferior grades. For years the fine wool-grower has struggled on under the delusive hope held out to him by the manufacturer of renumerating prices; but vain has been and will be that hope, unless some system is universally adopted, which shall cause this difference to be made, for the manufacturers frankly admit that they cannot buy from farm to farm and make it, because every man is prone to think his wool about as good as his neighbor's. Admit, for the sake of the argument that the manufacturers are honestly disposed to pay the grower all his wool is fairly worth to them, does the present system do justice? All must admit that it does not. Why? Because the manufacturer does not himself visit the grower to buy, but sends an agent who has no other interest than to buy the wool cheap enough, *upon the average*, to meet his employer's views. Every reader can call to mind numerous instances of reckless agents, buying with an utter want of discrimination, the only apparent rule being "buy as you can," but be sure and make the average low enough.

That the interest of the manufacturer and wool-grower should be identical all admit. How it is to be made so is the question? Of all the plans to accomplish this, that of *depots* seems to me to be the most feasible. Establish in localities where sufficient wool can be readily brought together, and of convenient access to the purchaser. What can be more just or equitable than for the wool-growers of a section to deposite their wool with a faithful and competent agent, to sell at the fair market price? As I understand the plan, a standard of quality is established; each lot is assorted by the fleece agreeable to such standard; the sorts are carefully weighed and entered in a memorandum-book; the lot is then placed by itself ready for the manufacturer, who can select such lots as suit. The value of each can be readily decided upon; the purchaser knows just what he is buying, and the grower gets the relative value of his wool, coarse or fine, be it high or low.

Another great advantage would eventually accrue to both manufacturer and grower. By a proper discrimination and price, the manufacturers could induce the growth of just the style and quality most desirable, while if the present system is continued, eventually nearly all the fine sheep will be superceded by those of middling grades, which pay better.

The wool-growing interest has become one scarcely inferior to any other in the Northern States, but has as yet been managed in a very loose way. Some good system should be adopted to effect equitable sales, and if a better one can be proposed than the one I am urging, I hope it will be, through the columns of the Cultivator.

I would also suggest that the wool-growers *hold* a convention in Albany during the coming winter, to discuss the subject and agree upon some plan for universal adoption. What say my brother wool-growers? Will you answer through the next Cultivator? Let us keep the "ball rolling" until some plan is devised to accomplish so desirable an object.

A WOOL-GROWER.

CORN, APPLES AND POTATOES.

MR. L. TUCKER—Herewith I send you nine varieties of Indian corn—eight of Apples: the Pound Sweeting, two Sour Russets, the Honey Russet, the riches apple I ever tasted; the Bellflower, Spitzenburg, Seek-no-further, and Daniel apple. The two last, from grafts at eight years since. They are all winter apples, except the Daniel, which is scarce, growing only in two orchards to my knowledge. They are a first-rate apple, and stand at the top of the market in Utica.

I send also four varieties of Potatoes—the early and late Pink-eyes—the blue Pink-eye, and a variety of white, which I call "Yorkers." I wish you would try the blue pink-eye, and if you have any better variety, send me half a peck or so. I think my experience with potatoes shows the fallacy of the doctrine that potatoes run out. I have planted the pink-eyes for more than 20 years, and for nine years on the same farm.

Trenton, N. Y. Nov. 1845. DAIRYMAN FARMER.

Our correspondent has our thanks for the articles above enumerated. They are fine specimens, and may be seen at our office. We will test the potatoe, but if we have any better, shall not be able to send them, unless Dairyman Farmer will give us his name.—ED.

TO KILL RATS.

MR. L. TUCKER—A subscriber in your last Cultivator, requests the best manner of destroying rats. The following methods of destroying them, I copy from a very good work, entitled the "Vermin Destroyer," which may be of some service to your inquirer. Although I have abbreviated the description, it does not destroy its efficacy:

Take an old fashioned wire trap in good order, smear the floor over with the oils of anniseed, carraway, and rhodium. This latter oil is very expensive and of a strong scent, therefore a very little of it should be used. Mix with them for bait, a few drops of the carraway oil, and set the trap for use. The scent of these oils will allure the rats into almost any kind of trap. Or by taking a handful of newly ground malt, mixed with a handful of good sweet oatmeal, and an ounce of arsenic made up into pills and thrown into their holes, is a very effectual remedy. Care must be taken not place them in the way of poultry. If too much arsenic is used it will not kill them; it will only make them vomit up the poison. Many persons have found that a genuine Scotch *slut* terrier is first rate for giving the above vermin their quietus. The sluts are considered far superior to the dogs for the business.

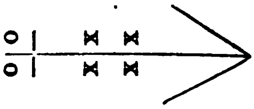
RATOLOGY.

Albany, Nov. 5, 1845.

FACTS AND OPINIONS,

Condensed from various Exchange Papers.

Snow-plow.—The European correspondent of the Boston Courier, gives an account of a machine to remove snow from highways and railroads, used in Dresden, which ingenious yankees will soon have an opportunity of employing and improving upon, if they wish. It literally puts "the cart before the horse." It is represented by the following diagram:—



The outside lines, forming an acute angle, represent the form of the shovel or snow-plow, the long straight line in the middle, is the pole; the oxen are placed at the points X X, and two men at the points O O, to steady it; it is pushed, not drawn, by the harness, ropes, or chains attached to the oxen and fastened to the hinder extremity of the pole, near O O. It will be perceived that a road is made for the team and men, and that they are not annoyed by travelling in the snow drift. Who will make one forthwith and try it this winter? Any force, by way of ox-team, may be attached to it, and the heaviest snow drifts riven asunder.

Wheat—heavy crop.—S. M. Brown, of Elbridge, Onondaga Co., N. Y., harvested over 400 bushels of fine white flint wheat, from eight acres, the present season. He ascribes a part of his success to a dressing of three bushels of salt per acre. Single experiments, however, are as a matter of course, insufficient to determine points of this nature.

Successful experiment with grass seeding.—A New-Jersey correspondent of the New-York Far. and Mechanic, states the following experiment:—He first procured, from different sources, sixty loads of muck, and rotted leaves from the woods; it was exposed to the frosts of winter, and the rain and sun of summer, till after midsummer, when three hogsheads of unslaked lime were mixed with it. When properly heated, it was put on three acres of turf ground, which had been newly turned over, and rolled down. The manure was well harrowed in, rye and grass seed were sown, and the land again well harrowed and rolled. The subsequent product was two tons of hay to the acre, where previously not half a ton was cut. This affords another proof of the great advantage of the thorough intermixture of the manure with the soil. Thorough and repeated harrowing should always be given immediately after spreading manure, even where it is intended to turn it under with the plow.

Grinding horse food.—The London Ag. Gazette states that two horses, every way equal, were allowed each five lbs. of oats daily, and enough hay, amounting to about 17 lbs. per day. For one horse the oats were crushed, for the other, not. 100 parts of the dung of each horse were examined chemically on the fourth day; that from the horse fed on crushed oats contained no nutritive matter, but merely woody fibre, mixed with secretions and salts. In that from the other horse, one quarter per cent of nutritive matter, consisting of starch and gluten was found—arising from the inability of the horse to perform perfect mastication, and which must vary with age and rapidity of feeding. No difference was found in the dung from chopped and unchopped hay, though the ease of eating the latter and consequently greater rest obtained, was a decided advantage.

Fatting Swine.—There is sound sense in the following, taken from an old work, called "Countrie Farm." The more quiet and comfortable hogs are kept, the more rapidly will they take on fat:—"The hogs which you intend to keep in and to fat, shall not come forth at their stye, being alone and free from others, nither shall they have any light but at the door, which is made to go in at, for to dress them. The care about these is not so great as other cattle, excepted only the keeping of them clean, and knowing how to make them good meat, so long as until they are fat, for after that they will lose every day some of their meat, for they are sometimes seen to heap such quantities of fat upon their live flesh, as that there are some hogs found a foot and a half thick of lard."

Golden Russet.—The Indiana Farmer and Gardener, speaking of the popularity of the Golden Russet, (described by Downing as the American Golden Russet, and known also by the name of Bullock's Pippin,) says, "A gentlemen near Belfre, Ohio, being applied to for a list of apples to furnish an orchard of a thousand trees for marketing purposes, replied, "take 999 Golden Russets, and the rest you can choose to suit yourself." [For an account of this apple see Downing's work on Fruit.]

Preserving Cut Flowers.—By changing the water once a day, and putting in a few grains of nitrate of soda, at each change, the beauty and brilliancy of cut flowers may be preserved a long time. Nitrate of potash (nitre or saltpetre) is nearly as good as nitrate of soda. A very weak solution of carbonate of ammonia would doubtless have a fine effect.

Draining.—A very thorough and successful experiment is described by E. Stabler, in the Rockville (Md.) Reporter. A piece of ground was completely worn out when purchased; a part was like mortar in spring, and baked like brick in summer. An unsuccessful attempt was made at draining. "Meeting" says he, "an able essay on draining in the Cultivator or Farmer's Cabinet, I concluded to make another effort. A heavy coating of lime was put on, but the crop of corn was not over 15 bushels per acre. From 500 to 600 yards of surface and underdrains were then made, and oats sown. "The increased crops of oats nearly paid for both the lime and the drains. Four years since, in the then state of the land, it would not have produced more than five bushels of wheat to the acre; now it is light and mellow, and will most likely produce an increase in grass of four or five to one. It is not a very difficult problem to solve, whether there has been a loss or gain in the transaction; when a single dollar for a year's subscription to an agricultural journal, should suggest the idea for improvement, by which land that did not formerly produce over five or ten bushels, will now yield thirty or forty bushels to the acre."

Produce from a single acre.—Henry Colman, in his his account of the market gardens about London, gives the following as the amount actually produced in one year from a single acre by a market gardener, the success being mainly attributed to trenching, heavy manuring, and rotation, besides the usual course of good cultivation:—

Radishes,	£10
Cauliflower,	60
Cabbages,	30
Celery, 1st crop,	50
" 2d "	40
Endive,	30
	£220—$1,100.

Pickling Eggs—as done in Hampshire, England.—When the eggs are plenty, take from four to six dozen, newly laid, and boil them hard. Then remove the shells, and placing them in a large mouthed earthen jar, pour upon them scalded vinegar, well seasoned with whole pepper, alspice, ginger, and a few cloves of garlic. When cold, the jars are closed, and in a month or more afterwards the pickles are fit for use.

Working Oxen.—At the late Northampton (Mass.) Cattle Show there were three trains of Oxen entered for the premiums. The train from Hadley was the largest, and comprised fifty pairs. The train from Goshen numbered 22 pairs; that from Southampton numbered 20 pairs. There were ten other yoke of fine oxen from different towns. These in all make 102 pairs, or 204 oxen.

Consumption of Guano in Great Britain.—

In 1841,	500 tons.
" 1842,	2,000 "
" 1843,	5,000 "
" 1844,	26,000 "

and from 1st July, 1844 to 1st July, 1845, the enormous amount of 257,000 tons.

THE CULTIVATOR.

ALBANY, DECEMBER, 1845.

CLOSE OF THE VOLUME.

With this number of "The Cultivator," we arrive at the termination of another year's labors. With the manner in which the duty on our part has been executed, we must leave our readers to judge; but if untiring exertions and ceaseless labor are attended with success, then we have certainly not labored in vain. It is with great satisfaction that we refer to the able assistance we have received in the shape of correspondence. More than three hundred persons have lent us their aid, nearly all of them highly intelligent practical farmers, and many of them well known for their agricultural and scientific experience. That the combination of ability which has been brought to bear in carrying on our paper, has been appreciated, we have the most gratifying testimony in the hearty expressions of approbation we are constantly receiving from every section of the country, and in the liberal and unprecedented circulation of our paper. To those correspondents, who have thus contributed so much to its substantial value; and to Agents, Editors, and others, who have essentially assisted us in placing it before the farming community, we are under strong obligations, and tender them our cordial thanks; and we invite earnestly their co-operation for the future.

By unremitting exertion, and the prospect of extensive and continued assistance for the future, we hope to render the paper at least equal in every respect to the past, and confidently expect the high character it has hitherto enjoyed will be fully sustained. In these labors the editor will be assisted as during the last year, by SANFORD HOWARD and J. J. THOMAS; and it is believed that with our extensive means for agricultural intelligence, we shall be able to embody in our next volume, an amount of information which will be every way acceptable to our readers.

☞ The subscribers to "The Cultivator," should remember that all subscriptions are discontinued at the end of each year; and consequently that this will be the last paper they will receive until their subscriptions are renewed.

TO CORRESPONDENTS.

COMMUNICATIONS have been received since our last, from Truth, Dairyman Farmer, Wm. R. Prince, A Subscriber, T. & J. Hardy, J. S. Pettibone, C. Smith, C. N. Bement, Daniel Gaylord, An Apprenticed Packer, Ratology, J. B. C., Grazier, Highlander, N. N. D., A Subscriber, A Farmer of Tompkins, A Young Planter, J. D. F., W. Bacon, A Wool-Grower, J. Townsend, Wm. Mackinster, Farmer C., L. Durand, R. H. Ostrander, Samuel Bradhurst, Geo. Geddes, S. S. G., E. V. W. Dox, Noyes Darling, Farmer, J. W. S., Philip Short, J. R. Fuller, D. G. Mitchell.

We are indebted to A. J. Downing & Co., Newburgh,—J. L. L. F. Warren, Boston—Elwanger & Barry, Rochester—W. R. Prince & Co., Flushing, and Thomas Hancock, Burlington, N. J., for new Catalogues of their Nurseries—To J. L. Roche, Wilmington, for Transactions of the New-Castle Ag. Society—to A. D. Phelps, Boston, for Mr. Teschemacker's Essay on Guano—to Dr. Thompson, for David Thomas' Address to the Aurora Hort. Society—to the American Institute, for copies of several Addresses and reports, made during their late exhibition.

☞ We tender our thanks to numerous friends who have forwarded us papers containing accounts of Agricultural Exhibitions, Addresses, &c. Though we may not be able to make immediate use of them, we are always glad to receive them, as we frequently heve occasion to refer to them.

☞ We are indebted to WM. MAKINSTER, Esq., for a copy of the doings of the Middlesex county (Conn.) Ag. Society, and the reports in reference to the last exhibition of that society. They show that spirited efforts are making in that county for the improvement of the various departments of agriculture and horticulture. We are obliged, for want of room to restrict our notice to this small space.

SOUTH DOWN MUTTON.—We acknowledge the receipt of a fine carcass of South Down Mutton from JAMES LENOX, Esq., of New-York. It was bred and fattened at Mr. Lenox's farm, NETHERWOOD, Dutchess county. We have, together with some of our friends, tested the quality of this mutton, which is unhesitatingly pronounced of very superior flavor—fully sustaining in this respect the high reputation which the South Down bears among epicures.

WOOL-GROWING.—We invite the attention of those engaged in this business, to the communication of "A Wool-Grower," published in this paper. The subject discussed, is one of great importance, and should receive the careful attention of those especially who are engaged in the production of the better grades of wool, whether for fineness or superior combing qualities.

AGENTS FOR THE CULTIVATOR.

WE publish this month, a list of Agents for the Cultivator, on a sheet with the Index and Title-page. It is hardly possible to avoid more or less errors in such a list. Some names may be omitted, and others may be inserted which ought to be omitted. We hope, however, that no one disposed to aid in the circulation of our paper, will fail to act as Agent because he does not find his name in the list.

An edition of the Cultivator is published in colored covers and stitched, for those who do not receive their papers through the post-office. This edition is not sent by mail on account of the extra postage the stitching and covering would occasion. It is sent by Express to the following Agents, and we would recommend to all our subscribers living in the vicinity of the places named below, to renew their subscriptions with these Agents.

Auburn—J. C. Derby & Co., Booksellers.
Boston, Mass.—A. D. Phelps, 124 Wash.-st.
Dr. E. Wight, Druggist, 7 Custom H. st.
Buffalo, N. Y.—T. S. Hawks, News-office.
Geneva, N. Y.—G. H. Derby & Co., Booksellers.
Lynn, Mass.—Samuel Farrington.
New-York City—M. H. Newman, 199 Broadway.
New-Haven, Ct.—G. N. Seagrave, Seedsman.
Northampton, Mass.—Harvey Kirkland.
Owego, N. Y.—G. J. Pumpelly.
Philadelphia, Pa.—G. B. Zieber & Co., Booksellers.
Providence, R. I.—A. H. Stilwell, Bookseller.
Portsmouth, N. H.—N. March, Bookseller.
Rome, N. Y.—A. L. Johnson.
Rochester, N. Y.—D M. Dewey, News office.
Springfield, Mass.—D. C. Brewer.
W. D. Brown.
Schenectady, N. Y.—W. E. Russell.
Syracuse, N. Y.—Stoddard & Babcock, Booksellers.
L. W. Hall, Bookseller.
Salem, N. Y.—W. B. Harkness.
Troy, N. Y.—S. Willard, News office.
B. H. Boynton.
Wilmington, Del.—Jas. L. Roche, Post-office.
Worcester Mass.—Ruggles, Nourse & Mason.

“TRANSACTIONS OF THE STATE AG. SOCIETY.”

The Editor of the Cultivator trusts that his readers will excuse him for the space he finds it necessary to occupy with matters which may, by some, be deemed of a personal character. In the present instance, however, justice to the State Ag. Society, as well as to himself, requires that he should brand with the infamy it deserves, an article in the last no. of the American Agriculturist. This article occupies a page and a half of that paper, and is filled with statements which, so far as they are derogatory to the State Society or to himself, are without the least shadow of foundation in fact; and while the editor denies the whole of these statements in gross, he will give a specific contradiction to such as he deems most pernicious in their tendency.

1. After detailing a “varied combination of men and circumstances, pointing all to the Cultivator,” this libeller proceeds to charge the basest corruption on the part of the editor of this paper, in the words following:

> “I am aware that the Editor of the Cultivator received no salary of the State Society as Recording Secretary. If he has received no compensation *indirectly*, his labors have been *highly disinterested!* He asserts that “all his labors in behalf of the Society for three years were bestowed without fee or reward.” He himself here makes a new issue. Let me ask if he did not receive $1,000, or a sum nearly equivalent to this, for *merely reading* the proof sheets of the Transactions of the Society for last year? If he did not, it is strange, for he himself is the authority for it. When urging that the Transactions should be sent to the Senate he remarked to a fellow-Executive-Committee-man, who desired the report to go to the House, that its being sent to the Senate would benefit him (the Editor of the Cultivator) a thousand dollars. Was not that $1,000 received from Mr. Van Benthuysen for reading proofs? If so, were not his official position and the patronage of the Society used to assist the Cultivator or its editor?”

The charge here is, taken in connection with the preceding part of the article, that the editor of this paper received from Mr. Van Benthuysen, the sum of one thousand dollars for his influence in causing the Transactions to be sent to the Senate printer. Now that he may not be accused of any evasion, the Editor of the Cultivator assures the public that he never received from Mr. Van Benthuysen, or any other person or persons, the sum of $1000, nor any other sum whatever, for reading proof sheets, or for any service or assistance whatever connected with the Transactions or any other business of the State Ag. Society.

To add to the atrocity of this libel, it will be seen that the writer says that “he himself [the editor of the Cultivator] is the authority for it,” and further that “he remarked to a fellow-Executive-Committee-man, that its [the Report of the State Society] being sent to the Senate would benefit him (the editor of the Cultivator) a thousand dollars.” That any other person than the writer of this article, ever made these assertions, the editor of the Cultivator does not believe; but by whomsoever made, he pronounces both assertions entirely destitute of truth. He never said that he had received, or was to receive, or that it would be in any way one copper's pecuniary benefit to him to have the Report sent to the Senate instead of the House. What he said, (and this he said not to a single committee-man, but to all the Committee while in session,) was, that it would be a personal convenience to him, as he had to read the proof-sheets and superintend the printing, to have it sent to the Senate inasmuch as the Senate printing was executed at the same office where his paper was printed.

2. The writer in the Agriculturist next asserts as follows:

> “Again: his friends have asserted that the position of Recording Secretary alone brought 1500 subscribers to the Cultivator. If his friends knew this, he was undoubtedly the source of their knowledge. Then his service is indeed *disinterested!* Better that there should be a “*fee and reward*,”-for then there might not be a perversion of official patronage to pay for labor that apparently was done of mere good will. The evidence that his friends (in interest, if nothing else) have urged that he should be Secretary to benefit the Cultivator is *not verbal*, and is in possession, and can be produced at once if it be necessary.”

That the position of Rec. Sec'y to the Society brought 1500, or any other number of subscribers to the Cultivator, the editor of the Cultivator never believed. On the contrary, he always supposed that, by drawing so large a portion of his time and attention from his own business, it was an injury to the circulation of his paper; and he confidently believes that had he devoted the time and energy which he gave to the Society, to his paper, its circulation would have been much larger than it was. Of the sincerity of this conviction, sufficient proof may be found in the fact that feeling sensible that he could not longer afford to hold the “position of Rec. Sec'y,” he positively declined a re-election in 1844. He was however re-elected, and most strenuously urged to accept it; but, feeling that the Society did not need his services so much as his own business did, he felt himself compelled, despite the urgent solicitation of gentlemen from every section of the State represented at the annual meeting, to decline the appointment. If, as the writer pretends, he has any evidence that the appointment of the editor of the Cultivator, has been urged “to benefit the Cultivator,” he is invited to make it public. If such arguments have been used, it was unbeknown to him. So far as he knows, no such arguments have been urged or were needed, the appointment having been made with entire unanimity, and entirely unsolicited and undesired by him.

It is well known that the editor of the Cultivator did not desire the appointment, which was again conferred on him at the last annual meeting of the Society. He consented to it, with much reluctance; and only on the consideration that he should, this year, receive such pay for his services as should be deemed reasonable, and his salary was accordingly fixed at $300. He felt that he could not afford, and that there was no occasion for his doing the labor, as heretofore, for nothing. He has already stated to several of his friends that he could not accept the appointment another year on account of the addition it made to his labors, which are already sufficiently onerous; but circumstances may now render it acceptable to him, as he would not wish to retire from it, until the facts in relation to these charges, are fully made known.

3. A third charge which this defamer brings against the Editor of the Cultivator, is in these words:—

> “A curious part of this whole system of no ‘fee or reward,’ was witnessed at Albany last winter. A bill was introduced into the House, directing every County Superintendant of Common Schools in the State, to subscribe for as many copies of the Cultivator as there were school districts in their counties. The subscription and postage to be paid by the State out of the school funds. And how was all this to be effected? By these very relations; by the exercise of that influence which springs from the possession of executive patronage. The committee of the House, to which the bill was referred, reported it back and advocated its passage; and every man who stood in a position to the Cultivator of either interest or *indefinite friendly relations*, was found urging it in the lobby or the House. However, the good sense of the House killed the bill. This, if it had passed, would have given 12,000 additional subscribers to the Cultivator, with the pay certain, and subject to no commission. This was a ‘*fee and reward*’ worth working for, and evinced a most decided *disinterestedness!*”

In reply to this heinous offence, the editor has only to say, that the bill alluded to, for supplying each school district with a copy of the Cultivator, was introduced into the Legislature by Mr. Danforth, of Jefferson county, a gentleman with whom he had never spoken, or had any communication either directly or indirectly, and the first intimation he had of the bill was derived from the report of the legislative proceedings in the newspapers. He then called on Mr. Danforth, who expressed a strong desire to have the bill passed, declaring his belief that its provisions would confer more benefit on the School Districts, than an equal sum appropriated in any other way. After thanking Mr. D. for the very flattering estimate he placed on the Cultivator, the editor expressed to him his conviction that it would be impolitic to urge the passage of the bill, as it would at least look like favoritism to one of the three agricultural papers of the state, and might excite their hostility; and that, so far as he was concerned, he preferred the matter should be dropped. This opinion he expressed to every one with whom he spoke upon the subject; and if any one, either in the Legislature or out of it, urged its passage, it was done without his solicitation or knowledge. For the evidence afforded of the high estimation placed on the Cultivator, by the introduction of this bill, and its passage being advocated by a committee of the legislature, if such was the fact, the editor is truly grateful; but he knows no rule of ethics by which he can be justly censured for the approbation which the public are pleased to bestow upon his labors.

It would seem that the writer in the Agriculturist intends to have *something* wrong understood by the repetition and italicising of the phrase "*indefinite friendly relations*," but what that something is, or what is intended by the use of the phrase, is beyond his conception, as he knows of nothing criminal in any of his friendly relations, whether definite or indefinite.

Having given his positive and unequivocal denial to these charges in all their length and breadth, the editor of the Cultivator trusts that he will be pardoned for adding, that for the four years, (1840, 1, 2, and 3,) that he was Secretary, so strong was his desire to do all in his power to place the Society upon a sound and stable footing, that he devoted himself most untiringly to its interests—finding a room for its Committee meetings, furnishing the stationery necessary—preparing the vols. of Transactions, reading the proof-sheets, and attending to the distribution of the vols. when printed, without any other "fee or reward," either directly or indirectly, than the consciousness that he was thus essentially benefiting the great interest of agriculture, to which he has devoted a large portion of his time for the last 15 years. In addition to his services, the actual expenses he incurred on behalf of the Society, and which he paid out of his own pocket, averaged from $50 to $100 per annum.

That he was not paid *directly* for these services, was not because the Society was not willing to pay him, but because he did not wish to be paid, his only object being to aid the Society. That he received no benefit from the Society in an *indirect* manner, was because he positively refused it. The Executive Committee proposed to make the Cultivator its official organ, to authorize the publication of its correspondence therein, and would have done it, had not the editor himself objected to it, which he did for the reason that it might be expected to create unpleasant feelings on the part of those interested in the publication of other similar journals in the state. For the same reason, he has repeatedly refused to second resolutions which have several times been made to give volumes of the Cultivator as premiums. Even at the last State Fair at Utica, several vols. of the Cultivator were awarded by viewing committees as premiums; but to prevent all cause for jealousy, the Editor called the attention of the President of the Society to the fact, and requested his assent to an alteration of the award so as to read vols. of the Society's Transactions instead of vols. of the Cultivator. Thus careful has he been, in every instance, where any thing has come up that would look like favoritism to the Cultivator, to prevent even "the appearance of evil," and he defies any one to point to an instance where he has received either directly or indirectly, even one cent for labors "professedly bestowed without fee or reward." To the truth of the statement here given, he ventures to say that every member of the Executive Committee, who was in the habit of attending the meetings frequently enough to make himself acquainted with the facts, will bear testimony.

Having thus shown that there was not a shadow of foundation for these charges, is it using too strong language to pronounce the utterer of them an infamous slanderer? That his infamy may be proved, and the brand officially placed upon his forehead, the editor of the Cultivator has directed his counsel to demand the name of the writer of the article, that he may be prosecuted for the libel; and if the name of the author is refused, he will hold the editor and publisher of the Agriculturist responsible. He will also demand of the Society, as alike due to it and to himself, that it appoint a committee thoroughly to investigate these charges, that their entire groundlessness may be shown on the most competent testimony.

There are some other things in the article to which we have alluded above, which require notice. The first is in relation to the cost of printing the Society's Transactions. The price of legislative printing is fixed by law, and consequently it did not make a particle of difference as to cost, whether the Report was sent to the Senate or to the House. The writer states that the amount "paid to the printer to the Senate for it, was about $7,000," and that "the profit on it, was stated to him by a printer, at $2,000." This would leave $5,000 as the price for the work, after deducting the profits. Now it so happens that the exact sum paid to the printer to the Senate for the work, was $4,329.13, being $670.87 less than this veracious writer puts the actual cost of the work.

In a previous paper this same writer charged that Mr. Thomas, who condensed the papers for the last vol. of Transactions, had omitted articles from others to make room for his own. The falsity of this having been shown, he now charges in effect that the premiums have been awarded by the Executive Committee, through favoritism to Mr. T. It is, therefore, proper to say, what this writer must have known, that the premiums on the three essays of Mr. Thomas, were awarded by three different sub-committees, of one of which Mr. JOHNSON, the present President of the Society, was chairman; of another, R. L. PELL, Esq., of New-York, and of the third, *H. S. Randall* of Cortland.

It would be an insult both to the Society and common sense to reply to the assertions respecting the management of the Society being under the control of the Cultivator. A mere reference to the names of the officers is a sufficient contradiction of this ridiculous charge. That we have possessed the confidence, so far as we know, of all the officers, during the years of our connection with the Society, is to us a matter of gratulation; but that we have in any way abused it, remains to be shown.

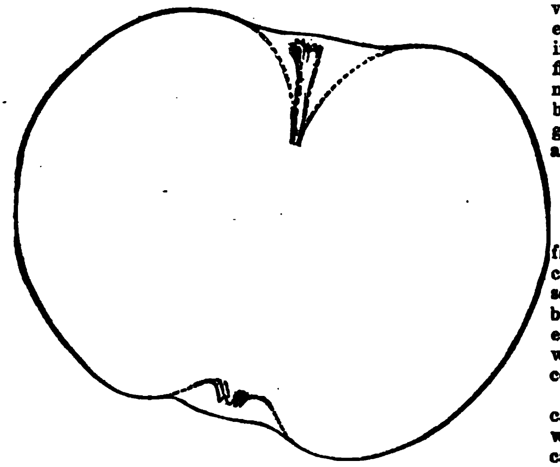
PERMANENCE OF LIME AS MANURE.

J. Watson, in the Journal of the English Agricultural Society, states that a piece of ground containing 166 acres, on which little grew except heath, was more than doubled in value, by a good dressing of lime, applied on the top sward. This was done about 15 years ago, and totally eradicated the heath. "The *lime to this day appears in full action*, as its effects annually testify, from the richness and sweetness of the herbage, the texture of which has been thoroughly changed by the action of the lime. The deep green hue and luxuriant appearance of this land in spring and autumn, form a striking contrast with those adjoining, which are still unimproved. The soil is a thin moorish loam in a high climate, resting on the greywack formation."

BENEFITS OF AGRICULTURAL SOCIETIES.

Dr. J. W. THOMSON, who has been either secretary or president of the New-Castle (Del.) Ag. Society, from its organization ten years since, in resigning the latter station at a recent meeting, among other things, said—"A county, for which nature has done so much, would, in all human probability, without their example and exertions, have gone on in her "old paths and accustomed ways." But, when all see and appreciate the rapid and improving state of her agriculture; in ten years, *doubling her crops*, and adding, as estimated, more than *a million of dollars* to the value of her stock and real estate, they must say that the progress of your Society is "*onward;*" and its success has been as complete as its benefits have been widely diffused." A vote of thanks to Dr. T. "for his devoted exertions for the benefit and prosperity of the society during the eight years of his presidency," was unanimously adopted,—a tribute most justly due to his untiring efforts in favor of agricultural improvement. James Canby, Esq. was then elected President; C. P. Holcomb, Cor. Sec'y; James Webb, Rec. Sec'y; also ten vice-presidents, board of directors, &c.

DISEASED POTATOES.—Accounts from England as well as from the continent, speak of the serious damage to the potatoe crop by disease. The London Examiner says, "Externally the disease indicates itself by a moss, or fungus, producing a decomposition of the farinaceous interior."



COMSTOCK'S GARDEN APPLE.—Fig. 105.

It is generally supposed that for *culinary* purposes, fruit of inferior quality will answer; hence we see in works on pomology, and in nursery catalogues, the division into *table* and *kitchen* varieties. This distinction is founded partly at least, in error. The finest apples before cooking, are usually the finest afterwards. Our best and richest table apples are incomparably better for stewing, than ninety-nine hundredths of the "natural" fruit with which many orchards abound, which might be classed as from fourth to tenth rate, and being unfit for eating in hand, is turned off for purposes of cider or for cooking. It is true, that with a heavy admixture of sugar and spices, the deficiency in flavor is supplied, and the intense sourness is disguised; but the amount of these ingredients required, thus to make bad apples good is usually far more in cost than the price of the best-flavored fruit. We have found it much more economical to purchase Fall Pippins for stewing at thirty to forty cents per bushel, than inferior varieties at a few cents only. An experienced housekeeper estimates the quantity of apples needed to supply a common-sized family for a year at thirty bushels; and that eight pounds of sugar at least, would be needed to sweeten even toleraby, a bushel of common "cooking" apples. This would amount to two hundred and forty pounds of sugar for the thirty bushels,—which at eight cents per pound, a low average, would be *twenty-two dollars*. The fruit, at ten cents per bushel, would be three dollars, making twenty-five dollars in all. Now we have found from ample experience, that the Fall Pippin is quite as good, when stewed without sugar, as most of these are well sweetened. So that the actual cost of the ten-cent apples when cooked, is eighty-three cents per bushel; and it would conseqently be as cheap to buy Fall Pippins for this sum as the others at a very low price. We have lately, however, met with a new variety, decidedly superior to the Fall Pippin for this purpose. The two sorts were stewed without sugar or spices; and the dishes, side by side, examined by several competent judges, who were decided and unanimous in giving the decided preference to the new apple.

It appears to have been first cultivated by Nathan Comstock, in the neighborhood of Palmyra, N. Y., who afterwards removed to Lockport, and where only the variety appears now to be known, and where it is called the "Garden Apple." The following is a description, which, with the above figure, was taken accurately from the average of a number of only moderately sized specimens.

Fruit medial size, flattish, sometimes inclining to oblong; the whole surface covered with narrow streaks of light and dark red, nearly a uniform dark red in the sun, and marked with numerous conspicuous light colored dots. Stem slender, usually about half an inch long, variable; set in an even round cavity. Calyx nearly closed, in a moderate slightly furrowed basin. Flesh very strongly tinged with red nearly to the core, and especially at the blossom end; tender, but never becoming decidedly mellow, and rather dry; hence it is not a first rate table fruit, but superlatively fine for stewing, no sugar being required, and the delicate aromatic flavor being equal to the most skilful spicing. The tree is a good bearer, and the fruit always fair. It ripens through autumn.

ROOT PRUNING.

The practice of pruning the roots of rapidly growing fruit trees, to lessen their luxuriance, and as a necessary consequence, to increase their fruitfulness, is known to some of our readers; but it can hardly be said to have been fairly tried as yet in this country. As late autumn or early winter is the usual season of the year for doing the work, a few suggestions in relation, may not be unacceptable.

New things should be neither hastily rejected nor incautiously adopted. Root pruning in some instances will doubtless be found of great advantage. In ordinary cases, and with most varieties of fruit, the tree will come into bearing quite as early without pruning, as is consistent with its due growth and ultimate productiveness. It has been remarked however, in relation to some of the old pears, that

> "He who plants pears,
> Plants for his heirs;

but on the other hand, we have known numerous cases with many other varieties, where the trees were in free bearing when only a few years old. Hence a proper discrimination must be used. Trees naturally productive while young, will not need it; but some other sorts, as for instance the Autumn Bergamot, which we have known to stand and grow fifteen years without yielding a solitary fruit, would doubtless be greatly benefited. It should be more cautiously applied to varieties of slow growth, than to those of natural luxuriance.

T. Rivers, an English nurseryman, near London, has practiced it extensively for the purpose of bringing new or untried varieties early into bearing in order to test their quality or genuineness, in the same way that dwarfing by grafting on slow-growing stocks is elsewhere adopted. It has this advantage however, over the method of dwarfing, that while the growth of the latter cannot be controlled except by good or bad culture, and the trees must ever remain dwarfs,—by applying root-pruning merely, with greater or less degrees of severity, or with different degrees of frequency as regards time, any extent of dwarfing or fruitfulness may be produced, or may after a time be wholly relinquished. Some varieties of the pear are found to exist but few years when dwarfed by grafting on the quince; such would be far better if treated by pruning the roots.

Nurseryman who have had occasion to remove large-sized trees in the nursery two or three times, have observed the diminished growth resulting from the operation, and often the early fruitfulness of the trees. By a process entirely similar, Rivers succeeded in throwing his standard trees into early bearing, with the difference, however, of suffering the trees to stand unmoved, and cutting off all the roots, if the trees be small, or nearly all if they be large, at a proper distance from the centre of the tree. This distance was usually at first about ten inches; the second time fourteen inches, the third eighteen, and each subsequent pruning at about the same; thus preserving the dwarf form, so that pears and apples would not occupy more than six feet square for each tree. The work was done by a sharp steel spade, digging a trench round the tree eighteen inches deep, and cutting off the side and bottom roots. The operation is usually repeated every second or third year, while the tree is young, the frequency to be influenced by the growth the trees make, which should be six or eight inches long at least, the season preceding the pruning. If they should be stunted, a greater interval is to be allowed for their recovery. The vigor of the trees is kept up by an abundant application of manure in the trenches, made for cutting off the roots.

This practice has been recommended as possessing the advantage of placing many bearing trees on a small piece of ground, which might be valuable in towns and villages; and in giving tenants the same advantages as freeholders, by enabling them to remove trees of fifteen or twenty years' growth, with nearly the same facility as furniture, the compact ball of fine fibres forming the whole mass of roots, being easily removed entire. In most instances, however, in the culture of fruit in this country, it will be found useful only, in bringing young and thrifty trees soon into bearing, after which the operation may be discontinued, and the trees suffered to attain their full size. For, as dwarfing on small stocks, always shortens the life of the tree, it cannot be questioned that the same result would be produced in some degree, by any other mode of permanent or continued dwarfing. Caution should always be used, as too severe a pruning has sometimes destroyed the tree, and at others, stunted, and injured the quality of the fruit.*

A. J. Downing, in his work on Fruits, states that "several nearly full grown peach, pear, and plum trees, on a very rich soil on the Hudson, which were over luxuriant, but bore no fruit, were root pruned by our advice two years ago, and yielded most excellent and abundant crops last season." A similar result has sometimes been produced by seeding orchards down to grass, which has a powerful tendency to check growth, and as a consequence to increase the productiveness of over-luxuriant trees.

In conclusion, it is proper to remark, that the great and general difficulty in the cultivation of fruit by most persons, is the stunting the trees by neglect; such will of course not need the preceding instructions; and those who give their trees the best culture, on fertile soil, must use a proper discrimination in applying these suggestions.

IRRIGATION OF GARDENS.

We do not know that this has ever been practiced systematically or on an extended scale; although there are certainly facts enough to show its advantages. The practice of the Dutch gardeners in freely and constantly watering many of their vegetable crops, and their consequent fine growth, is well known. During the present season we had a row of red Antwerp raspberries, which exhibited the same influence in a strong light. A part of the row stood under the eves of a wood-house and on the north side of the building, and another part stood in open ground, away from the drippings, but from its advantageous position was subjected to much freer cultivation. But the influence of the water from the roof upon the plants, was very striking throughout the summer, and at the present time, (mid-autumn,) these are *at least triple the size* of the others in open ground. S. Williams, of Waterloo, whose garden was clayey, during the dry hot weather a few years ago, let in the water through small gutters, between the hills and rows of vegetables. "Its genial influence," says he, "was instantaneous; in ten days, my early potatoes grew two thirds in size. In fact, I had never been able to get anything like a fair yield of potatoes in this garden before. Cucumbers grew equally fast; even beans and marrowfat peas bore testimony to its quickening power." McIntosh mentions another case, of the benefit of water upon strawberries. Strawberry beds, three feet wide, were kept watered by trenches between them, about nine inches wide, the trenches being lined with brick, forming four inch walls on each side, and the depth equal to two or three courses of brick. They were laid without mortar, and were for the purpose of preserving the sides of the trenches and for neatness. Water was supplied by a pump, when the ground was dry and the plants were in fruit. "*A much greater crop was thus obtained*, and the plants continued bearing much longer than in beds where there were no trenches for water." This was in the cool and moist climate of England; how much more striking would the results be in this country.

There is not the slightest question, that where water is at command, either from streams, ponds, by pumping with hand, or elevating by wind, the finest results would be produced. The water might be distributed by means of trenches, as already described, or by hose furnished with a nose like that of a watering pot, the latter would doubtless be much the best and most convenient. A very small pipe would be sufficient. Water containing foreign matter would of course be more enriching than pure water. Those who will try the experiment thoroughly, should make the necessary preparations now, at this comparatively leisure season of the year.

WAGES OF LABOR.

From an instructive article on the subject of agricultural labor in different countries, its wages, and the comparative condition of the laborer, in the London Mark Lane Express, we condense the following facts. In our estimates we have called the shilling sterling 22 cents, though its value is a trifle less; and the comparison, though instituted with the English laborer, can be easily made with those of this country.

In England, the average rate of agricultural wages for an able man with a family, is 9 shillings, or $1.98 cents per week. From this is to be deducted cottage rent at 33 cents per week, leaving $1.63 per week to provide himself with the necessaries of life. In France, a laborer in the same situation receives $1.04 per week; in Prussia. 66 cents; in Germany, $1.02 per week; in Holland and Belgium, $1.20; in Italy, and the Austrian states, $1.15 cents. It will be remembered that these averages are those of the common laborer, shepherds, carmen, and mechanics, receiving rather more. The food which the wages named above will purchase in the several countries, is stated in the Express as follows:

In England the laborer can obtain for his 163 cents, or his week's wages, either 39 lbs. of bread, or 11¼ lbs. of meat; 7¼ lbs. of butter; 12¾ lbs. cheese; or 174 lbs. potatoes.

In France, with his 104 cents, he can buy either 46 lbs. of bread; 13½ lbs of meat; or 261 lbs. of potatoes.

In Prussia, with his 66 cents per week, the laborer can buy either 36 lbs. of bread; 16 lbs. of meat; or 8¾ lbs of butter.

In Germany, with 102 cents he obtains either 43¼ lbs. of bread; 18 lbs. of meat; 11¼ lbs. of butter; 24 lbs. cheese: or 54 quarts of beer.

In Holland and Belgium, 120 cents will buy either, 58 lbs. of bread; 22 lbs. of beef; or 460 lbs. of potatoes.

In Italy and the Austrian states, the laborer with his 115 cents, can buy either 50 lbs. of bread; 22 lbs. of beef; 8 lbs. of butter; 8 lbs. cheese; or 168 lbs. of potatoes.

This table is interesting as showing not only the prices of labor in the countries named, but also the price of bread, meat, butter, cheese, &c. It is true the bread is stated by the lb. instead of grain by the bushel, but as the flour of a bushel of wheat, say 40 lbs., will make from 63 to 65 lbs. of bread, an estimate may easily be made of the quantity of wheat or flour a man in any of the countries named, would receive for a week's work. The laborer in this country who receives his bushel of wheat a day, or other articles in proportion, will readily conceive the meagre fare, and slender chance of "laying by anything" which must attend the foreign agricultural laborer. In all these countries it will be seen the value of provisions is at least as great as here, and in some instances much greater. It is only by the comparisons which such authentic statements enable them to make, that the free laborers, the farmers or mechanics of this country, can fully appreciate the advantages of their position.

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Onions.—For the past ten years from 30,000 to 60,000 bushels of onions have been raised in the single town of Danvers, Mass.

Fattening Hogs.—The latest improvement consists in keeping them as clean as possible.

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* A similar effect on the fruit of young and newly transplanted trees, which are made to bear in consequence of their removal, not unfrequently takes place; hence, purchasers of trees sometimes suppose they have been imposed upon by nurserymen, when in fact the new fruit has as yet had no chance to exhibit its real qualities.

WINTERING STOCK.

Throughout a considerable portion of the country, there is a scarcity of materials on which to feed stock the coming winter. The general warmth and moisture of the atmosphere, however, since the occurrence of rains in the beginning of autumn, have much promoted the growth of grass; thus fortunately affording an opportunity for grazing up to a late period of the season. And where fields of rye have been sown for the purpose of giving late fall and early spring pasturage, the favorableness of the season has probably induced a growth which will furnish support in a great degree, to light cattle and sheep. Yearlings, calves, and sheep, may therefore be grazed on such fields, care being taken that the bite is not too short, till snow covers the ground; and the spring growth may be availed of for the same purpose, to a longer or shorter period, according to the necessities of the farmer, or the wants of his stock. If, while the stock is feeding on rye, too lax a state of the bowels occurs, as is sometimes the case, owing to the succulence of the rye, the animals should be fed with some dry hay, and a little salt as a condiment, which will check the tendency to purge.

But under all circumstances, the most economical appropriation of the winter's stock of fodder, becomes an imimportant desideratum. The great aim should be the maintainence of the stock in proper condition with the least expense. The materials at the disposal of farmers for this purpose, consist usually of hay, straw of various grains, fodder of Indian corn, different vegetables in greater or less quantities, with occasionally some meal or "mill stuffs." A general saving of all rough fodder may be made by cutting with a machine. This saving results in various ways, some of which we will specify. 1. Coarse fodder, such as rank hay, straw, or corn-stalks, are thus wrought into a more convenient form for mastication, by which animals are often induced to eat that which would otherwise be rejected, or only partially consumed. This is particularly the case with clover hay, more or less of which is almost always wasted if fed in the long state, but which when passed through a cutter, if it has been properly cured, is readily eaten perfectly clean. The same remark is applicable, but in a less degree, to straw and corn fodder. 2. By cutting, fodder of inferior quality may be easily mixed in any desired proportions with that which is better or more palatable, and the poorer kind thus be made to conduce to the animal's support. Cutting also affords a convenient mode of mixing meal, shorts, or bran, with fodder, by which may be gained the double advantage of inducing stock to eat less palatable articles, and of so diffusing the meal that all its nutriment is appropriated by the animal. 3. Besides the advantages above mentioned, another and not less important benefit is known to be derived by laboring animals in the additional time it affords them for rest—the cutting performing in a great degree the work of chewing and preparation for digestion. This benefit is regarded as so important by those accustomed to feeding work horses and oxen on cut food, that nothing would induce them to discontinue the practice.

There are cases however, in which the advantages of cutting may not repay the expenses. If the food to be used is wholly hay of very fine quality, and the stock consuming it is not required to labor, it might be so fed that no waste would accrue, or nothing be gained by cutting. But wherever a mixture of fodder would be expedient, or meal, &c., is to be used, or working animals are to be provided for, the advantages of cutting will be found to repay the expenses ten fold.

In times past, the writer has had some experience in feeding stock, and has practiced various modes with a view to economizing food and cost. During seasons of scarcity of hay, a course like the following was adopted with advantage. Good hay and straw, (oat and barley straw are preferable, but wheat and rye straw were often used,) were cut together in equal parts. Chaff of wheat or oats was sometimes used instead of straw. This fodder was mixed with corn meal, at the rate of two quarts of meal to the hundred of fodder. First a layer of six or seven inches of the straw and hay was thrown into a large box, spread over the bottom, and moistened with hot water—then the meal was scattered over it, and afterwards well mixed with forks. Other layers were prepared in the same way, until enough was ready for twenty head of cattle for twenty-four hours. It was made the object to give each grown animal, (cow or ox,) twenty-five pounds of the cut straw and hay every twenty-four hours—that is, each was allowed twelve and a half pounds of hay, the same quantity of straw, and a pint of meal per day. Younger and smaller stock was fed in proportion. Cows giving milk, and oxen when working, had the meal increased—giving in such instances, two to three quarts per day. Sometimes rye meal, shorts, and occasionally oil-cake were used, either by themselves or in connection with the corn-meal; endeavoring to use about the relative quantities of each which would afford the same amount of nutriment; but as we had no definite standard, we gave as nearly as practicable equal weights.

Not the least waste attended this course of feeding, and we found stock to do well on it. Though not fat, they were in good trim, and their coats got into fine order early in spring, so that they went to grass in excellent condition.

In feeding potatoes or other vegetables to store stock, where the quantity does not exceed half a bushel per day to each grown cow or ox, we have usually given them at one feed in the morning, after the first foddering of hay.

Col. Jaques, of Massachusetts, who is known as an economical feeder of stock, adopts the following plan, which we copied sometime since from notes furnished by him:

"For 30 cows, cut with a machine 30 bushels for one feed; one-third common or English hay, one third salt hay, and one-third rye or barley straw; add 30 quarts of wheat-bran or shorts, and ten quarts of oat and corn meal moistened with water. One bushel of this mixture is given to each cow in the morning, and the same quantity at noon and in the evening. In addition to this, a peck of mangel wurtzel is given to each cow per day. This mode of feeding has been found to produce nearly as much milk as the best grass feed in summer."

Stock must not be too much stinted in their food in the fore part of winter, nor should an attempt be made to keep them at once on the poorer kinds of fodder. In the coldest weather of January and February their appetites will be sharpest, and then the poor fodder will be eaten to best advantage. We said their food should not be stinted in the beginning; the reason is, that if they are brought low in flesh in the first of the winter, they cannot stand the inclemency of the weather so well, and they fail rapidly towards spring. Hence if any *pinching* must be done, it had better be deferred to the last end of the season of feeding, as relief may then be shortly expected from the growth of grass. The greatest regularity should be observed in feeding—always giving the food as near as practicable at certain fixed times. But no food should at any time be given to be left—all should be eaten to the last straw which is eatable. Still, substances which are really innutricious—such as the large, sour butts of corn-stalks and the woody stems of large weeds and coarse herbage—should not be given to stock with the expectation that they will be eaten and benefit be derived from them.

The importance of shelter to stock must not be overlooked—it having been fully demonstrated that warmth is equivalent to food. The heat of the animal system is kept up in the same manner as flame is supported—that is, by an union of carbon and oxygen. The animal derives its carbon from the food, which, having undergone digestion, is taken up by the blood and thence conveyed to the lungs, where by the act of respiration, it is united with a portion of the oxygen of the atmosphere, and heat is produced. Exposure to a low temperature dissipates the animal heat, just as heat is driven off from any other body similarly situated. It is obvious that the natural temperature of the body must be sustained or the animal will perish. As carbon is the only material by which this heat can be furnished, that substance must either be supplied to the blood from the fat and muscle already formed, or the blood must obtain it through the medium of food. If the food is deficient, the supply must be made up from a waste of the bodily parts; and the consequence will be loss of flesh and weight, which if long continued may cause the death of the animal, either by finally cutting off the source of heat, or so weakening the system that it yields to the attack of some malady. To sustain the animal in proper condition, then, requires a supply of food proportioned to the degree of cold to which it is exposed; and it is therefore obvious that by avoiding exposure to cold, we save food.

HEDGE FOR WET GROUNDS.

The flats or low grounds, sometimes of great extent, which border on rivers and large creeks, may be fenced by driving piles cut from willow trees, about as large as a man's wrist, into the earth at a distance of about one foot from each other. They are kept together by two poles running along the top, and alternating with the piles, as represented by the annexed figure. The work is to be done late in autumn or early in spring; the stakes take root and grow; and by sending up lateral branches, soon form a solid and permanent fence. Twisting and interweaving the branches, is an essential part of the operation. The use of a crowbar to make the holes in the earth, greatly facilitates the work. One hand will make, when the materials are convenient, from ten to twelve rods of such fence in a day.

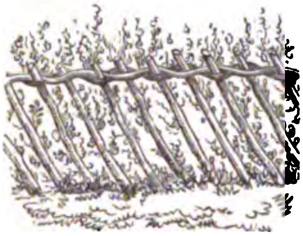


Fig. 108.

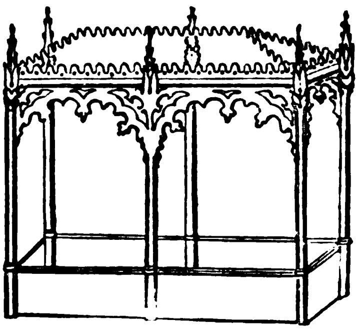
HORTICULTURAL ITEMS.

Roses.—Some idea may be formed of the extent of the cultivation of ornamental plants by the nurserymen of England, from the fact, that at the celebrated Sawbridgeworth Nursery, owned by T. Rivers, a single "quarter of dwarf roses budded this year, contains 80,000 plants; and that in the same nursery, *twenty-four persons* were constantly occupied in budding roses, during the whole of the month of August."

Specific food of Plants.—It is well known that salt has been sometimes recommended for the destruction of weeds in gravel walks, and that most plants are destroyed by heavy doses. There are some plants, on the contrary, which bear large quantities of it,—among which is the *Polygonum aviculare*, a weed well known in this country as well as in England, as growing in paths and frequented places. A gentleman in Scotland, according to the Gardener's Chronicle, in attempting to destroy the weeds in the drive through his park, by the use of salt, so increased this weed, that the road was literally rendered green by it.

Transplanting the White Pine.—Three years ago, a neighbor went half a day's journey and procured about 60 young trees of the white pine, from three to six feet high, for the ornament of his grounds. The trees were taken up and set out with ordinary care, with the removal of no soil upon the roots. Only two of them are now living, and one of these is in quite a doubtful state, as to life or death. About the same time, the writer procured fifteen trees of the same species, from five to twelve feet high, removing with them a large cake of earth, (not frozen) sufficient to keep them steady in the wind without staking. All of them are now living, and most of them growing vigorously.

Californian Plants.—The celebrated botanist, Hartweg, has been sent out this fall by the London Horticultural Society, to explore the ground which had just been commenced some years ago by David Douglass, before the death of that eminent individual. Hartweg is to spend three years in California, and many handsome plants will doubtless be added to those already in cultivation.



FLOWER CASES.—(Fig. 109.)

A portable green-house, called from the name of the inventor, Ward's Cases, has lately been brought into use in the neighborhood of London. It consists of a box or trough for holding the soil, made of zinc, covered with a frame set with glass, high enough to admit of the free growth of the plants, somewhat in the shape of a bird-cage. The cases being tight, keep in the moisture; and the plants, though standing in a very dry room, have all the advantages of a moist atmosphere. The cases also prevent injury from sudden changes of temperature, and afford considerable protection from frost; they also keep the plants perfectly free from dust.

There should be one hole in the bottom of the zinc trough to let off the surplus water. A door admits entrance to the case. When exposed daily to a few hours of sun, the plants do perfectly well *for weeks* without any attention whatever, the moisture of the soil being entirely prevented by the glass casing from evaporation. The whole may stand upon a table, and no pots being needed for the plants to stand in, the beautiful appearance of a miniature conservatory is presented.

The bottom should first be lined with broken earthenware, and then turfy loam to admit drainage. The hole for the egress of water, after being left open for twenty-four hours, may then be closed, having by that time, allowed enough to pass off.

Such plants are said to do best as grow naturally in moist and shady situations. Among those which have succeeded finely, are crocuses, winter aconite, the various cactuses, aloes, primroses, begonias, anemones, myrtles, jasmines. &c.

Sir W. J. Hooker, an eminent British botanist, says in a letter to the inventor, "Splendid as is the hot-house and green-house collection at Woburn Abbey, I doubt whether that gives more pleasure to the noble proprietors and their numerous visitors, than the beautiful little collection in Mr. Ward's case, that occupies a table in the library, and flourishes without requiring the skill of the gardener in its cultivation."

As we republican Yankees cannot very well afford splendid green-houses, this must be the very thing we want.

CUTTING HAY FOR STOCK.

Mr. Thos. W. Ward, gives in the Massachusetts Plowman, some important facts in regard to the utility of cutting hay for feeding cattle. He says he has for years practiced cutting hay for his horses, which, mixed with meal, he thinks far the best and cheapest feed they can have. He also finds a great advantage in cutting coarse hay and straw, which he says cattle will eat readily if cut fine and mixed with only a third part of good hay. He says, "to test the value of the cutter in point of good economy, I adopted the following method, viz: After having kept four oxen on long hay for some days, I weighed hay enough to keep them 24 hours. At the expiration of which I weighed what hay was left, together with what little remained in their crib, and found they had eaten 104½ lbs. of hay. Their excrement evacuated during the same time weighed 178¼ lbs.; exceeding the quantity of hay by 78 lbs. They were kept in the barn all the time except being driven to water, after which they were immediately put in the barn. While out, only one ox voided, of this there was no account made.

"I then kept them 24 hours on cut hay from the same mow, thinking that in this time they might empty themselves of the long hay. I then weighed 104½ lbs., (the same quantity they ate of long hay,) from the same mow —kept them in the barn and watered as before. With them there was no difference except in this instance, they all returned to the barn without having anything pass from them.

"At the end of the 24 hours I weighed the hay that was left, and found they had eaten 86 lbs. only; and their excrement during the same time weighed 208¼ lbs., exceeding the weight of cut hay eaten, by 122¼ lbs. It was my purpose in each instance to let them have what they needed, and no more; in neither case was there a waste of hay, and in each case the oxen were comfortably filled. They had done no work for several days before being put on the trial, nor did they do any while on trial, nor during the intervening 24 hours." These facts show a saving in this instance, of about 18 per cent. in favor of cut hay, and also an increase in weight of the excrement, of 15 per cent. Thus, says Mr. W., "we spend less hay and make more manure, which is the farmer's capital." He thinks the cattle did as well when fed on the cut hay, as when fed on the long. He says he will not attempt to solve the mystery in regard to least hay making most manure.

THE POTATAO ROT IN EUROPE.

The extensive destruction of the potato crop in Europe has awakened a great deal of inquiry among scientific men and through all classes of people. The Editor of the London Gardener's Chronicle, estimates the loss at five-sixths of the whole crop of Europe. The speedy destruction in many cases, may be inferred from the statement of a correspondent of that paper:—"Two days ago, twelve acres were still safe; they are now gone." But the further investigations have been pushed, by men of the most eminent abilities, the greater seems to be the doubt which hangs over the cause and cure; and the scientific world appears yet divided between the opinion of its being a gangrene or murrain, or the blighting effects of a fungus.

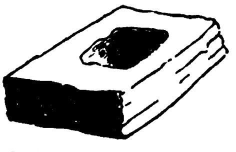
The opinion which has prevailed to some extent in this country, as well as in Europe, that common salt was an efficient remedy, and which was strengthened by the fact that on parts of the sea-coast, exposed to saline moisture, the rot had not appeared,—appears to be overthrown by failure in other places on the sea, and where in experiment salt was directly applied.

All that scientific men have yet done, is to *suggest experiments* for determining the nature of the malady, and for saving such parts of diseased potatoes, as may remain uninjured, by chemical process. The latter has been to for use in cooking for food, and for mixing with grain flour has been manufactured to a considerable extent. Kiln-drying the diseased potatoes at a temperature not higher than 180 degrees Fah., and not longer than fifteen or twenty minutes, has been found at once to arrest all de- a considerable degree successful; and good potato flour, cay or progress in the disease. Professor Henslow succeeded in obtaining from half a bushel of *sound* potatoes, 4 lbs. 10 oz. of flour; and from the same quantity of diseased and decaying tubers, 3 lbs. 1 oz. The quality of the latter was equally good, the starch of potatoes remaining a long time uninjured in diseased ones, and only lessened in quantity. The process of extracting the flour, consists essentially, in first washing the potatoes, then grafting or mashing them to a fine pulp, (which might be done rapidly by means of a common grater cider-mill;) and washing the pulp repeatedly with water. The washing may be conveniently done by placing the pulp on a canvass sieve or bag, and stirring it well, while a stream of water is suffered to run upon it, into a large vessel beneath. When the water ceases to become milky, it has carried off the flour; and the coarse fibrous matter remaining behind may be thrown away. The flour water, after standing 10 minutes to settle, is racked off, fresh water is applied, is suffered again to stand 10 minutes, and again racked off; the process is repeated several times, until it is thoroughly washed. It is then dried on stretched flannel.

A hundred weight of good potatoes yields about 18 lbs. of good starch; the quantity however varies. The average proportion of water in good potatoes, is about 80 lbs. per hundred weight. Professor Henslow, hired his potatoes grated by hand. "The cost of grating 7 sacks was 17*s*. 6*d*.; the flour saved 122 lbs.; call this 8 stone, which may be used instead of 8 stone of wheat-flour, at 2*s*. 6*d*. per stone, and I lose nothing; whilst the poor graters have gained, and the amount of human food saved, will tend to keep down prices."

CHEAP CONTRIVANCES—SPLITTING WOOD.

A cheap and simple contrivance, costing but a few minutes labor, and used every day in the year, is often worth more than the complex and ostentatious machine but rarely needed in practice.



Every man who splits up stove-wood, knows that by the usual way, he has to spend two-thirds of his time in setting up the block ready for the blow of the axe.

To save this time, we have adopted the following way, and found it to save at least two-thirds the time, equal to at least several dollars a year to every man who has to keep one stove going.

A large flat block of wood, six or eight inches thick, and nearly two feet wide, has a large hole cut through the middle about eight or nine inches square. The block of stove-wood is set on end in this hole, and quick and repeated strokes of the axe splits it up finely, without once touching it with the hand.

If such a block is not easily to be had, take two crooked logs, and pin them together.

CULTURE OF BROOM CORN.

L. Tucker, Esq.—I am not prepared to give satisfactory answers to your correspondent, on the subject of broom corn, in every particular; but will briefly state, that we have, the past summer, had about thirty-five acres under cultivation; about half on the Mohawk low lands, (or flats) which is the soil generally perferred, the balance adjoining, on a gravelly soil. On account of the extreme drouth, the low ground has done much the best.

2d. As to the profits, compared with other crops. Much depends on the success you may have; some seasons it does much better than others; the past has been too dry to give a good large brush, but with us the seed has been an extraordinary crop—averaging nearly or quite fifty bushels to the acre, and most of it very full and heavy, weighing 31 lbs. to the bushel, and is excellent for fatting hogs. They eat it greedily, and thrive on it as well, if not better, than on Indian corn. An acre of good broom corn should yield from four to six hundred lbs. of brush; and the seed, when good, is worth, in its rough state, as much as oats for feed.

I have now on hand, enough of prime seed, to plant two hundred acres, and can supply your correspondent with any reasonable quantity, at the lowest market price. My seed is the largest and best I have ever seen. A letter directed J. D. F., West Schuyler, will be attended to.

As to the query, "will the increased production be likely to over stock the market?" Like every other product of the soil, there may be an over stock some years, more than others, but thus far the demand has kept up with the product. J. D. F.

West Schuyler, Herkimer co., Nov. 1845.

Weeds.—Succulent weeds may be converted into a blackened and lifeless mass, applicable as manure by mixing them layer for layer in a compost with quick-lime.

NUTRITIVE VALUE OF DIFFERENT KINDS OF FOOD.

The following table, condensed from the Gardener's Chronicle, gives the value of different kinds of food, as deduced from theory, and from the practical observations of several eminent agriculturists. The comparison is interesting, and shows in some cases the near coincidence between theory and experiment, and in others the wide departure in their results. The table also exhibits the the quantity of water in each substance, and the proportion of nitrogen entering into its composition.

It will be observed, as a reason of the discrepancy often noticed, that on different animals, and on different classes of animals, the same amount of food may give very different results, some animals being more affected by certain kinds of food than others. It must also be remembered that the same kind of food varies in nutritive value, with soil, climate, season, culture, mode of feeding, as ground or unground, and other controlling causes.

The nutritive equivalent is the quantity required of each substance to afford nourishment equal to 100 lbs. of common natural meadow hay.

Different kinds of Food.	Water per cent.	Nitrogen per cent. Substance dry.	Nitrogen per cent before dried.	NUTRITIVE EQUIVALENT ACCORDING TO										
				Theory.	Block.	Petri.	Meyer.	Thaer.	Pabst.	Flottow.	Pohl.	Crud.	Weber.	Dombasle.
Common Natural Meadow Hay,...	11.0	1.34	1.15	100	100	100	100	100	100	100	100	100	100	100
Ditto, of very choice quality,.....	14.0	1.50	1.30	98										
Natural meadow-hay, picked, ...	18.8	2.40	2.00	58	108	100	....	....	....	100				
Lucerne, free from woody stems, .	16.6	1.66	1.38	83	....	90	....	90	100	....	....	90	90	90
Red Clover, cut in flower, dried,..	10.1	1.70	1.54	75	100	70	....	90	100	....	....	90		
Ditto, Green,..................	76.0	......	9.64	311	430	....	....	450	425	500	450			
New Wheat-Straw,..............	26.0	0.36	0.27	426	200	360	150	450	300	175				
Old Wheat-Straw,...............	8.5	0.53	0.49	235										
Oat-Straw, ...	21.0	0.36	0.30	383	200	200	150	190	200	175			150	
Barley-Straw, ...	11.0	0.30	0.25	460	193	180	150	150	200	175	....			
Pea-Straw,......................	8.5	1.95	1.79	64	165	200	150	130	150	200	90			
Mangold-Wurzel leaves,.........	88.9	4.50	0.50	280	600	....	....	600	....	....	600			
Hearted Cabbages, ...	92.3	3.70	0.28	411	556	500	250	429	600	600	....	500		
Ruta-Bagas,.....................	91.0	1.83	1.17	676	....	300	....	300	250	....	350			
Common Turneps,................	92.5	1.70	0.13	885	533	600	290	526	450	500	525	525	500	
Mangold Wurzel, ...	87.8	1.70	0.21	548	366	400	250	460	250	300	....	255	....	261
White Silesian Beet, ...	85.6	1.43	0.18	669	....	....	....	....	....	....	....	....	....	220
Carrots, ...	87.6	2.40	0.30	382	366	250	225	300	250	....	266	260	266	307
Potatoes,........................	75.9	1.50	0.36	319	216	200	150	200	200	250	200	210	....	187
Field Beans, (English,)..........	7.9	5.50	5.11	23	30	54	50	73	40	....	50			
White Peas, dried,...............	8.6	4.20	3.84	27	30	54	48	66	40	....	47			
Kidney Beans, (White,)	5.0	4.30	4.58	25	....	39								
New Indian-corn,................	18.0	2.00	1.64	70	....	52								
Buckwheat,......................	12.5	2.40	2.10	55	....	64								
Barley, ...	13.2	2.02	1.76	65	33	61	53	76	50	....	....	....	....	47
Oats,...........................	20.8	2.20	1.74	68	....	71	....	86	60	....	50			
Rye,............................	11.5	1.70	1.50	77	33	55	51	71	50	44	38			
Wheat, ...	10.5	2.33	2.09	55	27	52	46	64	40					
Fresh bran,.....................	37.1	2.18	1.36	85	105									
Wheat chaff,....................	7.6	0.94	0.85	135	160	....	....	....	....	....	175			
Oil-cake, (Linseed,)............	13 4	6.00	5.20	22	42	108	....	....	....	....	....	....	57	
Rice, (Piedmont,)................	13.4	1.39	1.20	96										

From the above practical results, we have taken the mean, of several of the most important articles, from which our readers will see at a glance the average results of all the experiments, and which will be interesting as well as very valuable, as affording a comparison of the value of the various substances. We have also placed alongside the equivalent, according to theory, to which the results of the experiments sometimes approach quite near, and at other times are quite remote. The whole, however, cannot fail to throw light on the subject; for though strict accuracy cannot be expected where so many causes must combine to vary the results, yet a tolerable approximation *for comparison*, is doubtless in nearly every case attained.

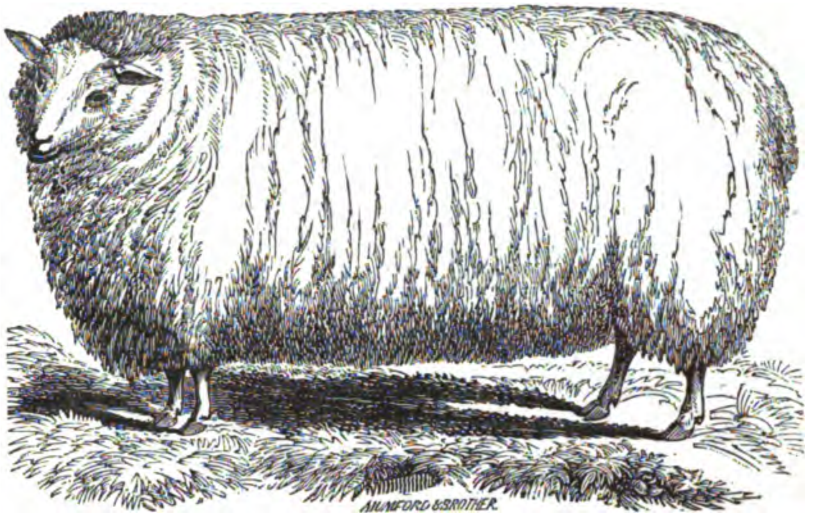
	Mean of exp's.	Theory
Hay,......................	100	100
Lucerne,..................	92	83
Red clover hay,............	94	75
New Wheat-straw (variable,)	272	426
Oat-straw, ...	166	383
Barley-straw,..............	175	460
Pea-straw,.................	169	64
Cabbages,..................	419	411
Ruta-bagas,................	300	676
Common turneps,...........	494	885
Mangold Wurzel,............	317	548
Carrots,......................	276	382
Potatoes,..................	201	319

	Mean of expr's.	Theory.
Peas,......................	47	27
Indian Corn,................	52	70
Barley,.....................	53	65
Oats,.......................	67	68
Wheat,.....................	46	55

LIGHTNING CULTURE.

Much interest has been excited by the experiments of Dr. Foster in Scotland, to show the influence of atmospheric electricity on the growth of plants. James Cowie and two distinguished farmers called on the Doctor, and the result of their examination is given in the London Gardener's Chronicle. Not finding the proprietor at home, they made inquiries of a young man, a servant on the farm, who, on being asked if the crops were better where the poles and wires were placed, than on the rest of the field, answered,—"Weel, the crop sud be better, considerin' the additional pickle dung it got beside the wires, but that he could not say there was any difference observable."

Productive Apple-tree.—The Germantown (Pa.) Telegraph states, that there is an apple-tree near that place, which has repeatedly borne over hundred bushels of apples at one crop.



LEICESTER WETHER.—(Fig. 113.)

The above is a portrait, from life, of a Bakewell or Leicester wether, bred and fed by Maj. PHILIP REYBOLD, of Delaware, and slaughtered in Philadelphia, in March, 1842. He was two years old and weighed alive, 251 lbs.—the four quarters 147 lbs., or nearly 37 lbs. per quarter. The saddle weighed 78 lbs. and cut 4½ inches of fat on the ribs. Maj. Reybold's is, we believe, the largest of any long-wooled flock in America—numbering, as we have been informed, over 600 of the pure blood. He has taken great pains in breeding, and has found his flock highly profitable. One of his sons has during the past season been to England for the purpose of procuring bucks, which, if possible, might still farther improve their sheep. He returned, as we hear, with two very large and splendid bucks of what are usually called in England the Improved Cotswold, or Improved Oxfordshire breed. This breed originated, according to British authors, by a cross of the Bakewell or Leicester, with the old Oxfordshire or Cotswold sheep. They are highly prized as fattening sheep, possess good constitutions, and yield very heavy fleeces of long wool. They and the Leicesters, carry the principal prizes for long-wooled sheep in England. The increasing demand in this country for long wool, and the increasing demand also, for fine mutton, renders these sheep particularly adapted for situations convenient to market, and the profits which they afford in such situations are undoubtedly equal, at least, to those given by other breeds under any circumstances.

WOOD AND WOOD-LANDS.

The fore part of the winter is the best time for cutting and securing the year's wood, as well as for clearing off the forest preparatory to cultivation. Before snow falls, or while there is little on the ground, it is much more convenient and pleasant working in the woods—the trees can be readily cut close to the ground, the small limbs and brush can be easily separated from the wood and piled by themselves, and the workmen are not obliged to plunge their hands in cold snow to pick out the wood, which is always more or less buried if the snow is deep.

Few things are of more consequence to the farmer than a judicious management of his wood-lands; and yet nothing is generally more neglected. Such in fact has been the inattention to this subject, that a scarcity of wood and timber has occurred in many districts naturally provided with abundance. After having cut off the old or "first growth," as it is called, fires have in some instances been allowed to sweep over the ground with such intensity as not only to prevent the stumps from sprouting, but also to destroy most of the seeds of trees contained in the soil—thus leaving the lands comparatively a barren waste. Besides this, cattle are often allowed to range at will, and are indeed sometimes compelled to obtain their living by brousing on the sprouts and young trees, which permits only a scrubby, worthless growth.

It has been sometimes recommended to cut out old decaying trees first, but the practice is attended with several objections, and we believe experience has proved that the best course is to cut off the entire growth, clean and smooth. In attempting to cut out the old trees, a great many of the smaller ones are inevitably broken down and spoiled, and as the growth is always kept uneven, the greatest quantity is prevented from accumulating on the ground at once.

Where fuel is the object, the course now pursued in those sections where wood-lots are turned to the best account, is, to cut everything close and clean once in fifteen to twenty years. The lots are protected as much as possible against fires, and cattle are kept entirely off. Lands producing hard-wood are in this way made to yield from fifteen to twenty cords of excellent wood per acre at each cutting—giving a growth at least equal to a cord per acre annually.

On cutting the primitive or old growth from a lot, the succeeding growth cannot be relied on from sprouts—especially if the trees were much on the decline. In such cases we have usually to wait for a generation to come from seed, which generally takes a considerably longer time than is required where a thrifty growth is cut; because in the latter case the stumps sprout vigorously and as great a growth is obtained in one year as ordinarily takes place from seed in four years. This is one of the great advantages of frequent and clean cutting—a rapid, even, and thick growth always springs from the stump, and we have never to wait for the slow and somewhat uncertain process of a renewal from seed.

Trees had better be cut close to the ground, whether the lot is intended to grow up again or to be cleared. When there is a great depth of snow on the ground, it is difficult to cut trees closely, and we sometimes see the stumps from two to three feet high; but we think sufficient care is not generally taken to cut low. The best of the wood or timber is generally next the ground. If the land is to be cleared, the plow and the harrow can be made to work much nearer the stumps if they are cut close to the ground, and if the lot is intended to grow up, the suckers or sprouts grow much more vigorously from low than from high stumps. If the stumps are left high, the sprouts often come out on the sides or near the top, and the winds break them off, or the stumps rot and they perish. These remarks of course apply to hard-wood trees; resinous ones never start from the stump.

In our next we shall give an article on this subject, received since the above was written from W. Bacon, Esq.

FOOT-ROT IN SHEEP.

We have recieved several communications in reference to the article on this subject by "GRAZIER," in our August number. The opinion of Grazier that the foot-rot is not contagious, is controverted. A correspondent with the signature "E. P.," who dates at Bridport, Vt., thinks it possible that the error in regard to the non-contagiousness of this disease, was imbibed from having mistaken another disease with which the feet of sheep are sometimes attacked, for the real foot-rot. This *spurious* kind of foot-rot, according to E. P., "is caused by a stoppage in the secretory outlet between the claws, or from inflamation by bruises, gravel, &c., and cannot, from the nature of the case, be contagious." This, E. P. thinks, is the disease to which Grazier refers, and gives directions for curing. "It is," says E. P. "very easily managed, and I have never known more than four or five lame sheep to the hundred affected with it at a time." But the *real* foot-rot, E. P. thinks "a very different article to contend with, though in its first appearance, it somewhat resembles the above."

In proof of the contagiousness of foot-rot, E. P. states the following case:—"Sometime between the years 1826 and 1830, Gen. Sumner, of Boston, had a flock of merino sheep kept in Addison county, Vt. About the latter year, he purchased some imported Saxon sheep, some of which had the foot-rot, and added them to his former flock. About the same time he appointed an agent in my immediate neighborhood, to have the care of the sheep. The foot-rot spread with great rapidity through the whole flock. This was the first time I ever saw the disease, or heard of its being in this country. Nor did this infectious disorder stop with this flock; several others became infected with it by being driven along the road where the lame ones had been previously driven, much to the annoyance of their owners, who at that time knew nothing of the disease or its remedy; consequently great losses were sustained before they could get rid of the detestable plague.

"A portion of Gen. S.'s flock were kept adjoining my farm. On the morning of a particular day, my sheep were salted, and at noon of that same day, a part of them were discovered to be mixed with Gen. S.'s sheep, and were immediately separated, so that they could not have been together only a few hours. Thirteen days from that time, one of my sheep was lame; it was caught immediately, and doctored, and in a few days got well. In about two weeks from the first one being lame, there were half a dozen, and in about eight weeks, one half the flock was lame; a serious business, that lasted me more than two years of doctering after 'Grazier's' mode of making an application to the lame ones only. I have known several flocks infected with the foot-rot by being put in a pen to be washed, where diseased ones had previously been; and by experiment, I have known sheep that had never before been exposed, thoroughly impregnated with the foot-rot where the lame had been kept and removed *four weeks* before the well ones were put in. Indeed, so well is it understood in Vermont that the foot-rot is contagious, that a law has been very wisely passed for restraining sheep so infected within proper limits, and by reference to the records of our courts, it may be seen that suits have been sustained and damages recovered, for the neglect of keeping sheep so disordered, according to law."

In regard to the symptoms and cure of the foot-rot, E. P. observes—"When a sheep first begins to be lame with the foot-rot, it is very easily detected, the tread of the foot being different from ordinary lameness, bearing directly on the toe of the foot, causing the ankle or fetlock joint to project forward, and if in the fore foot, the animal will frequently stumble. On examining at this stage, there is frequently nothing to be discovered by the eye, but on handling the foot it feels hot, and throws off a smell emitted by no other disease than foot-rot. By pressing the foot in various places, it will be found most tender at the heel. It commences at the heel of either claw, frequently between the claws, but always under the skin near where the hoof or horny substance commences, and it is not uncommon for it to work its way over the whole foot between the hoof and quick before it makes its external appearance, causing the animal much distress and loss of appetite. It however eventually breaks out a rotten sore.

"The difficulty of getting this loathsome disease out of a flock, consists not in its being hard to cure, but from its highly contagious character; continually going the rounds; by the time one sheep is cured another takes it and so on, the same sheep having been known to take it and be cured of it three times in one season.

"As to cures it has been long known that blue-vitriol [sulphate of copper] readily effects the purpose in a single sheep; but for the reason before stated, many farmers have been baffled in thoroughly trying it, and have kept the disease in their flocks for years. The following prescription I have never known to fail of effecting an entire cure if thoroughly applied:

Copperas half a pound,
Alum half a pound,
Blue-vitriol one pound.

Dissolve all in two gallons strong tobacco water. This compound may be applied by means of a small piece of sponge, tied to a handle of convenient length. The sheep should be caught, one by one, every foot cleaned, the long toes taken off by the clippers. Then with a sharp knife the foot should be pared and examined. If it is sound, take the swab and thoroughly wash the foot all over as high as the fetlock joint; hold on to the sheep till a little dried, and turn out to pasture. If, on examination, a foot is found diseased, every particle of hoof should be pared away over the affected part; better pare a little too much than not enough; if blood follows the knife it will do no harm. The foot being thus prepared, apply the wash as before, and then turn them out.

"In this compound, the vitriol is the main ingredient in performing the cure, the tobacco is healing, while the alum and copperas *set* the vitriol and it forms a coat like paint, which adheres to the foot, cures the lameness, and acts as a preventive for the well ones. If a pasture is procured that has not been impregnated with the disease, and the sheep are transfered to it, three applications, one week apart, will effect an entire cure; but if the sheep are to remain in the same lot, the three applications should be made as above, and they should besides, be run over once a month during the summer, or until the disease is entirely eradicated from the soil. I have seen many experiments tried with doctoring the lame ones only, and by driving them over a bed of lime and various other ways, without the desired effect. Neither are high and dry pastures any guard against the ravages of this disease, as has been abundantly tested on the high and rocky pastures of Crown Point, and on the mountain summits of Vermont. But in no instance have I known the above remedy, faithfully applied, without performing a cure."

Another correspondent who signs "TRUTH," and dates from Hoosick, N. Y., writes in reference to the contagiousness of foot-rot:—"I know a flock of sheep that was almost surrounded, for years, by neighboring flocks affected with foot-rot, but this flock remained perfectly free from the disease until one, thus affected, accidentally got into the lot with it. The distemper soon spread through the flock. It would seem singular indeed, that, immediately after the diseased sheep had got in with sound ones, they should all *bruise their hoofs* in such a particular manner as to produce such sameness in the result. * * * I will state for the gentleman's information, that the space of time between a sheep's being exposed and the symptoms becoming visible, varies from nine to fourteen days."

The question as to the contagiousness of foot-rot, is, it must be admitted, one of great importance; and we deem it therefore proper to give as full an understanding as possible of the case. It may not be generally known to our readers that this has formerly been made the subject of much controversy in Europe, both among farmers and scientific writers. Mr. Youatt, in his excellent work drawn up under the direction of the British Society for the Diffusion of Useful Knowledge, enters at length into the discussion of the subject; but he comes at last to the conclusion that the balance of evidence is decidedly in favor of the contagiousness or infectiousness of this disease. Mr. Youatt, however, holds in common with Prof. Dick, and many other veterinary writers, that foot-rot is sometimes originated spontaneously—that is, it is caused "by the feet having been macerated by the soft and damp pastures on which they have trodden, and the internal part of the foot being thus denuded and injured." He says—"There are many flocks in which it would be idle to seek for the cause of foot-rot in infection"—* * * and adds, "It is almost superfluous to argue that there are numerous diseases that may be produced by natural causes, and yet are communicable from one animal to another."

Mr. Youatt then goes on to relate many experiments which have been made by different persons to test the point under consideraion, by inoculating the feet of sound sheep with the virus of foot-rot. Many of these attempts at inoculation failed, but several succeeded and clearly established the fact of contagiousness. In one class of experiments referred to, conducted by Prof. Gohier, the disease was only communicated by inoculation in two cases out of six; but in the experiments of M. Favre, a Genevese veterinarian of high standing, out of thirty-two sound sheep inoculated with the matter of foot-rot, twenty became infected. "On one of the sheep," says Mr. Youatt, "that would not take the infection, he operated six times ineffectually. He tried once more and foot-rot was produced." In the cases where the disease was produced by inoculation, it was sufficiently marked to leave no room for doubt.

P. S. Since writing the above we have received a communication from Rutland, Vt., signed "Farmer." This writer takes the same ground in relation to foot-rot and the communication of "Grazier," as our correspondents above mentioned. But upon carefully reading over his article, we cannot discover any important point that is not already sufficiently discussed and explained, and any further remarks would therefore seem to be unnecessary.

FARMERS' CONFERENCE MEETING.

We find in the *Onondaga Standard*, a report of the doings of a Farmers' Conference, held at Marcellus, in that county, on the 6th Nov., from which we take pleasure in presenting the following extracts. We hope many of these conference or club meetings will be held by our farmers during the present winter. We know of no measure cauculated to have a more decidedly beneficial effect than such meetings, where, with the freedom of the fire-side, each one gives the details of his practice and the results of his experience. In this way, much useful information is imparted, and a spirit of inquiry and investigation awakened, from which the most happy results may be anticipated.

PREPARATION AND APPLICATION OF MANURES.

The meeting having been called to order, John Sandford, of Marcellus, was called to the chair, and Jas. M. Ellis, of Onondaga, appointed Secretary.

Mr. Brown, Pres't of the Co. Agricultural Society, said: The meeting had been called by him in pursuance of a resolution of the Society, passed at the last annual meeting, and its object was the free and social conference of the farmers of our county upon the leading questions of practical Agriculture. The subject to be discussed at the present meeting was the preparation and application of manures.

Mr. Brown has ascertained by careful observation that he has saved by his attention to the saving and preparation of manures, more than sufficient to pay his town and county taxes. His plan is to stable all his cattle and to litter his barn yard twice a week in winter, with straw, and allow his sheep, and his cattle, when out of the stable, to run over it and tread it in, with the manure they deposite upon it. He sprinkles plaster on his stable floors, and over his yard in sufficient quantities to absorb all the volatile portion of the manure, so that there is no smell arising from it whatever. He cleans his yard in the spring, and places the manure in a heap under his shed, mixing plaster with it plentifully as it is piled; except such a quantity as he may need for his hoed crops, which he prefers to take out fresh and plow it under. Mr. Brown finds that plaster, applied to his manure heap and his stables, have added 50 per cent to the strength and value of his manure. He sows plaster over his barn yard once a week.

Mr. Brown has used salt as a manure with great benefit. He sows it broadcast upon wheat and grass at the rate of 3 to 5 bushels to the acre. On grass he would sow it in the fall—for wheat he would sow it just before the wheat is sown. He found that 3 bushels of salt to the acre on his wheat field, occasioned an increase of 17 bushels of wheat to the acre over that which had no salt. The soil was a strong loam with a stiff subsoil. Mr. B. had not tried salt to kill wire-worms.

Mr. Shepherd thought salt would kill angle-worms.

Mr. Sandford asked Mr. Brown why he preferred fresh manure plowed under for corn and hoed crops.

Mr. Brown said he preferred it in this state because it made the ground warmer and more friable—and was more enduring in its effects.

Mr. Sandford asked if more benefit was not derived from manure used in this way in all cases?

Mr. Brown thought not, because on sowed crops it brought too many weeds, and on sandy soils it leached away.

Mr. Sandford did not believe any soil *leached* in the sense that term is commonly used. Mr. Van Rensselaer of Albany, had proved by careful experiment that such could not be the fact. He had filled a barrel with perfectly clean sand and turned on it water from the farm yard which was saturated with manure, and had found it always came through pure and limpid, and on examination he had never found the least trace of manure lower than one inch and a half below the surface. This proved to his mind that sandy lands did not leach in the sense generally understood, but that the failure of manure on sandy soil is owing to the too rapid evaporation of the more valuable portions of the manure, there being no mineral substances in the sand to fix and retain gases.

Mr. J. B. Burnet was inclined to credit this theory. He thought the fact that all complaints of leaching were so suddenly removed by the application of a light deposit of marl or clay or muck, was corroborative of this theory. An inch or two of marl or clay or muck spread upon the surface of a sandy soil would not prevent filtration certainly. But it removed the complaint of leaching invariably, and rendered manures on such soils effectual and durable. This result must be accounted for by the supposition that marl or clay or muck will fix the volatite portions of the manure, and prevent evaporation.

Mr. Chester Moses would state two facts which he thought conflicted with this theory. 1st. He had always observed that those sandy soils which had a stiff subsoil were more retentive of manures than those with a loose subsoil. 2d. He knows that the wells bordering on the Farmington Canal were filled with the fœtid matter of said canal, notwithstanding there was a wide bank of sand between the canal and the wells.

Mr. Ellis thought the latter fact might be explained by the supposition that the sand had become saturated with the impurities of the water by long continued filtration.

Mr. Curtis Moses thought this a plausible explanation, and it was supported by the fact that the wells were perfectly good for some considerable time after the canal was filled.

Mr. Sandford would remark that whatever objection might be brought to Mr. Van Rensselaer's theory, the experiment he had described was a very simple one, and each person might try it for himself.

Mr. Brown resumed the subject of the preparation of manures, and remarked that he thought all manure should be sprinkled with plaster as soon after its deposition as is convenient. He had a sewer from his sink through his vault, which conveyed the night soil, and suds and dish water, to a reservoir near his barn, which reservoir he kept constantly supplied with plaster. He found the manure thus made very valuable, and would recommend the practice to others.

Mr. Moses and Mr. Sandford had no doubt of the efficacy of plaster in fixing the gasses of manure.

Mr. Sandford had seen large quantities of packing sal carted out of New-York city by the farmers of Long Island and New-Jersey. They consider it a very valuable manure there.

Mr. Ellis believed that the bitterns and ashes from our salt works were valuable manures.

Mr. Brown thought that stiff soils should be plowed in the fall and exposed to the action of frosts. It thus was rendered friable and its particles could be more readily dissolved and taken into the circulation of the plants. Loose soils he thought were injured by fall plowing.

Mr. Ellis would have all lands plowed in the fall, if he could be sure of a covering of snow all winter. He thought plowed land absorbed a great deal of ammonia from snow.

Mr. Brown remarked during the meeting that a friend of his, an excellent farmer, had observed to him that he always derived the greatest benefit from plaster as a manure for wheat, when he sowed it on his summer fallow.

MONTHLY NOTICES.

We are indebted to Capt. Silas Allen, of Shrewsbury, Mass., for some fine specimens of the Baldwin, Seek-no-further, Spice, Sugar Sweeting, Roxbury Russet, and Detroit apples, and we are happy to have an opportunity of speaking of Mr. A.'s well deserved success in fruit-raising. His peaches, in particular, have long been celebrated in the Worcester market, and have, we believe, several times taken prizes at the state and county fairs. He has raised during the past season, about one hundred bushels of this fruit, of the very first quality; some of the finest selling at a dollar per dozen; of Quinces he has also raised nearly the same quantity.

Capt. Allen' apple orchard, though not very large, is thrifty and well selected, and the pains he takes in gathering and packing his fruit for market, is worthy the imitation of all fruit-growers. It is, as he says, the cheapest in the long run, for by this means his fruit has acquired a celebrity that ensures a ready sale. His second quality of apples, is equal to most sold as first quality, and his first quality commands a ready sale at the highest price.

The specimens with which we have been favored, are very fine; the Baldwins, in particular, we think the finest of that variety we have ever seen, though in point of flavor the Seek-no-further is inferior to none.

Cortland Academy.—We are gratified to learn that a course of instruction in Agricultural Chemistry and Geology will be given at this institution during the present winter, commencing Dec. 4th, and terminating on the 18th March. It will embrace a general outline of Chemistry and Geology, with their applications to Agriculture, including the nature and analysis of soils, the nature and action of manures, and Vegetable and Animal Physiology, as exhibiting the nourishment and growth of plants and animals. The Principal, Mr. S. B. Woolworth, will devote a large portion of his time to the class, and every effort will be made to elevate agriculture to its true dignity, by presenting the principles and reasons of its processes. We consider this an important experiment in academical instruction, and shall be gratified to learn that its success is such as to be followed at many of the other academies of this state.

Agricultural Addresses.—We have received copies of numerous agricultural addresses, and should be glad if we could find room for particular notices and extracts from each. Most of them are valuable productions, well suited to the circumstances under which they were delivered. But we are compelled to pass them for the present with only this general notice—tendering our thanks to the individuals who have been so kind as to forward them.

Wool.—We would call attention to the article of Mr. Pettibone, under the head of "Heavy Fleeces, "in another part of this paper. We received in connexion with the communication, samples of his wool, which we think remarkably good—fine, long, soft, and very free from gum. They show that Mr. P. must have an excellent flock of sheep. Judging from his statement, (for we have no personal knowledge of him or his flock,) we think he has pursued a very judicious course with his flock, and we doubt not his labor and care are well rewarded.

Stoddard's Washington Alpine Strawberry.—Where did our friend Elliott learn that this is "nothing but the common Alpine, save that the soil on which it grew and fruited, was rich and some three feet deep, thus giving the vines every benefit?" We saw it while in full fruit, and can assure Mr. E. that it is no "common" plant, and we know no reason to doubt the statement of Col. Stoddard respecting it. He had a large number of seedlings of various ages, some just coming from the ground, and others in fruit; but nothing to compare with "the Washington."

Cornstalk sugar and Molasses.—We have received from John Beal, of New Harmony, Indiana, samples of corn-stalk sugar and molasses manufactured by him the past season. The sugar is equal in quality to any of that kind we have seen with the exception of a single sample, which we understood to have been made by Mr. Webb, of Delaware. The molasses is clear and thick, but retains a little of the peculiar pungency in taste, which seems to attend more or less, that which is made from Corn-stalks. But we can hardly doubt that improvement will be made in the process of manufacture, by which these articles will be produced of better quality. It should be considered that the business is yet new, and of course partakes of the imperfection attending all untried enterprises. The communication of Mr. Beal having been mislaid until too late for this number, will appear in our next.

American Quarterly Journal of Agriculture and Science.—The fourth number this work, which closes the first year, has been received. From a rather cursory view of its contents, we think it the most interesting number yet issued. Among the original articles we notice one on "The Wheat Fly," (*Cecidomyia,*) by Asa Fitch, M. D. It is accompanied by a well-executed plate, exhibiting several species of the insect in its various stages. We deem this a highly valuable paper, affording a clear and comprehensive history of this diminutive though potent enemy of the wheat-crop throughout a considerable portion of this country. We have not room to particularize, but observe other valuable articles—such as one on manures by Jesse Ryder, and an editorial article on the same subject.

POTATOE ROT.

In this section we have heard but little complaint in reference to the disease or rot in the potatoe, this year, till since the crop was harvested. In some other neighborhoods too, we have heard that heavy losses have been sustained by the potatoes having rotted since they were dug, though while the crop was growing it exhibited generally a healthy appearance. The Boston papers make complaints of potatoes rotting much in the cellars, and within a few days we have heard of many having rotted in this vicinity. Some kinds seems to have suffered more than others—the very excellent kind called *Carters* appear, from statements we have heard, to be more inclined to rot than others. A gentleman in this vicinity who raised this kind quite largely, has lost half his crop since they were put in the cellar. The Shakers, located at Watervliet, also raise the Carters largely. They informed us a few days since that they had lost from $600 to $1000 worth of this kind since they were dug. As to preventives, it is agreed that they should be carefully sorted over, rejecting all that show the least unsoundness, as soon as they are discovered to be rotting. The Shakers inform us that the best remedy which they have discovered, (and they have tried many,) is to *dry them thoroughly* by spreading them exposed to the air. This they say will stop the progress of decay, and it is the only way they know by which it can be stopped.

Musty Oats Poisonous.—Several horses have died at Princeton, N. J., from eating musty oats.

INQUIRIES.

Fowls.—"A Dairyman Farmer," (Trenton, N. Y.) is informed that the *Dorking* is not the largest variety of fowls; they may be considered about third in respect to size. The Java and Malay are larger. The latter are worth $2.50 per pair.

A gentleman at Lexington, Va., proposes several inquiries as follows:

"Which are considered the best breed of cattle, for beef and milk principally?"

The Durham, Hereford, and Devon, each have their advocates. We cannot say which would be best suited to the location of our friend. If his soil is rich and food good and abundant, he would probably succeed well with either the Herefords or Durhams, but if the soil is thin, a smaller animal should be chosen. For milk, the Ayrshires, we are told, have done well in Virginia.

"Which is the best breed of sheep, wool being the primary object, and the farm some distance in the interior.?"

If the flock is to be well tended, carefully sheltered from storms, &c., the very finest wooled Saxons may give satisfactory profits; if they are to take rough fare, and are not to be provided with much shelter, a hardier animal with a heavier and coarser fleece, will be likely to do better. A selection should be made something according to the situation, and care to be bestowed—remembering that the sheep which produce the very finest wool are more delicate in constitution than others, though under favorable circumstances they may be as profitable as any.

"What is the best breed of hogs for the farmer, to make pork to eat, and a little to sell?"

The relative profits of breeds, depend so much on management, that it is almost impossible to give a definite answer to this question. Experience has taught us that those animals which will fatten best and most profitably when kept in pens, and duly provided with food without being obliged to perform any exertion, are not the ones best fitted to "*grub*" for a living. If hogs are destined to range the fields and forests for much the greater portion of their lives, a tendency to muscular fibre, in the breed, rather than a propensity to secrete mere fat, is of paramount importance.

Churning Milk.—"A Subscriber," (Fairhaven, Mass.) Several years ago, while keeping a dairy, we made some trials in churning milk. It was put into a large churn (Galt's,) soon after coming from the cow, and kept in motion till the butter separated. But we do not suppose it to be necessary that it should be churned as soon as milked. While visiting some of the dairies in Orange county, in this state, last season, we noticed the practice of churning the milk was followed, and that the milk in some instances had become *loppered*, or turned to "bonnyclabber." A large barrel churn was used, moved by horse power. We are unable to give the information asked relative to the comparative advantages of this mode of churning, but shall feel obliged if those who can speak from experience will furnish it.

Corn and Cob Meal.—"A Subscriber," (Greenville, S. C.)—We never heard of this kind of meal being "injurious" to cattle or horses, though we have heard one or two instances where it was thought injury had been done to *hogs* by eating meal which had too much cob in it. As to the "cob injuring mill-stones," we know nothing, but presume it is better to grind the article in mills calculated for the purpose. As to the benefit of grinding the cob with the corn, we think it varies with the nature of the corn—being greatest with the hardest and most flinty varieties. From our own experience, we think the advantage of grinding the cob with the light chaffy "gourd-seed" corn of the south would not be very great.

Guinea Corn.—Mr. S. Gilliam, of Oxford, S. C., has sent us a sample of what he says is called "*rice corn*." The grain is evidently a variety of what is often called Guinea corn, or African Millet. We have seen and sometimes cultivated different kinds of it for the last twenty-five years. It is a very good article to raise for fodder, sown broadcast or in drills, and managed in the same way that our Indian corn is when used for that purpose. Mr. Gilliam states that some which he sowed on the 6th of August last, attained a height of more than five feet by the 29th of Sept., and he thinks would "yield a greater quantity of hay than ever was cut from the same quantity of ground before."

J. G., Gilopolis—We will endeavor to comply with your request.

P. S. S. Carthage, wishes for a plan of a Piggery, for from 30 to 50, or even 100 hogs. He will find some good plans in the 8th vol. of the Cultivator, p. 40 and 109—also vol. 9, p. 96. We shall, however, be glad to receive plans and descriptions of a good piggery from any of our subscribers who have made one to suit themselves.

Woad.—"A Subscriber" wishes to be informed "whether woad can be raised in Connecticut, and whether it is a profitable crop—also whether there is a market for the leaves without going through the process spoken of, in the Cultivator for Sept." If any one has tried it, we should be glad to hear the result.

CONDENSED CORRESPONDENCE.

Beneficial Effects of Ag. Papers.—A correspondent in Otsego county, "Highlander," says:—"Owing chiefly to the circulation of agricultural papers, principally the Cultivator, in this section, within the last 10 years a decided improvement in the following, among many other things, is observable, viz: The operation of plowing is more neatly and thoroughly performed; more attention is paid to the making, preserving, and application of manures, and an increase in the corn crop equal to 20 or 30 per cent."

Cure for the Bite of a Rattlesnake.—"Below I send you," says a letter from Dr. R. North, of Mobile, to the editor of the Cultivator, "a receipe for the cure of a rattlesnake bite, which has been used by a physician of our city, Dr. Woodcock, who has found it nearly always to succeed. I have used it several times in my practice, and it succeeded.

R. Aqua ammonia,
Spts. Turpentine,
Tinct opii, of each, one oz., mixed together.

Take a teaspoonful every hour until sleep comes on. For a child three years old, half a teaspoonful every half hour; and wash the part frequently with the same."

Castor Oil.—Extract of a letter from Mr. Andrew Gray, Parson's Mills, N. C., to the Cultivator:—"I raise the bean, express and clarify in the most simple manner, the pure Castor Oil. My oil is highly approved by all that have used it. Our physicians say that it is far superior to the northern oil, which is highly adulterated." Will Mr. G. please furnish us with the details of the operation. Mr. G. says the wheat in his vicinity was good, oats poor, and corn mostly but one-third of a crop.

"A Dairyman Farmer," of Trenton, N. Y., informs us that in 1842, he obtained 396 bushels of potatoes, ("blue pink-eyes,") from an acre of land.

Salting Pork and Beef.—Mr. R. H. Ostrander, of Glenville, informs us that he has for several years pursued the following method with success:—"In packing down pork I sprinkle in four quarts of rock salt to a barrel, then make a pickle of warm water sufficient to cover all the meat, as strong as can be made with salt, and when cold pour it on; when the pickle becomes much colored with the blood of the meat, draw it off, boil it, take off the scum till it becomes clean, and apply it again; in this way pork will keep sweet throughout the ensuing summer, and will be free of rust.

"In salting beef, take four quarts of rock salt pounded fine; eight ounces of saltpetre, and five pounds of brown sugar; mix them well together, and with these ingredients pack the meat down very closely, so as that they will of themselves cover the whole with brine. The next spring draw off the brine, clarify it as before mentioned, adding a little salt to it, and apply it again, and the beef will keep very sweet and fine tasted during the whole summer following."

Mr. J. R. Fuller of Kent, Ct., says—"In looking over the Oct. number of the Cultivator, I saw some remarks on the subject of preserving Pork, with a request that if any one had practiced the same method, to inform you of the result. I have for more than twenty years, with very few exceptions, cut and packed my pork and hams the evening after butchering, and always pour on the brine boiling hot, the same evening or the next morning. The barrel should be left open until the brine gets cold. I have never known any one that has tried that method that was not satisfied with the result. I can therefore, with the fullest confidence, recommend that method."

FOREIGN.

By the Britannia, arrived at Boston on the 20th ult., we have received English papers to the 4th Nov. The nature of the intelligence brought is important in relation to the prices of American produce. It is now well ascertained that the deficiency in the supply of bread-stuffs throughout England, Scotland and Ireland, as well as over a considerable portion of Northern Europe, is truly alarming. Many of the continental ports have already been opened duty free, and the popular cry is loud for Great Britain to place her ports in the same situation—an event which seems to be expected with considerable confidence. The rise in the value of wheat in the English markets has been equal to 20 shillings per quarter (8 bus.) within the last two months, and the Mark-Lane Express states that it may be regarded as "pretty certain that quotations will be higher in December and January than at present." In relation to the disease of the potato crop, it is said "accounts are more and more serious." Complaints of heavy losses by rot are received from Scotland, and in Ireland it is said a third of the crop has been destroyed. The government has sent two agents, Professors Lindley and Henslow, to Ireland, to investigate the nature of this alarming malady. That more or less suffering must be experienced by the poor population of Ireland and some other districts, is scarcely doubted; to what extent the government will be disposed to aid them, is not yet known. In addition to the free admission of foreign corn, which all seem to look for, it is stated that O'Connell, who is regarded as the organ of the Irish people, demands in their behalf a grant of money to the extent of a million and a half of pounds, to be expended in the purchase of food. He also asks for the prohibition of corn and provisions leaving the island, and for the prevention of distilleries consuming grain.

The effect of this intelligence has been to cause a still farther advance in the prices of our bread-stuffs and provisions. Flour went up at once to seven dollars per bbl., which it seems likely will be for the present sustained, as the supply for the British markets is looked for chiefly from the United States and Canada.

American wheat, in England, was quoted at 8s. 6d. and 9s. sterling for 70 pounds. American flour, in bond, was quoted at 31*s*. and 32*s*. sterling, per bbl. Beef, mess, per bbl, of 200 lbs., 34s. to 46s. Pork, prime mess, per bbl. of 200 lbs., 55s. to 60s. Cheese, prime quality, duty paid, 52s. to 60s.—ordinary 46s. to 50s. American wool in London, 1s. 3d. to 1s. 8½d. per lb.

American Guano.—We find in the Mark Lane Express, a communication from Mr. Henry Colman, giving an account of the discovery of a large amount of guano on an island in the Gulf of St. Lawrence. The information was communicated to Mr. Colman by a gentleman from New-York, of the highest respectability. The discovery of the guano was made by a young man last season, and a small cargo of it was taken to New-York. A quantity of it was purchased by a gentleman who tried it side by side with the Peruvian and Ichaboe guano, and the results were decidedly in favor of that from the Gulf of St. Lawrence.

The Potato Disease.—The Hague, Oct. 15.—We have accounts from Copenhagen of the 3d of this month, which state that the disease in the potatoes is spreading more and more in Denmark, as in Funen, Lolland, Falster, and likewise Sealand, especially in Amak, near Copenhagen. It has likewise appeared in the Durhie. It is stated that the disease is beginning to show itself in Sweden, and as the crops, particularly of the latter kinds, are more backward than in the Netherlands, it is feared that the disease may spread wider. It will, therefore, be advisable to take measures in the discharging of cargoes from that country, to ascertain the quality of the potatoes.

GRAIN CROPS OF EUROPE.

In one of our English exchanges, we find the following extracts from the *Gazette d' Augsburg*, on the crops of 1845 in Europe. We do not know what may have been the writer's opportunities for obtaining the information, but if it can be relied on, the article is very valuable:

According to the custom we have adopted, we shall divide our account of the results of the last crop into two parts—one referring to the east, and the other to the west of Europe. For several years past the east threatened us with sterility; it first of all began in Russia, spread over Poland and Prussia, and appeared even this year likely to diffuse itself in the east of Germany. Experience has generally proved that in the boreal latitude the rainy years are more sterile than the dry ones. This fact has again been confirmed during the last years. It was humidity that diminished the crops a few years ago in Russia, and which produced the like effect in Poland, Galicia, and Upper Silesia in the course of last year. In Germany the humidity has not produced any unfavorable consequences, but in certain countries; there are others, on the contrary, which have suffered from want of rain. The results of the crops are, in the mean time, far from being satisfactory, and, from the calculations which have been made, will not suffice the public consumption.

It is far from our intention to represent the situation of things in more dreary colors than belongs to it; but we do not wish, and we ought not, to exaggerate the advantages of it, desirous as we are of attaining our present object, which is to furnish an exact appreciation of actual circumstances. We shall separately name the different countries, and indicate the supplies they stand in need or can dispose of.

Russia will have sufficient corn for the whole empire, without purchasing any foreign corn. Its Governments are in a position to assist mutually each other, but it is very doubtful whether they can send much corn abroad.

The crops of Poland are not sufficient for its general consumption; and, unless it has been previously supplied will suffer from a scarcity, or be obliged to receive corn from abroad. But whom can one have recourse to when one's neighbors have only had themselves but middling crops, and have not wherewith to supply the deficiency? Money also is scarce in Poland, and important sums cannot be sent abroad to purchase corn.

The kingdom of Prussia has greatly suffered last year and this from inundations, which have ravaged precisely its most fertile countries; and want, which is generally felt there, is on the point of transforming itself into actual famine.

The news from Pomerania agrees in stating that the results of the last crops are very mediocre.

In the Grand Duchy of Posen only a middling crop has been obtained, and anterior provisions can alone prevent a scarcity. The author does not remember having heard such numerous and general complaints, unless it be in the years 1804 and 1817. God grant that the unfortunate events of that epoch be not again reproduced! There are in this province whole countries where the usual corn sellers will be obliged themselves to make purchases the next spring. The situation of Galicia is still worse. The price of rye rose 60 per cent. immediately after the crops: it is still on the rise.

In Hungary, which is usually so productive, the Government has been obliged to lay in large stores of corn to prevent a famine. The hope entertained of having good crops has been still more cruelly disappointed than in Silesia.

In Austria, Moravia, and Bohemia, the results of this year's crop are below those of the averake ones, and must scarcely suffice for the general consumption.

If we consider the west of Germany, we find first of all, that the crops in Saxony have not precisely failed, although they are very far from being abundant. The same may be said of the provinces of Brandenburg, and of Madgbeurg.

Bavaria, like other countries, has suffered greatly this year from hail-storms and water-spouts; the results of the crops have in consequence been diminished, as likewise by the state of the atmosphere, which has shown itself but little favorable to the cultivation of corn.

Wurtemburg, the country of Baden, Westphalia, and the Rhenish provinces, have been better treated; but the disease which has ravaged the patato crop will be severely felt. Nevertheless, the potato crop has been generally good throughout Western Germany; it will supply many deficiencies in the crops of other places, although they are not so much grown as in other parts of Germany.

Belgium and Holland have had but bad crops; and the news from France sufficiently proves that this year has not been a productive one.

Spain occupies but an inferior rank among corn-growing countries; still reports from this country do not mention that the crops have been deficient.

England, where the states of the European continent generally find a market for their surplus corn, appears to-day to be reassured on the wants of its internal consumption, or at least the alarming news which arrived from that country has been succeeded by much more favorable intelligence. Those who count upon corn supplies from the Baltic and provinces of the North Sea will be greatly deceived; the prices of these productions will first of all be very high, and in the second place, the quantities that can be supplied very small. A great quantity of whent has this year been struck by blight; and this disease, which has spread throughout Germany, Poland, and Hungary, has deteriorated the quality of the corn as well as diminished the quantity. Further, it cannot now be accurately known whether at a later period England will not be reduced to supply itself from abroad, for it is well known that it is only in case of an abundant crop that enough corn can be grown for the country. In the contrary case, she will look to supplies from America, or from the countries bordering on the Black Sea.

In Scandinavia, that is to say Denmark, Norway, and Sweden, the crops have not been satisfactory. In a few words, then, it may be said that for many years past there has not been so unfavorable a year as the present one; and if it be added that last year only furnished but indifferent crops in comparison with the preceding ones, this circumstance ought to give rise to measures being taken to prevent the danger which threatens us."

Potatoes in Maine.—In 1844, the potatato crop in Maine, was 12,304,000, bushels only second to that of New-York, which was 17,703,000 bushels. New-York raised six bushels, and Maine twenty-four bushels, to every person in these respective states. From last year's crop, it is estimated that the loss by rot this year in Maine, cannot be less than $1,230,000 dollars, or more than two dollars to every person in the state.

Warts on a Cow's Udder.—Muriate of Ammonia (sal ammoniac,) 2 drachms, powdered savin 1 ounce, lard 1½ ounces,—rubbed well together, and applied daily to the warts, is said to have been an efficient remedy. If the cow is not in milk, and the warts are large, they may be removed by operation, either with the knife or cautery.

Profits of Fruit.—The Bost. Cultivator says, that one of the largest and most flourishing peach orchards in New-Jersey, a few years ago, every tree of which was in good condition, yielded fruit in one year which sold for sixteen thousand dollars. The number of trees or extent of ground occupied, are not stated.

GARDENER WANTED.

A YOUNG MAN of good character, who understands his business thoroughly, may hear of a pleasant and permanent situation, on application to the Editor of the Cultivator. Oct. 15—1t*

PRICES OF AGRICULTURAL PRODUCTS.

New-York, November 21, 1845.

COTTON—New Orleans per lb. 6½a9½ cents—Upland 6a8 cents. Market dull.

BUTTER.—Western, 15a17—Goshen, 18a20.

CHEESE—7½a8½ cts. per lb.—in demand.

FLOUR—Since the arrival of the Steamer of the 20th, flour has advanced to $6.87a$7.

GRAIN—Wheat per bushel $1.30a$1.36, for Genesee—Corn, Northern and New Jersey, white and yellow, 79a80 cts.

HEMP—Dew rotted, American, per ton, $95—Manilla $155—Russian, cleaned, $180a$185.

HOPS—Best sort Eastern and Western 30a35 cts. per lb.—sales moderate.

HAMS—Pickled, 9½a10 per lb.—city smoked 9½a11 cts.—green hams 8 cts.

BEEF—$7.75a$8 per bbl.

LARD—8a8½ per lb.

PORK—Ohio mess $14a$14.12½ per bbl.—Dutchess county, new, $14.37½a$14.50.

TOBACCO—Kentucky, per lb. 3 to 7 cents—Connecticut seed leaf, for export, first received, 10½a12 cts.

WOOL—(Boston prices.) Nov. 21:

Prime or Saxony fleeces, washed per lb..........	40a45	cts.
American full blood fleeces,....................	37a40	"
" three-fourths blood fleeces,........	34a35	"
" half blood do	32a33	"
" one-fourth blood and common,....	29a31	"

ALBANY, Nov. 22.—At the opening of the market, Flour, including Western as well as Genesee, sold at $6¾a⅞; towards noon the prices stiffened, and the market closed firm at $7. Wheat was sold at 144a145c. The only sale of Barley is a load two-rowed at about 62½c. Rye, by canal, 81½c., in the street, 79c. Oats 46a48.

NEW-YORK, Nov. 22.—Cotton, sales of 200 bales at full ½ c. decline. Flour opened at $7·25, at which several sales were made; afterwards 4000 bbls. in store, deliverable in 30 days, at $7.12½; other lots at $7.06; closing at $7, sellers but no buyers; Southern $6 75a7, sales.

3000 bu. Southern wheat at 148c.; 8000 bu. rye at 85c.; 2000 at 83c.; corn 85., buyers; oats 52c.; barley 65a67c.; 1500 bags black eyed peas yesterday at 175c. bag.

Cloverseed 10½c., buyers of prime. Beef and pork are both rather heavy. Ohio new lard sold in bbls at 8¾.

VALUABLE WORKS, BY A. J. DOWNING, Esq.

1. *The Fruits and Fruit Trees of America*, or the Culture, Propagation and Management, in the Garden and Orchard, of Fruit Trees generally; with descriptions of all the finest varieties of Fruit cultivated in this country. 1 thick vol. 12 mo. Fifth edition, with many engravings.—$1·50. Or a superior edition, in large 8 vo., to match the author's other works. $2.50.

"At length we have the gratification of announcing this long expected work, and from a perusal of it, we can say, that nothing compared with it on the subject of Pomology has yet been published in the United States. This work will unquestionably now become the standard pomological work of this country; for the great care bestowed on the different kinds, arranging and connecting numberless synonyms, and giving accurate outlines and descriptions, will make it a safe guide."—*American Agriculturist.*

2. *A Treatise on Landscape Gardening*; adapted to North America, with a view to the improvement of Country Residences. Comprising historical notices, and general principles of the art; directions for laying out grounds, and arranging plantations; description and cultivation of hardy trees; decorative accompaniments to the house and grounds; formation of pieces of artificial water, flower-gardens, etc.; with remarks on Rural Architecture. New edition, with large additions and improvements, and many new and beautiful illustrations. 1 large vol. 8 vo. $3.50.

This volume, the first American Treatise on this subject, will at once take the rank of THE standard work."—*Silliman's Journal.*

"Downing's Landscape Gardening is a masterly work of the kind —more especially considering that the art is yet in its infancy in America"—*London's Gardner's Magazine.*

3. *Designs for Cottage Residences*, adapted to North America, including Elevations and Plans of the Buildings, and Designs for Laying out Grounds. By A. J. Downing, Esq. 1 vol. 8 vo., with very neat illustrations. Second edition, revised. $2.00.

A second edition of "Cottage Residences" is just published as Part 1; and it is announced by the author that Part II., which is in preparation, will contain hints and designs for the *interiors* and furniture of cottages, as well as additional designs for farm buildings.

4. *Gardening for Ladies*; and Companion to the Flower-Garden. Being an alphabetical arrangement of all the ornamental plants usually grown in Gardens and shrubberies; with full directions for their culture. By Mrs. Loudon. First American, from the second London edition. Revised and edited by A. J. Downing, Esq. 1 thick vol. 12 mo., with engravings representing the processes of grafting, budding, layering, &c., &c. $1.25

"This is a full and complete manual of instruction upon the subject of which it treats. Being intended for those who have little or no previous knowledge of gardening, it presents, in a very precise and detailed manner, all that is necessary to be known upon it, and cannot fail to awaken a more general taste for these healthful and pleasant pursuits among the ladies of our country"—*N. Y. Tribune*

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☞ **ADVERTISEMENTS** inserted in the Cultivator, at $1,00 per 100 words for each insertion.

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THE new volume of "The Cultivator," for 1846, commences on the first of January, and the Nos. will be promptly issued on the first of each month as heretofore. In the importance, extent and variety of its contents—in the number of its contributors—in the beauty and variety of its illustrations, as well as in the extent of its circulation, this paper is without a rival in the agricultural press, at home or abroad.

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